

THE BIRDS OF
MATTO GROSSO, BRAZIL

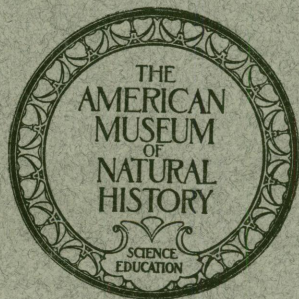
A Report on the Birds Secured by the
Roosevelt-Rondon Expedition

By ELSIE M. B. NAUMBURG

With Field Notes by George K. Cherrie

BULLETIN
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THE AMERICAN MUSEUM OF
NATURAL HISTORY

VOLUME LX, 1930



NEW YORK

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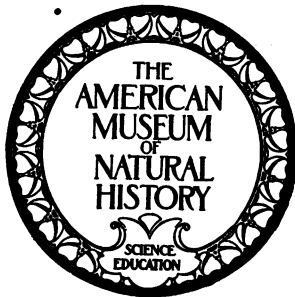
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DEDICATED
TO THE MEMORY OF
THEODORE ROOSEVELT

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Article I.—THE BIRDS OF MATTO GROSSO, BRAZIL

A REPORT ON THE BIRDS SECURED BY THE ROOSEVELT-RONDON
EXPEDITION

BY ELSIE M. B. NAUMBURG

WITH FIELD NOTES BY GEORGE K. CHERRIE

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INTRODUCTORY NOTE

In planning his expedition to Brazil, Colonel Roosevelt invited The American Museum of Natural History to add, at his expense, two naturalists to his party. The men selected were George K. Cherrie, ornithologist, and Leo E. Miller, mammalogist. Under a fund provided by Colonel Roosevelt, Cherrie returned to Brazil in September, 1916, to work more intensively in the region to which the Roosevelt Expedition had of necessity been able to devote comparatively little time.

This paper is based primarily on the collections secured during these two visits. It was originally begun by Mr. Cherrie with the assistance of Mrs. Naumburg (then Mrs. Reichenberger) but Cherrie had proved himself so valuable a member of Colonel Roosevelt's staff that the demand for his services as naturalist kept him for the larger part of the time in remote parts of the earth and Mrs. Naumburg was left to prepare the systematic portion of this Bulletin alone, while Cherrie has written the narrative and field-notes. Cherrie's contributions are in quotations or signed with his initials, G. K. C., while Mrs. Naumburg is responsible for the remainder of the book. In prosecuting her studies she has used not only the collections for which the Museum has to thank Col. Roosevelt, but has also had access to the Herbert H. Smith collections from Matto Grosso in the American Museum.

Further, during the period in which this report was in preparation she has made yearly visits to Europe to study related material in the museums of the Old World, making her determinations authoritative by comparisons with authentic and historic material.

In the dedication to his history of the expedition¹ Colonel Roosevelt has expressed his indebtedness to those representatives of the Brazilian Government who made his memorable journey possible and The American Museum of Natural History, the institution which Col. Roosevelt represented, adds its acknowledgment of indebtedness to that of Col. Roosevelt's. The Museum also wishes to record its appreciation of the service voluntarily rendered by Mrs. E. M. B. Naumburg, in preparing this comprehensive report.—FRANK M. CHAPMAN.

ACKNOWLEDGMENTS

Mrs. Naumburg gratefully acknowledges the valuable assistance given to her by Dr. Frank M. Chapman, the late Mr. Waldron DeWitt Miller and Dr. James P. Chapin, of the Department of Ornithology at The American Museum of Natural History.

¹ 'Through the Brazilian Wilderness.' Charles Scribner's Sons.

In the making of maps Dr. Joseph Bequaert was most helpful, and to him we wish to express our sincere gratitude.

To the ornithological staff of the Naturhistorisches Museum in Vienna, as well as to Mr. Othmar Reiser, we are especially indebted for their kindly interest and coöperation, and likewise to Professor zur Strassen, Director of the Senckenbergisches Institut and Museum in Frankfurt, for allowing us to examine many specimens.

Our thanks are due to Dr. Ernst Hartert and Lord Rothschild for giving Mrs. Naumburg the privilege of study for several weeks at the Tring Museum, and to Dr. Percy R. Lowe for permission to examine much valuable material at the South Kensington Museum in London where we were aided by the late Mr. Charles Chubb.

Mrs. Alice K. Fraser has been invaluable in the painstaking and conscientious work she has given to editing our manuscript and verifying original descriptions, and to her we express our deep appreciation and hearty gratitude for her helpfulness.

Finally, and most particularly, Mrs. Naumburg wishes to thank Dr. C. E. Hellmayr for permission to work in the Munich Museum during the spring and summer of 1922, for the valuable assistance he rendered her there, and for helping her to borrow specimens from various European museums, thereby enabling her to solve many difficult problems. Also for kindly consenting to examine her work after its completion, and by making suggestions and revisions he has rendered assistance of almost inestimable value.

NARRATIVE OF THE EXPEDITION

I had been working on my farm up in Vermont during early spring and summer, when, one day, late in July, 1913, I received a short note from Dr. Chapman: "Please do not make any definite arrangement for South American trips until you hear from me." Ten days, or two weeks later, another note was received asking me to come to New York for a conference. It was at that time that I first learned of the proposed Roosevelt South American Expedition. At Colonel Roosevelt's request, Dr. Chapman and I met him at luncheon when we discussed, in a general way, plans for making zoölogical collections and the various localities we expected to visit.

The outfit and supplies having been assembled on the 4th of October, the party embarked from Pier 8, in Brooklyn, on the S. S. "Van Dyke" bound for Rio de Janeiro and other South American ports. The personnel of the expedition consisted of Colonel Roosevelt, Dr.

Zahm, Frank Harper (secretary to Colonel Roosevelt), Anthony Fiala, in charge of the commissary department, Jacob Sigg, and myself.

While on board the steamer we held frequent conferences, which served to make us better acquainted with one another and to bring our individual plans into unison. From the first day, Fiala took observations and worked out our latitude and longitude, with the ship's officers, in preparation for the work he hoped to continue throughout the journey in Brazil, so as to locate with accuracy all important points at which the expedition might stop.

The fall migration of our northern land birds was in progress and for two or three days after sailing several species were seen about the ship; those noted were the yellow-rumped warbler, Carolina dove, a kinglet, and two or three species that I was unable to identify.

Thursday, October 9, we spent a delightful day sailing down through the islands, one or more of the Lesser Antilles being in sight throughout the entire day. The following morning, the shores of Barbados were in sight, and at 9 A.M. we weighed anchor off Bridgetown. Colonel and Mrs. Roosevelt were entertained by the Governor, while Harper, Fiala, Sigg, and I went ashore to attend to the purchase of supplies that had been overlooked. When we returned to the steamer, I was delighted to find that Mr. Leo Miller, who was to be my companion naturalist for the balance of the trip, had joined our party. Miller had just completed an extended zoological exploration trip up the Orinoco, for the American Museum. The following day we held a long conference in which Miller joined us, and the conversation turned on the results of his recent expedition into the Orinoco region—a region in which we felt much interest inasmuch as, at that time, we thought it not improbable that after the completion of our journey in Brazil, we might return by way of the Rio Negro (of Brazil), and Cassiquiare, and descend the Orinoco to the Caribbean.

We sailed from Bridgetown late in the afternoon of the 10th, bound for Bahia, our next port of call. There was little of special interest from that date until the afternoon of the 14th, when we were off the Brazilian coast, just opposite the mouth of the Amazon, but so far away that there was nothing to indicate the proximity of that great river.

At noon the next day, in latitude $5^{\circ} 31' S.$, we were off the most eastern point of South America. Land was in sight, and we had our first glimpse of the country in which we were to meet with so many thrilling experiences.

Off the port of Bahia, on the morning of the 17th, we were met by a steam yacht that had been sent out by the Governor to convey the Roosevelt party ashore.

At Rio, our next stop, many of the plans we had been making were completely changed as the result of conferences with Senhor Lauro Müller, Brazil's then Minister of Foreign Affairs. Colonel Roosevelt, during a conversation regarding our proposed trip, remarked that he hoped to get away from the beaten highway of travel; whereupon Senhor Müller asked, "Why don't you go down the unknown river?" In reply to the explanation that was requested, we learned of a stream whose source had been discovered by Colonel Rondon, Chief of the Brazilian Telegraphic Commission, in the high interior of Matto Grosso. Colonel Rondon had followed the course of that stream for a distance of about one hundred and fifty kilometers (approximately one hundred miles) to a point from which he conjectured that its waters must ultimately enter the Amazon; but not knowing what its course might be from that point, he christened it "Rio Duvida." Before that day's conference ended, it was determined that we would complete the explorations of the River of Doubt.

Because Colonel Roosevelt had lecture engagements at Rio and other nearby points, it was arranged that Miller, Fiala, Sigg, and I should go on to Buenos Aires with our supplies and outfit. From there we were to make our way up the Paraná and Paraguay rivers, as far as Corumbá, Matto Grosso, at which point we were to establish a base for our natural history work and wait the arrival of the Colonel and other members of the expedition. Miller and I, however, had begun our zoölogical collecting before leaving Rio, where, during one of our visits to the botanical garden, we secured several bats.

Arriving at Buenos Aires, we learned that it would be a week or more before a steamer would sail for Asunción, or other ports on the Paraguay. We had about resigned ourselves to a week of comparative idleness, when some one of us saw the notice in one of the daily papers of the completion of a railroad between Buenos Aires and Asunción, the capital of Paraguay. Upon inquiry we found that traffic would be established within a few days, and that the running time between the two cities would be forty-eight hours. Miller and I were anxious to get into a locality where we could do some natural history work, and inasmuch as Asunción was a much smaller place than Buenos Aires, we believed there would be less difficulty in getting out into some rural district, where we could collect. Besides, much less was known of the Paraguayan fauna than of that about Buenos Aires. Consequently, we felt we were to be congratulated

when, three or four days later, we found ourselves passengers on the first through train from Buenos Aires.

Our railroad journey was one of mixed sensations; much of the scenery was novel, almost all picturesque, and the people interesting. The birds that were seen were all of a new fauna and claimed much of our attention. Between Ibicui and Alvear, Argentina, we saw many rheas, sometimes singly, again in flocks of from three or four to a dozen or more. We also saw a great many ovenbirds (*Furnarius*) and several of their nests. The latter were usually placed on the tops of the fence posts, telegraph poles, or similar locations. Other birds noted were several species of duck, screamers, herons, Cayenne lapwings, caracaras, tinamous, rails, and a multitude of small birds which at that time I was unable to identify. Mr. Ferris, the American Consul at Asunción, met us at the station and, through his good offices, our baggage was quickly passed through the Customs and we were conducted to the Grand Hotel del Paraguay on the outskirts of the city.

On our first morning in Asunción we were awakened by the song of a little white-throated sparrow (*Brachyospiza capensis matutina*) that had chosen the piazza rail just outside of our window from which to deliver his morning's greetings. Miller set out a few traps that day, while I began bird collecting not far from the hotel and succeeded in getting seven specimens, representing five species, before my efforts were brought to an abrupt close by a police officer politely informing me that it was contrary to the law to use firearms within the city limits. That afternoon we met Professor Fiebrig, who extended to us an invitation to visit him at the Agricultural Experiment Station, located at Trinidad, one of the suburbs of Asunción. The first real collecting of the expedition was done at that place, where four days' work netted something over a hundred specimens of birds, and nearly as many mammals.

During our stay at Trinidad, we planned an excursion for a short distance up the Rio Pilcomayo, into the territory known as the Gran Chaco. This excursion was also made possible largely through the good offices of Professor Fiebrig, who arranged for our transportation across the Paraguay and up the Pilcomayo in one of the motor boats employed by Internal Revenue officers. We were taken to a point known as Puerto Galileo, where there is a mill for the extraction of quebracho from the log. The superintendent of the factory very kindly sent us on to the end of the company's service railway, about three miles, where we established our camp on a tributary of the Pilcomayo.¹ From this Gran Chaco camp we

¹Probably Puerto Pinasco.

brought together a small collection that included 150 birds and 50 mammals.

On our return from the Gran Chaco to Asunción we found that our companions, Fiala and Sigg, had arrived and that they were busy superintending the transfer of the expedition's outfit to a small river-boat going to Corumbá. The following day we embarked on the river steamer "Asunción" for Corumbá. Comparatively few birds were seen during the first day's journey, but toward dusk of the second day several large flocks of roseate spoonbills were seen taking their course up stream, while here and there we passed rookeries where the trees and bushes were white from excrement of herons, snake-birds and cormorants. The character of the country through which we traveled was exactly similar from day to day: vast, level grassy plains, often dotted with palm trees, stretched as far as the eye could reach in all directions, marked by sinuous belts of timber which border the shallow streams or ponds. Not only do the belts of timber indicate the watercourses, but they also indicate high land. These great alluvial plains are inundated for at least half of the year, but furnish during the other half a wonderful growth of succulent grasses on which great herds of cattle fatten. In addition to the cattle ranches that have their headquarters along the Paraguay, there are several large plants where the quebracho is being worked for the tannin. The days were hot and the nights were warm, but the discomfort we experienced from the heat was as nothing compared with the annoyance and misery caused by the clouds of insects that nearly drove us mad in the late afternoons and at night. Not only were there mosquitoes in hungry hordes, but thousands of tiny, soft-bodied creatures that got into our eyes, ears, and into the nostrils.

Two days before arriving at Corumbá, the generally level country was relieved by short ranges of hills that rose abruptly from the grassy plains. The highest of these hills we estimated to be about eight hundred feet. The river runs close to the base of some of these hills, so that we could see the exceedingly rough and rocky surface, covered with somewhat stunted forest growth. The number and variety of birds increased from day to day, until there were countless thousands of egrets, other herons, and cormorants; while I shall never forget the sight that greeted us early one morning on the shores of a small lagoon, where there were congregated many hundreds of jabiru. When they took wing and began mounting upward in great circles, the display afforded Fiala an excellent opportunity to use his moving-picture machine.

Our first impression of Corumbá was that of a sleepy, quiet old town; but a glance at the shipping lying along the water-front, and the activity

there, soon convinced us that there was a large volume of business transacted. Corumbá is a principal port of entry for the vast territory of Matto Grosso, Brazil; and is also the port of entry for a large area of Bolivia. Miller and I, however, were not particularly interested in the commerce of Corumbá, so we immediately began making inquiries for some place where we might carry on natural history investigations. We soon learned of a large fazenda called Urucúm, twenty miles out, that might be described as a week-end resort for people living in Corumbá. After making some further inquiries about Urucúm we determined to visit the place and made arrangements with a cartman to call for us and our baggage at four o'clock the next morning. Native-like, however, it was ten o'clock before he arrived. The road, so called by courtesy, between Corumbá and Urucúm, is beset with enormous stones, logs, and stumps for one-half the distance, while the other half was soft, sticky mud from the previous night's rain. We spent seven hours on the journey—and it cost us twenty-seven and a half dollars gold! Senhor Cezar Carcano and brother, owners of the place, were at home, and good enough to provide us with quarters in a small house near their own place and factory, where they manufactured aguardiente and panela, the black sugar of the country. We made our headquarters at this place, until the arrival of Colonel Roosevelt and the Brazilian contingent of the expedition.

The dwellings of the owners, together with the store-houses, factories, and cottages of the employees of the Fazenda Urucúm, are located at the foot of one of the ranges of hills that rise abruptly from the generally level, grassy plains bordering the Paraguay. The lower two-thirds, or more, of the rocky sides of these hills are heavily timbered, while the upper third and the generally nearly level tops are covered with tall-growing coarse grasses. Near the foot of the Urucúm range much of the forest has given way to cultivated fields, that in turn were succeeded by brush and pasture land; the latter, with many irregular areas of thickets and patches of low, forest growth, particularly near the watercourses and ponds.

On the heavily forested hillsides, peccaries (*Pecari tajacu*) in small droves or family parties were not uncommon; squirrels (*Urosciurus langsdorffi urucumus*) were abundant, and troops of the little monkeys (*Cebus azaræ azaræ*) were frequently seen; these monkeys were of unusual interest to me, inasmuch as the old males showed their gallantry by assuming the care of their offspring as the troop scurried through the tree-tops. In no other species of monkey have I had ocular proof of the old male's interest in his offspring; but on my first encounter with this species

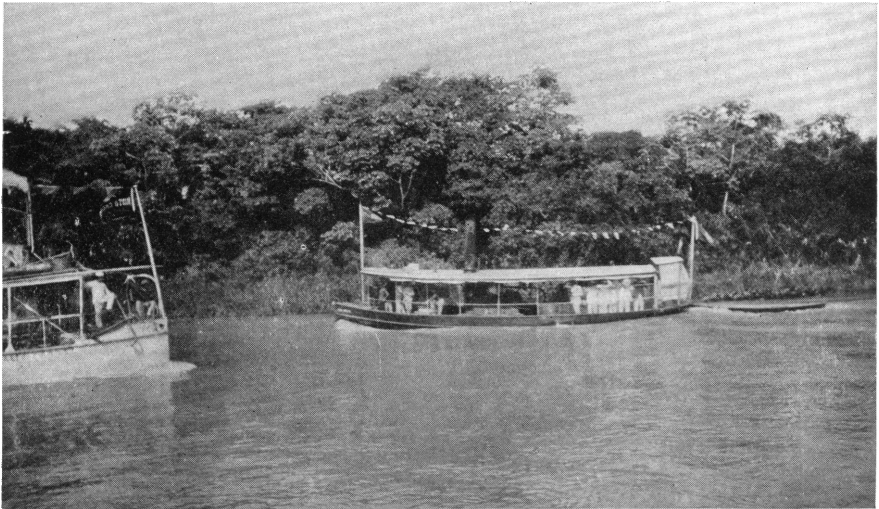


Fig. 1. Expedition's escort on the Paraguay, November, 1913.



Fig. 2. Street in Corumbá, November and December, 1913.



Fig. 1. Street in Corumbá, November and December, 1913.



Fig. 2. On the road between Urucúm and Corumbá, December, 1913.

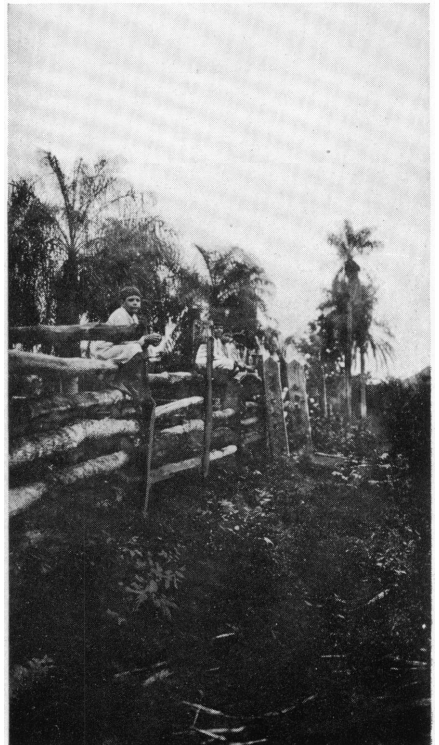


Fig. 3. Urucúm, December, 1913.



Matto Grosso, Palm.

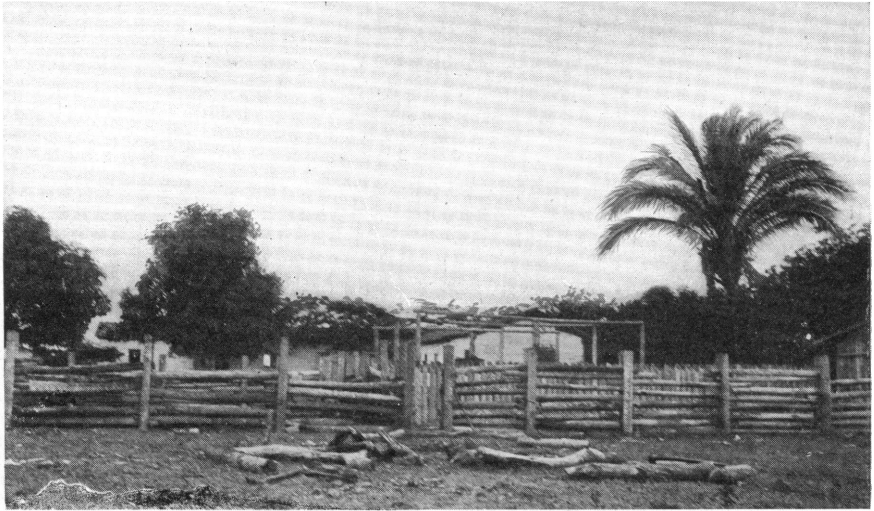


Fig. 1. Ranch at Palmiras on the Taquary near Matto Grosso, December, 1913.



Fig. 2. Porto Campo, camp of Expedition, January, 1914.

at Urucúm I shot an old male that was carrying a half-grown young, and thereafter I frequently saw troops in which the males were carrying the young.

During our stay at Urucúm comparatively few water-birds were seen, and the collections we made consisted almost entirely of forest- or brush-loving species. In the collection there were some four hundred specimens, representing nearly two hundred species. The specimens that were collected from day to day were usually packed as soon as they were properly made into cabinet skins. This we did in order that we might the more quickly get our outfit together and start for Corumbá as soon as we were notified of the arrival of the other members of the expedition. As a result of this little bit of preparedness, Miller and I had our baggage and collections in Corumbá on the evening of the same day when we were notified that the boat was due to arrive.

During a conference held on board the steamer that evening, the Colonel expressed a desire to get away from Corumbá at the earliest possible moment, and asked Fiala and me if we could get our baggage and other supplies on board at once; this we accomplished in a comparatively short time by returning to shore, where we engaged boats and porters, and also made arrangements for the shipping of the collections that we made at Urucúm. Finally, at 10 P.M., Christmas Eve, the steamer whistled a goodly salute to Corumbá and steamed up-stream, headed for the unknown wilderness of Brazil.

From Corumbá, the river was so narrow that it was deemed inadvisable to run at night; as a consequence every afternoon about four o'clock we would tie up for the night, and nearly every member of the party would leave the boat to explore the surrounding country.

The specimens that were brought in from these afternoon hunting trips were taken care of the following day as the steamer plowed her way upstream; in this way we traveled for eight days, finally entering the Rio Sepotuba, which was too shallow to permit the passage of our steamer; here we transferred our outfit to smaller craft, in which we ascended to a point known as Tapirapoan, where the Brazilian Government maintained a small military station. At this point, a sufficient number of oxen and mules for pack animals, and for riding animals, had been brought together for the use of the expedition in crossing the high tableland forming the divide between the Paraguay and streams entering the Amazon.

Forty-four days were spent in making the journey across this tableland. However, as we started early every morning and frequently made

camp late at night, we were not able to do much in the way of collecting. We finally reached the point on the Rio Duvida where Colonel Rondon's explorations had terminated; here we secured seven dug-out Indian canoes, into which we placed our equipment, together with rations for eighty-five days. The American members of the party consisted of Colonel Roosevelt, Kermit Roosevelt, and myself; our Brazilian companions were Colonel Rondon, Lieutenant Lyra, Dr. (Captain) Cajazeira, twenty-two canoe men and camp helpers, and three dogs.

At noon on February 27 we started on our canoe journey down the unknown river. Kermit Roosevelt, in the smallest canoe, went in advance; he carried the sighting rod. Colonel Rondon and Lieutenant Lyra with telemeter and compass followed in the second canoe, making the observations necessary for the platting of the stream. Colonel Roosevelt, Dr. Cajazeira, and I followed in the third canoe; the remaining four canoes joined in pairs, with the balance of the outfit, brought up the rear. A great many trees had fallen into the stream, and in many places almost completely blocked our course; the boatmen as a consequence had a strenuous time getting the canoes around these obstructions. We made camp early that afternoon, but it was nearly night before our tents were pitched owing to the labor necessary in clearing away the dense undergrowth that covered our camp site. The next morning we set up a marker on which was inscribed "Camp 1," together with the date, Feb. 27, 1914. Before leaving the camp I collected half a dozen birds.

Our second day's journey was much the same as that of the first; the river making innumerable twists and turns, first running away to the westward, and then as much to the eastward; but at the end of the day we found that the general course had been due northward. Game was very scarce, only two guans having been seen; but there were abundant game trails, indicating that there were many tapirs, deer, and wild hogs that frequented the neighborhood of our camp. On our descent of the river, the surveying boats always started as early as possible in the morning; the "kitchen" and other boats going later, an arrangement that afforded me an opportunity to do some collecting and make observations on the animal life seen about our various camps.

The third day out we passed several Indian clearings; and at one point, a primitive bridge consisting of twisted lianas stretched across the river. During the day we advanced rapidly, and also for the greater part of the following day; but toward evening of the fourth day the current of the river began to quicken, running faster and faster until we were

going almost as if through a mill race; while from a distance there was borne to our ears the ominous roar of rapids or a cataract; rounding a sharp bend in the river we were confronted by the angry whirl of waters that might precede either. Our canoes were quickly directed ashore, and while the canoe men and camp helpers began clearing the ground for our camp the other members of the party cut their way through the tangled undergrowth, down along the river's shore, to determine how serious or how extensive was the obstacle to our progress. As the result of our reconnaissance, we found a long series of rapids and low falls; while for a part of the distance the river went rushing down through a narrow gorge, whose jagged walls at one point were barely two yards apart. •

Only one glance at the angry whirl of waters was necessary for us to realize that a long portage must be made. The following morning our camp and kitchen equipment was transported to the foot of the carry, and work was begun cutting a road through the forest over which we could drag our heavy dugout canoes. The small trees that were felled were cut into short lengths and laid across this road, forming a continuous skid-way. Four days were spent in conveying our canoes and supplies to the foot of the carry; when we once more embarked on a broad, smooth river. But at the end of a day and a half we were encamped at the head of a second series of rapids and small falls that required another long carry. During the four days that were spent in transporting our canoes and supplies to the foot of these rapids, we moved camp three times—the last occasion to a point we are all sure to remember.

We had carefully passed the two largest and oldest of our canoes by means of ropes, and felt that all was secure before retiring that night; but a heavy rainstorm so increased the flood of water that these two canoes capsized and crushed among the rocks. It was a serious misfortune; in spite of the fact that part of our equipment and supplies were swept away it was impossible to get all the members of the party and outfit into the remaining five canoes; one or two new canoes must be built. Only a very short time was necessary before we found a suitable tree that we felled and work on a new twenty-five foot canoe was begun. During our stay at this point, which was christened "Broken Canoe Rapids Camp," rain was almost constant; our clothing was never dry, and we suffered greatly from the attacks of hordes of biting, stinging insects. Especially did they attack the canoe men and camp helpers, who were busy hewing out the new canoe; their clothing was scanty and their hands, feet, and faces soon became sore and much inflamed. Work on

the canoe, however, went steadily forward. Colonel Rondon would stand all day long, directing. The men worked in shifts: the last shift not stopping until near midnight. During our stay here we made a careful inventory of our possessions, and found that there were sufficient rations for the men to last about thirty-five days; while the rations that had been arranged for the officials of the party would perhaps last fifty days. At that time we had been out for fifteen days; our survey records showed that we had advanced on an average of about two and a half miles per day, or a total of twenty-two or three out of a possible four hundred, should the Duvida prove to be a tributary of the Amazon; and at the estimated rate of advance we would be "shy" about thirty-five days in our food supply! About noon, on March 14, every member of the expedition was called to assist in dragging down to the shore and launching our new canoe. She rode well on the water, and at one-thirty in the afternoon we made our start down stream once more. The current was swift, carrying us rapidly along, and as we had all reached the point where we felt the necessity for making better time, we ran quite a number of rapids which made things exciting. Two of the rapids were decidedly dangerous for canoes so heavily laden; once we shipped half a boatful of water and came very near swamping, from which we were saved by furious baling. That afternoon we ran fifteen kilometers, not making camp until long after dark. We had already met with misfortune, but the following day was destined to be one of tragedy. We started early in the morning, with Kermit's canoe as usual in advance. Only a short distance had been traversed when we encountered a series of rapids that would require another carry. Kermit disembarked on the right bank of the river, and after making an examination of the shore, concluded that the difficulty in getting our canoes around on that side would be too great; so he once more embarked, turned his canoe up-stream, with the idea of ascending a short distance and then passing to the other side of the river. But whether it was through an error in judgment on the part of the paddlers, or that they were caught by an unseen whirlpool we shall never know, but in any case, before the occupants of the canoe realized their danger, they were in the swiftly moving water that swept them over the brink of the falls. They were carried down through one series of rapids, the canoe was capsized and crushed among the stones. Kermit and one of the paddlers managed to reach shore, but Simplicio was not seen again. In addition to a life, we lost a canoe, ten days' food supply, and part of our tools for boat-building, besides Kermit's rifle. The loss of a human life is always a tragedy, but the loss of the canoe and its contents was an even greater one for the remaining members of the party.

We once more found it was impossible to get all the members of our party into the remaining five canoes and, as we did not find any suitable trees in the immediate neighborhood of our camp for building canoes, we determined to push ahead with part of the members of the expedition walking along shore. Misfortune, however, was still following us, as we had only advanced for a short distance when more rough water was encountered, down which we felt it would be impossible to send our loaded canoes; but after a careful survey from along shore, we concluded that we might let the canoes, if empty, down by means of ropes. The plan succeeded with four of the canoes, but the rope broke with the fifth (the large, new canoe, that we had made at "Broken Canoe Rapids Camp" and launched only four days before), which, in the midst of the rapids, was swept in among the rocks and crushed. But that was not to be the end of our misfortunes for that day; after we had made camp, Colonel Rondon took one of the dogs and started down stream to make a reconnaissance. He had only gone a short distance, however, before the dog was heard to give a sharp cry of pain, followed a few minutes later by another cry, and then the animal staggered into view only to drop dead, pierced by two long Indian arrows. Rondon saw no one, but he heard the Indian voices; he fired a couple of shots, hoping to frighten the Indians and at the same time to warn us; and then made his way back to camp. The incident filled us with apprehension—were we in a hostile Indian country?—a question which we never were enabled to answer fully, because, during the long days and weeks of our struggle with rapids and cataracts, hunger, and sickness, we never saw a living soul; day after day we came to hastily abandoned Indian camps. We frequently saw footprints by the river's edge; we even heard Indian voices, but never once in all that long journey did we see a human being. The sight of the hastily abandoned camps and the sound of voices finally became uncanny; we felt that we were surrounded by hostile Indians and that our only safety lay in keeping on the move. At this point we abandoned much of our equipment; in that way we were enabled to get all of our food supplies and the members of the party that at that time were too sick to walk into the canoes, together with two paddlers for each canoe. The remaining members of the party walked along the shore. In this way, we advanced for four days, being fortunate in not encountering any serious rapids. On the evening of the fourth day we encamped in a sheltered nook, near which we found a number of trees suitable for building new canoes. As we felt we had passed the immediate danger zone, we determined to stop and build one or two new boats.

At the point where we lost the first two canoes, we had cut down our rations somewhat; later, after the accident when Kermit's canoe was lost, we again cut rations; and from that time forward we ate a great many of the tops of palms. The labor was very severe, and the food we had was neither sufficiently nourishing nor enough in quantity to keep up the strength of the men; but in spite of lack of nourishment and the hardships we had gone through, only three days were spent in constructing two small canoes.

During the time spent in building these boats, I worked collecting birds about the camp, which was situated in thick forest where there was much undergrowth. The birds that were seen there were almost all either ant-thrushes or woodhewers; some of the former splendid songsters. With the completion of the canoes our fleet once more consisted of seven boats, but averaging much smaller than those with which we had begun the journey; this, owing to the loss of provisions and some of our equipment, gave us abundant room.

After leaving this camp, we advanced much more rapidly than we had previously done, although we passed a great many rapids and low cataracts; but we were becoming more skilful every day in the handling of the boats, and getting them around obstacles.

When we were starting on our journey down the river, we expected to supplement our rations with fish from the stream, Brazil-nuts, and possibly other fruit from the trees along the shore; but although one or two men were detailed at every camp to fish, they were rarely successful, and it was three weeks before we found a single Brazil-nut. The trees were abundant, but in that region the Brazil-nut crop was a complete failure. During the entire trip there were only three occasions when nuts were found; they were carefully counted and distributed equally among every member of the party. We had also expected to find much game; but in this we were disappointed. It was the height of the rainy season and vast areas were inundated; undoubtedly many animals that we might have seen had been driven back to the highlands. Not a day passed without its exciting moments, and many times we narrowly escaped disaster, such as befell us on the 27th of March, when the canoe men in attempting to run the empty canoes down through a long series of rapids made an error in judging the force of the current. They had two of the canoes strapped together, forming what there was known as a balsa, and in attempting to get through a too-narrow channel, with a sharp turn near the rocky shore, were swept against the rocks and also caught by some vines and creepers from an overhanging tree-top. In the

twinkling of an eye the current had wrenched the outer boat loose, driven it under the prow of the inside boat that was thrown on its side, both filled with water and sank. Thanks to the fierce current, they were held firmly against the rocks and snags near the shore and not whirled away to be crushed among the boulders of the main rapids below. I heard the screams of the men and hurried from the port where we were waiting to find out what had happened: on discovering the wreck I immediately called all the men, and by the combined effort of everyone, Colonel Roosevelt included, working in the rushing water almost to our waists, we were able to raise the canoes one at a time and get the water out of them. There were many anxious, strenuous moments during the process when everyone was straining and lifting to his uttermost.

On the evening of the day following the incident described above, we made our camp at the mouth of a small stream that Colonel Rondon christened "Rio Cherrie." During the entire day we had advanced only about one mile, and the camp was at the beginning of a long series of rapids and low falls; the river rushing through the deep gorge between the mountain. Our first examination made us feel that it might be necessary to abandon all of our canoes; we would at least be compelled to leave everything except the clothing on our backs, and what little food remained. At that point I made up ten bird skins, which we thought likely would be the last collecting that I would be able to do; in fact, we debated the question of abandoning the box of skins, but I determined to hold on to them just as long as possible.

The following ten days proved to be the most exciting and dangerous part of our journey, and I can, perhaps, not do better than make an extract from my journal.

Sunday, March 29.—We started from the mouth of the Rio Cherrie, Colonel Rondon with a gang of men cutting a trail around and over the mountain and down to below the series of six falls; it was necessary to go back a considerable distance from the river, it being impracticable and too dangerous to cut a trail along the precipitous sides of the mountains facing the river. At the highest point on this trail, we came out on a rocky point looking out over a vast panorama of forest-clad hilltops and valleys, with the Roosevelt rushing like an arrow of light straightaway toward the distant hills, there to be enveloped in another sea of forest; from that point it was utterly impossible to determine if the river turned to the right or to the left, to ply its course through the hills to the open country beyond. There would be rough going, we felt certain. Kermit and Lieutenant Lyra, with a gang, tried to get by means of ropes some of our canoes down and over the falls; but at night they had only succeeded in passing one canoe below the third fall. The work was slow and dangerous but extremely important if we were not to lose our boats. I spent the entire day hunting, but only succeeded in adding one new bird to my collection, a small *Synallaxis*, about the size of the northern junco with long, wedge-shaped tail and rounded wings.

March 30.—The main part of our supplies, the cargo, was carried up over the trail and down to the camp; that is, to the foot of the series of falls and rapids. The work of passing our canoes was advanced to the head of the last fall, where a considerable carry overland is necessary. We had determined to abandon our largest canoe, but through an accident, one of the smaller ones was wrecked to-day; as a consequence, an effort will be made to get our big canoe down. Several swallow-tailed kites were seen sailing about over the hilltops. Colonel Rondon came on to a troop of monkeys at the top of the divide and got two; they were of the kind known here as *barragudos*. Everyone had a taste of fresh meat, even the dogs had a generous helping; the altitude of the pass above the camp is 106 meters.

April 2.—All day yesterday and the day before was spent in passing the canoes, including our largest one, down to the camp; and we have been congratulating ourselves in getting them down safely. Colonel Roosevelt is very ill. I assisted him up over the hilltop; the climb up and down was very tiring, and he was completely exhausted when we reached camp. Lack of sufficient food is, I believe, beginning to tell upon him. This morning the two new canoes were joined together as a *balsa*, the other canoes were all loaded separately. The Colonel and the pilots, and other paddlers were the only ones that went in the canoes, the rest of us walked along the shore. At the end of an hour's time we arrived at the head of rapids that will require the portage of our canoe for a long distance; instead of getting out of the hills at once, as we expected to do, we are deeper in among them. The river's course is a narrow, rocky gorge where it runs like a mill race, and wherever there is an obstacle of any kind, the water becomes rough and dangerous. The hills on each side of the river are very precipitous, rising abruptly from the water's edge. Frequently we had difficulty in finding a path between the perpendicular wall of rock and the rushing river at its base. The carry for the cargo was difficult, so our advance was relatively very little, but we succeeded in getting the single canoes and the *balsas* safely through. Rondon, Lyra, and Kermit, went on a little farther to explore; they report rapids and several small falls ahead. How much more of this we have no one knows; Kermit found and brought back with him a small turtle; it will furnish soup for our breakfast tomorrow.

April 3.—We found that we had a very long and exceedingly difficult carry before us. For a short distance the canoes could be run down empty; then they had to be carefully let down with ropes, and finally carried overland for a short stretch. Early in the day disaster seemed again to have overtaken us. In bringing the empty canoes around to the point, from which they were to be let down with ropes, the canoe man neglected to put a tie-rope in the smallest of our three original canoes. As they paddled along and came near shore, they caught at overhanging boughs and *bejucas*, which broke with them; the canoe was caught in swift water and was whirling away when Juan and Antonio leaped out to save themselves, and also if possible to save the canoe, but without a tie-rope it was useless; the canoe was whirled out of their hands to be crushed to splinters in the whirlpools below; a disaster which left us only four canoes. But the loss of the canoe was not all. The cargo was being carried from last night's camp to the head of the first falls as an intermediate station. Colonel Roosevelt, Kermit, and I had gone ahead to that point. Colonel Rondon, with a gang was ahead trying to clear a way for the cargo-carriers, over the hills and along the face of the cliff to the foot of the falls and rapids. Lyra was down by the river's edge with a couple of men clearing a way for the ropes in letting the canoes down. The remainder of the men were engaged in bringing the cargo forward to the first



Fig. 1. Tapirapoan. Hut and palms, January, 1914.

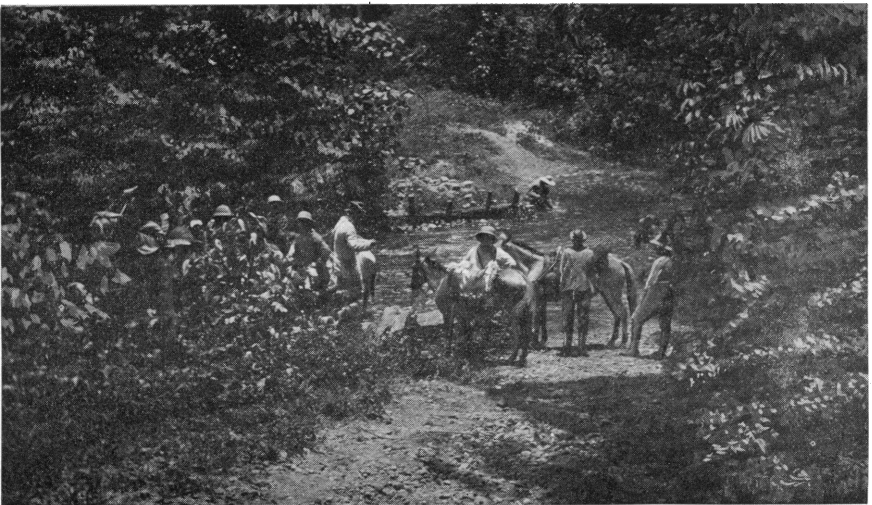


Fig. 2. Tapirapoan. Dense forest along the river, January, 1914.



Utiarity. One of the most wonderful waterfalls of the world. January and February, 1914.

station. The Colonel was reading, while Kermit and I were talking, and did not give much attention to the going and coming of the men, until Julio, the lazy shirk of the party, came up groaning and muttering to himself as was his custom; as he put down his load, I remarked, "one would know who that was by the groan." The Colonel and Kermit both gave a short, laughing assent. I looked up and noticed that Julio, when he started back, had picked up one of the rifles that had been deposited by one of the other carriers. I made some remark about it, and think that the Colonel and Kermit also looked up and made some trivial comment. A few minutes later we heard a shot; I think I remarked, "I wonder what he has shot at?" We were to learn very quickly. Several of the *camaradas* came running up with their loads, and one of them shouted, "Julio, he matado Paishon." The Colonel sent a messenger for Rondon and Lyra. I, and I think my companions, felt that the cowardly murderer had run amuck; we expected to hear at any moment more shots, and feared that Pedrinho, who incurred Julio's animosity by having caught him stealing food, and who was back at the camp, might be the next victim. The Colonel started back for the camp; Kermit and I remained where we were to guard the stores and canoes. Finally Rondon came back and then with Kermit and Lyra went back toward the camp, first leaving, however, a couple of armed men to guard the stations. A few minutes later I also started back to the camp with one of the men, but only for a short distance when we came to the spot where lay the body of poor Paishon, just as he had fallen, and from where the murderer had turned into the forest after committing his cowardly deed. Antonio Correa started to follow his trail, but after a few yards gave an exclamation of surprise as he caught sight of the gun that Julio had used, and that had probably been torn from the murderer's hands by the vines, as he fled in his cowardly terror from his victim. The finding of the gun was an immense relief, for I am sure that we all felt that the assassin might be lurking in the thick forest awaiting an opportunity to get another victim. A little later Louis Correa trailed the outlaw for a considerable distance; the trail showed that he had run a short distance and had then doubled back, probably with the idea of recovering the gun, but had been frightened away. The trail then turned and led straight up over the hill where it was lost in the thickets. The *camaradas* with axes and knives dug a shallow grave, scooping the dirt out with their hands, a few feet from the spot where Paishon had fallen. Rondon, Lyra, and the Doctor assisted by Colonel Roosevelt, Kermit, and myself lifted the body and placed it in the grave. Paishon had died doing his duty, and to his honor we fired a salute over the grave. As we had no idea what other crimes might be attempted by Julio, the *camaradas* had an armed guard with them as they carried the cargo along the steep, dangerous trail on the side of the cliff, and down to the foot of the last falls. Someone stood guard also at each end of the trail, while I stood guard and assisted Lyra and Kermit in working the canoes down through the rapids. The work went slowly, and we only succeeded in getting two of the canoes as far as the carry around the falls; also only part of the cargo was brought down, making it necessary to divide our party at night; one division remaining with the canoes and cargo still at the head of the rapids; while the remainder of the party managed to find room for their hammocks stretched between the trees, above the boulders, along a narrow strip at the foot of the cliff.

April 4.—By diligent, careful work we got the remaining two canoes down to the carry without accident, and then across the carry as far as last night's bivouac. Today I continued to stand guard with my gun, giving a helping hand when necessary

with the rope, and in pushing and pulling the boats across the carry. Before noon all of the cargo had been transported, and although it was late in the afternoon before we got started, we advanced for one or two kilometers to the head of another series of rapids before making camp.

Sunday, April 5, Camp 25.—The rapids ahead of us proved not difficult to negotiate. Antonio and Louis Correa were able to bring the canoes down empty with difficulty. Late in the afternoon Antonio Parasee hurried for his gun and called, "monkeys are in sight." Lyra, Kermit, and I each grabbed our guns and went after Antonio. There was a big troop of barragudos, but they were very high up and moved with surprising speed through the treetops, I succeeded, however, in getting two; while Kermit got one. They furnished us with fresh meat, which everyone in camp craved so much. Our prospects looked brighter this evening; the mountains that had so long hemmed us in seemed to be falling away from the river, and the river itself is broadening.

April 6, Camp 26, Mouth of Rio Capitão.—We got away from last night's camp about nine o'clock. The boats going fully loaded, but carrying the paddlers only, while the remaining members of the party walked along the shore to the head of the first rapids where it was necessary to unload and transport the cargo for some three hundred meters to the foot of a series of rapids down which the canoe men were able to bring the empty canoes. At the foot of the rapids the river widened out into a spacious bay, and then took its course—a deep, broad, quiet stream—away to the northward. Only once during the remainder of the day was it necessary to disembark; and then the paddlers brought the loaded canoes down through a not difficult rapids. All day long the mountains have been receding from the river on either side. Only a few outlined, rather low hills, appeared in the distance to offer a barrier to our course, but the river wound gracefully around them and before noon the last of the hills was left far in our rear, and the course of the stream grew less tortuous. Our surveying records for the day showed that we covered a distance of thirty-six kilometers; the best record that we have made since starting on the expedition. Everyone to-night feels, and certainly looks more cheerful. We feel that most of our river troubles are behind us. Our camp tonight is at the mouth of the largest tributary that has entered the Rio Roosevelt, and although we can hear the roar of rapids or cataract ahead of us, the country all about is level, or nearly so, and we feel that the rapids cannot be serious. As the camp site is a pleasant one and several of the members of the party have been sick for some days, we stopped for a day's rest. Antonio Correa, however, went ahead to make an examination of the rapids, and on his return reported not only serious rapids, but falls! It may well be that we are up against it good and hard. In the evening Antonio and Henrique brought in a fine big fish, known locally as the *Pira rara*. It was about three and a half feet long, and in general appearance much like the catfish or horned pout of our own country, but with a sort of armoured plate covering the anterior third of the body. In cleaning this fish the men removed from the stomach the head and arm of some species of monkey; unfortunately these relics were thrown away without my seeing them, and it was only by hearing the conversation of the men that I learned the facts; the flesh of the *Pira rara* is of fine flavor.

On the morning of the 8th we started on our journey; once more to begin the battle with rapids and cataracts and, as has so long been the case, we are camped where the roar of angry waters is heard both above and below us. The lack of sufficient food is a potent reason why we are all physically below normal, and a similar lack of

strength and energy is very evident among the men; but we were fortunate this evening in one thing. After we had reached our present camp, I heard the cries of a troop of monkeys back in the forest. Taking my gun, I slipped through the undergrowth to a point beneath the trees where they were feeding; out of the troop of a dozen or more, I got three; one of three, however, hung suspended by its prehensile tail, and I could not have secured it but for the help of Antonio Parasee, who, by climbing up a small tree and from that tree holding on to the *bajucas*, made his way into the branches of the larger one, where the monkey hung; he finally reached a point from which it was possible to shake the limb and dislodge the animal. The fresh meat thus secured was most acceptable. In addition to the monkeys we had two fine large *pacu* fish that were caught by Lyra, who used bits of monkey meat for bait.

My notes for April 9th, like those for many days previous, are simply a record of our struggle with the rapids and cataracts; and much of the cheerfulness that we felt on arriving at the mouth of the Cardoza has been dispelled by a ridge of hills in front of us, on the opposite side of the river, that towers to an imposing height; this range of hills, through which the Roosevelt has cut its way, is doubtless the continuation of the range that shaped the course of the Cardoza westward into the Roosevelt.

April 10.—I fired my last cartridge of heavy shot this evening, in an attempt to get a large spider monkey; the animal was wounded but escaped. The losing of the heavy cartridges, by the theft of some of the *camaradas* who doubtless thought the cans in which they were sealed contained meat, was a most serious loss. My gun is thus rendered of little value for obtaining meat for our party.

Sunday, April 12.—We have just had the best news since starting on this journey, and we are all much excited over it. Antonio Correa, after we had made camp, took the smallest canoe and crossed the river to fish. As he worked his way along the shore he found a place where a *bejuca* had been cut off with a knife or axe. It was in a place where the cut could have been done only from a canoe. As we have not found any canoes in our journey down the river, we know that the Indians are not canoe Indians; consequently, some adventurous *syringero* (rubber gatherer) must have been exploring along the Roosevelt at this point, and we feel that our chances of meeting with rubber gatherers may take place any day.

During the early morning, in working our way across one of the numerous rapids, our oldest and surest canoe got beyond control of the paddlers and was hurled in among the rocks; fortunately where it was thrown the water was not deep, although very swift. After about three hours of heart-breaking toil directed by Lyra and Rondon, it was finally rescued. The damage sustained was only slight, but a great wave of uncertainty was lifted from us when we knew that the boat was not lost. I don't believe the men have sufficient strength or energy to build another canoe.

Our camp to-night is one of the most uncomfortable of the entire trip. It is in the midst of a tangle of vines, bamboo, low trees, and bushes. We have been so busy in our efforts to get down the river, that few ornithological notes have been made. To-day I saw a great blue heron, the first that I have observed on the river. Colonel reports that he saw one at the mouth of the Cardoza. He also states that at that point he saw a black skimmer (?).

Paroaria is common, and kingfishers abundant. Our dinner tonight was the best we have had for a very long time. After we had made camp, the men who had been detailed to fish secured between twenty-five and thirty *pacu* and *pirhanas*. The dinner consisted entirely of fish and one soda cracker for each man.

The next morning in the thicket about our camp, I got a fine example of the chestnut-breasted manakin (*Heterocercus lineatus*). And during the day the belted swallow (*Diplochelidon melanoleuca*) was observed for the first time, as were also the white-banded swallow (*Atticora fasciata*) and the white-rumped tree swallow (*Iridoprocne albiventris*); the latter were very abundant on the upper stretches of the Roosevelt, but were not observed in the region through the hills.

After more than a month's constant struggle, our camp is located at a point where we do not hear the roar of water; it is a great relief to us. During the day we seem to have run out of the rough country, but I can never forget with what dread we watched each turn of the river to see what it held in store for us, and with what relief we found our way unimpeded. Only slight, easily run rapids being encountered during the day we had good straight going almost continuously; from time to time a hill, or low ridge, would appear ahead of us to fill our hearts with apprehension; but every time we passed an obstacle without undue difficulty our spirits grew lighter.

April 15.—This has been a day of many agreeable surprises. First, we found a sign-post on the left bank of the river bearing the letters "J. A.," the first definite mark that a civilized man had been on the river. The sight of this sign-board was like a tonic for everyone. Within half an hour when we came within sight of the first *baraca*, or *ranchito*, what a shout went up from everyone in the canoes, and what a delightful sight it was; uncertainty was a thing of the past; we had reached a point below which the river must certainly be known at least to the hardy rubber-gatherers. This first *baraca* was without tenants, but guarded by three dogs. The dogs, however, were friendly and glad to see us. We stopped and looked about the place, but not finding any provisions we re-embarked. We felt sure that we would soon find other habitations where we would also find food; and as a matter of fact, within three-quarters of an hour, we arrived at the second *baraca*, and found its owner, an old negro, named Ramundo José Marques; we received from him the first definite information as to our whereabouts. We were journeying on a stream, the lower course of which had been known to traders and rubber-gatherers as the Rio Castanha, although a stream that had never been marked on the map. Senhor Ramundo was living absolutely alone and his supply of provisions was not more than would last him for thirty-six hours; he, however, assured us that it was not far to the next *baraca* where we would find a family and plenty of provisions. At 3 P.M. that afternoon we reached the *baraca* of a Senhor Loreto, whose wife and child were at home but fled to the forest at our approach! After wading through estuaries and streams she at length reached the place where her husband was employed with a couple of his neighbors; to these men she gave the report that their homes had been raided by the Indians; her fears were due to the fact that canoe-loads of people, except Indians, had never before been seen coming down the river! A few hours after our arrival, Senhor Loreto with his neighbors put in an appearance; not finding an Indian raid in progress, we were given a hospitable welcome. But before the arrival of Senhor Loreto, we had helped ourselves from his store of provisions and had a royal dinner in preparation. We were here able to purchase mandioca and yucca. The *camaradas*, and we, ourselves, had a full meal; the first in many days. Although we had not been for a long time on an exclusive diet of fish, we were nevertheless thoroughly tired of it; perhaps nothing that we saw at this *baraca* was more pleasing than the sight of a couple of old hens with broods of little chicks—it was so homelike. That night we had a roof over our heads, and as I lay awake feeling at ease and grateful for our deliverance, another joyful sight caught

my eye; the great dipper hung above the northern horizon in full view. Upside down, to be sure, but how good it looked to me; almost as if an old friend has come from home.

From Senhor Loreto we acquired much information about the river, rapids, distances between *baracas*, and points where we were sure to find a store of food; and, having learned about what was ahead of us, there were no surprises on the following day. We did not strain to see, and dread to learn what might be around each bend of the river. In this way we proceeded without incident, until the evening of the 19th of April, when we secured from the owner of one of the *baracas* we passed the services of a guide who knew the river from that point to its mouth. We also bought from the owner of this *baraca*, Senhor Barboza, an additional boat that we fitted with a cover, so that several members of our party, who were still ill with fever, could be carried along with less discomfort. Although there remained a long distance to go, and we encountered many rapids, and made carries around the worst of these, we felt no uneasiness and having plenty of food the men worked with a will. On the 20th we encamped at theanela Rapids, where we found a good-sized storehouse; we were able to buy bananas, sugar cane, a lot of lemons, two or three chickens and a duck; also some mandioca, condensed milk, rice, and tobacco, making an abundant supply of all the necessary things. On the 21st, at another large *baraca*, we were able to exchange the last two of our small canoes, one of which was the last and only one of the original seven with which we started into the unknown wilderness, for a large and more suitable boat.

On the morning of Sunday, April 26, we reached the end, or at least the virtual end of our long, hard journey—the junction of the Rio Roosevelt and the Aripuaná,¹ where was located the camp of Lieutenant Pyraneis. He had been sent with provisions and the Brazilian Government S. S. "Cidade de Man'os" to this point, as it was felt that it would probably be one of these two rivers where we could come out. One of the most pleasant sights that greeted our eyes was that of the Stars and Stripes floating side by side with the Brazilian flag. We received an enthusiastic welcome from the Lieutenant and his companions.—G. K. C.

THE STATE OF MATTO GROSSO

GEOGRAPHIC POSITION.—Matto Grosso is an inland state of Brazil which is bounded on the north by the State of Amazonas, on the east by the States of Goyaz and Minas Geraes, on the south by the states of São Paulo, Paraná, and the Republic of Paraguay, and on the west by the Republic of Bolivia.

TOPOGRAPHY.—The larger part of the state belongs to the western extension of the Brazilian plateau across which, between the 14° and 16° parallel, runs the watershed separating the drainage basins of the Amazon and the La Plata.

Colonel Roosevelt states that a singular topographical feature of the "Plan Alto," the great interior sandy plateau of Brazil, is that at its westernmost end the southward flowing streams, instead of running into the Paraguay as they do farther east, form the headwaters of the Guaporé

¹I have no information as to the correct spelling of this locality; see Aripuanan on map (frontispiece).

which may perhaps be called the upper main stream of the Madeira. These westernmost streams from the southern edge of the plateau, therefore, begin by flowing south; then for a long stretch they flow southwest; then north, and finally northeast to the Amazon.

PHYSIOGRAPHY.—This region is known as the plateau of *Matto Grosso* and its elevation, so far as known, rarely exceeds 3000 ft. The northern slope of this great plateau is drained by the *Araguaya*, *Tocantins*, *Xingú*, *Tapajóz*, *Guaporé*, *Mamoré*, and *Madeira*, which flow northward and, except the first, empty into the Amazon. The southern slope drains southward through a multitude of streams flowing into the *Paraná* and *Paraguay*. The general elevation in the southern part of the state is much lower and large areas bordering the *Paraguay* are swampy, partially submerged plains, which the sluggish rivers are unable to drain. The lowland elevation in this part of the state ranges from 300–400 ft. above sea-level.

CLIMATE.—“The *campo* district¹ has a climate admirably suited to grassland in particular, frequent precipitations and moderate heat during the vegetative season; on the other hand, the climate includes a factor unfavorable for woodland in dry cold winter.” A good grassland climate is then composed of the following elements: frequent, even if weak, atmospheric precipitations during the vegetative season, so that the superficial soil is kept in a moist condition; and further, a moderate heat during the same period.

The city of *Corumbá*² is the hottest, no doubt, in *Matto Grosso*, for in addition to its location, the nature of the soil seems to affect the climate. The coolest months are May, June, July, and August; the hottest, September and April. There are no seasons or noticeable changes throughout the year. During some months there are spells of cool breezes lasting six to eight days. Some of these cool spells are preceded by violent winds that blow over the city a great mass of fine dust, producing a phenomenon similar to rain. The climate of *Corumbá* is humid only during the days of this cool spell. Interesting, however, is the fact that these cool periods sometimes occur during the hot months, as it happened during the expedition. In these months the cool winds modify the temperature less than they do at other times. On other occasions the thermometer will drop twenty degrees, as the members of the expedition had occasion to verify from the reports made by the priests of the *Salesian College*. These reports were kindly loaned to the expedition as it passed

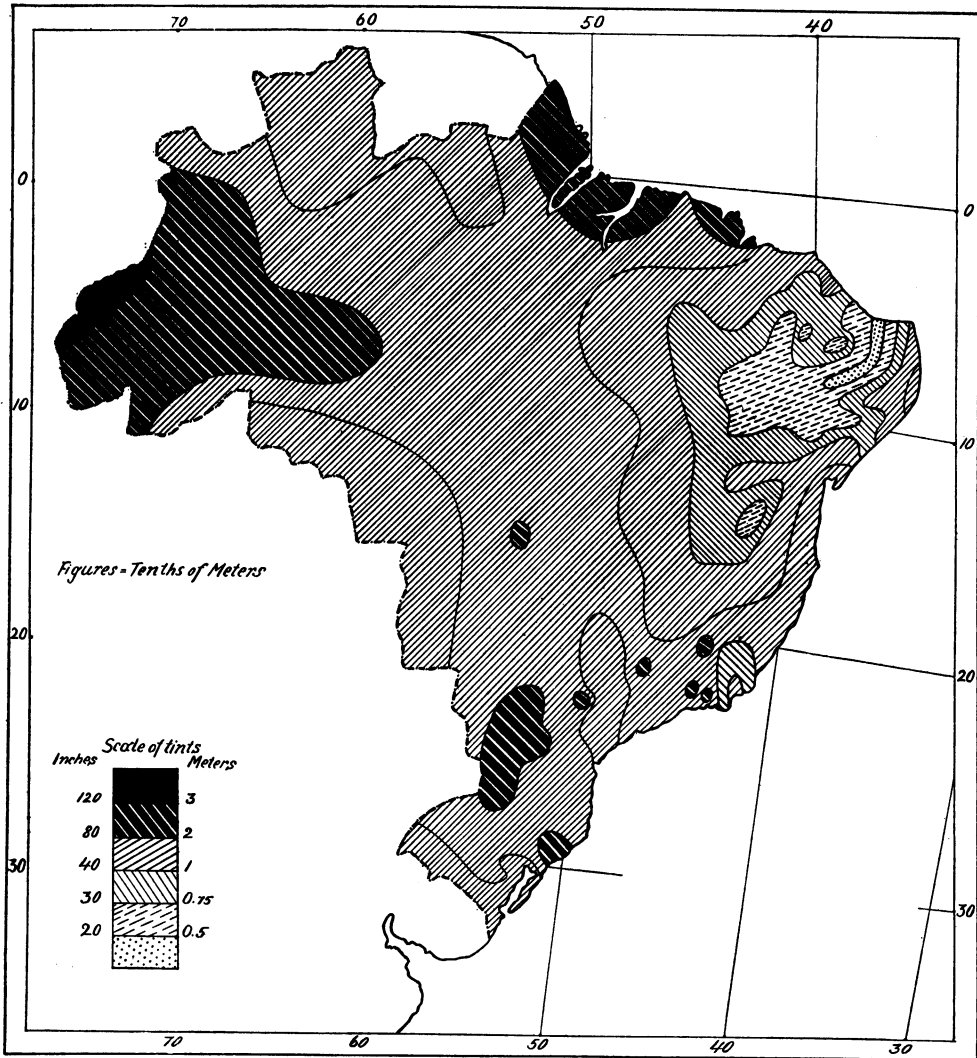
¹ *Plant Geography upon a physiological basis.* Dr. A. F. W. Schimper, 1903, p. 273.

² *Expedição Científica Roosevelt-Rondon.* Publicação N. 55, Anexo No. 6, Dr. José Antonio Cajazeira, 1914.

through Corumbá. The maximum temperature of Corumbá was 40° centigrade in the shade and the minimum was 11° in the morning. When the warm quarter of the year begins the sanitary condition of the city becomes much better. In any case, the city of Corumbá is not unhealthful and as soon as a good hygienic service is inaugurated the city will become one of the most healthful in Brazil. From Corumbá to Tapirapoan the days were warm but the morning and nights very cool and agreeable. The climate became less trying as the expedition approached the plain of the Parecis. This plain, at an altitude of over 800 meters, has a very agreeable climate. The mornings are delightful and the days as a general rule rather warm. The nights are exceedingly cool, many times blankets being necessary. There was some humidity in the air in the early mornings. In certain zones of this plain the days are warmer and the nights cooler because of the poverty of the vegetation and because of the aridity of the soil. Cloudy and foggy days are not rare. The expedition crossed the plain during the rainy season (January-February) which sometimes extends to April. This bearable climate lasted throughout on the Rio Roosevelt until the expedition came to the mouth of the Rio Branco, where the days became much warmer, but the nights continued to be agreeable. The hottest days were always alternated by others with abundant rain. The maximum centigrade temperature in the shade was thirty-four degrees and the minimum in the early morning ten degrees. A report¹ to General Rondon, by Capt. Armando Botelho de Magalhães, states that in 78 days there were 57 rainy ones. During ten of those days there were thunder storms accompanied by lightning and electrical discharges. No snow nor frost were observed at any point. It is said, however, that there is heavy dew and often heavy fogs and heavy clouds. At some points a rainbow was observed. The maximum temperature was thirty-four degrees and the minimum was sixteen degrees in the morning.

I have seen the 'Boletim de Normães' compiled by Sampaio Ferraz, 1922, and the accompanying tables (pp. 52-54) for Cuyabá, Corumbá, and São Luiz de Cáceres are taken from this most valuable publication. "Dr. Ferraz's report contains climatological tables for all the stations of Brazil besides Rio de Janeiro. They include data on temperature, rainfall, atmospheric pressure, wind, etc., and in no case is the period of observation less than five years. The value is entirely relative, particularly because the total number of years of the various series presented is much

¹ 'Expedição Científica Roosevelt-Rondon.' Publicação N. 54, Anexo No. 5, Capitão Amilcar Armando Botelho de Magalhães, 1916.



Mean annual rainfall of Brazil.



Fig. 1. Rio Juruena, February, 1914.

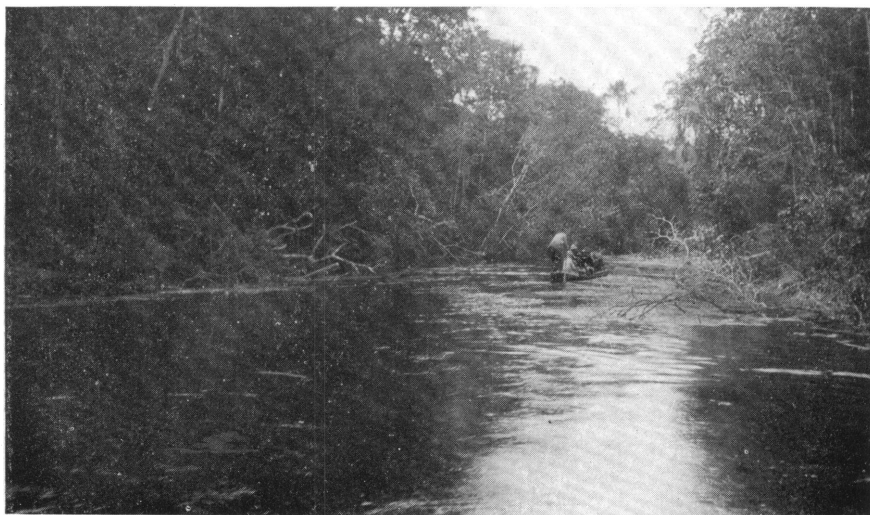
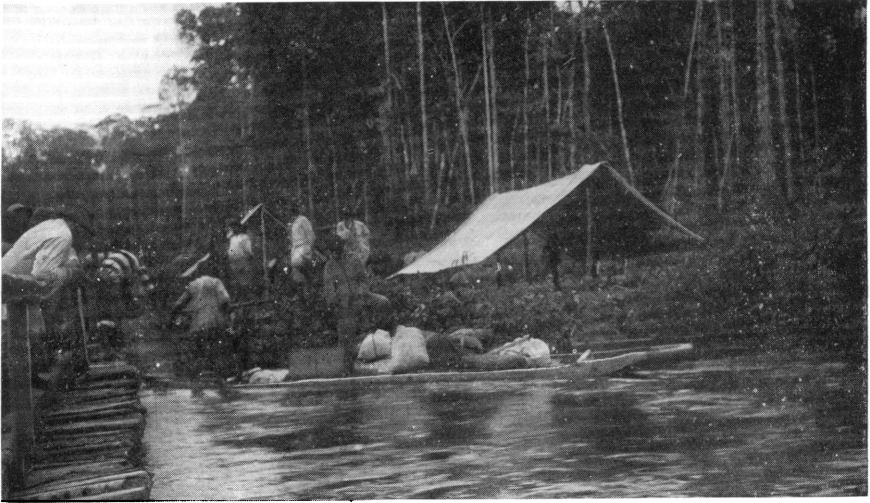


Fig. 2. Rio Roosevelt, February, 1914.



Figs. 1 and 2. Camp on the Rio Roosevelt, February, 1914.



Fig. 1. Palms along the bank of the Rio Roosevelt.

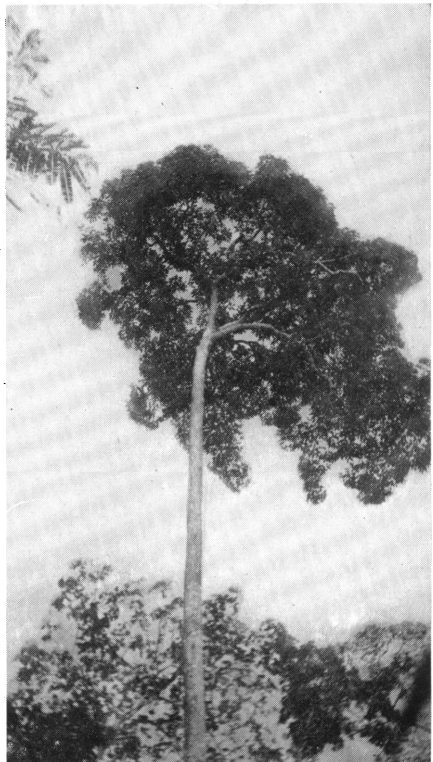


Fig. 2. A Brazil-nut tree on the lower Rio Roosevelt, March, 1914.



Fig. 3. Rio Gy-Paraná, $11^{\circ} 15'-8^{\circ} S.$, $61^{\circ} 40'-63^{\circ} W.$



Fig. 1. Rapids of San Vicente. Photograph by Leo E. Miller.



Fig. 2. Camp at the Telegraph Survey Line, Kilometer 52, Matto Grosso.

too small and the periods different. They are the first of the character of normals to be published, thus permitting an insight into some aspects of the climate of Brazil.”

“The broad features of Brazilian rainfall are supposed to result from northeast trades in the north and southeast trades in the south. The trades are competent rain-makers when they blow against hilly and mountainous coasts and so heavy rains are found in the Guianas and along the east coast.”²

INTERRELATIONS OF THE CAMPO AND AMAZONIAN FAUNAS

Mr. Wallace³ says, “There is no part of Natural History more interesting than the study of geographical distribution of animals.”

In South America we find well-marked, smaller districts appearing to depend upon climate. The tropical and temperate parts of America have a distinct climate and a distinct animal life.

There are many kinds of boundaries which, independent of climate, limit the range of animals. Places not more than fifty or a hundred miles apart often have species of birds at the one which are not found at the other. There is some boundary, however, according to Mr. Wallace, which determines the range of a species, some peculiarity to mark the line which each one does not pass. These boundaries do not always form a barrier to the progress of a wide-ranging animal, for many birds have a limited range in a country where there is nothing to prevent them from flying in every direction. Small rivers generally do not determine the distribution of species because there are few animals that cannot pass them. It is evident, however, that the broad sheet of water of the lower Amazon separates the ranges of many representative species.⁴

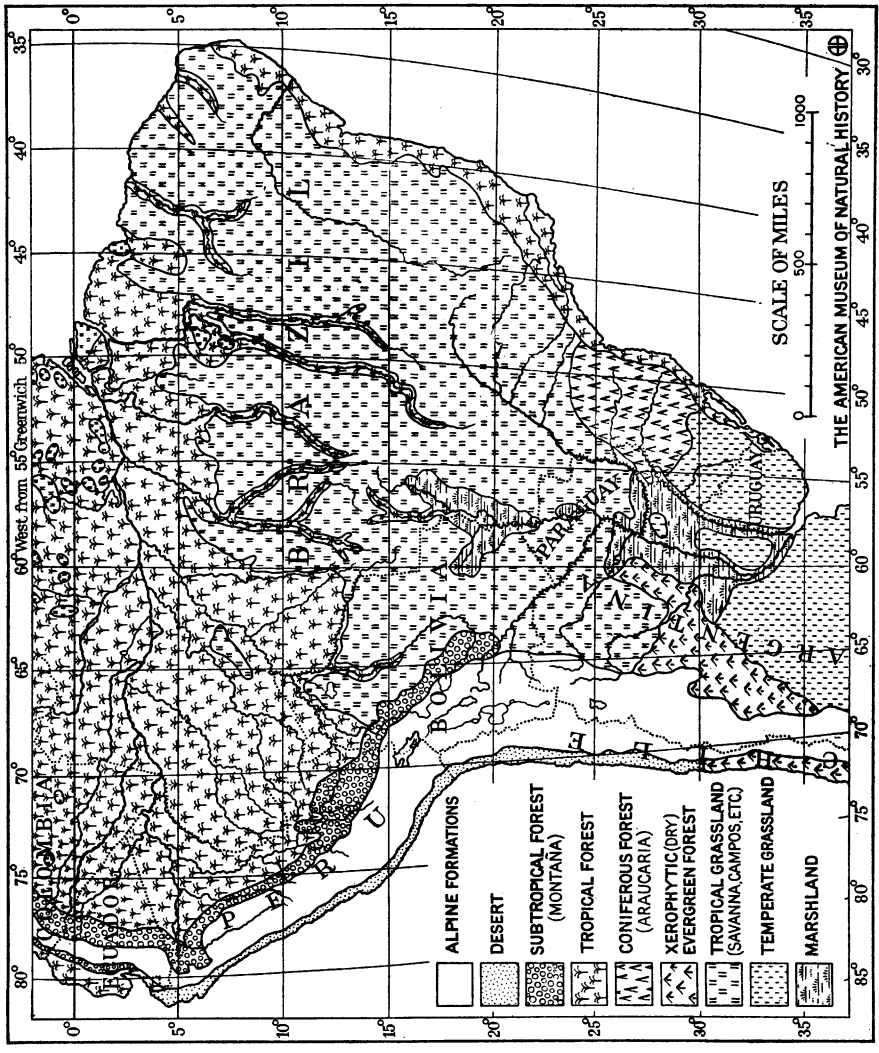
The Amazonian fauna belongs to the selva or forested region, due to the fertilizing influence of the tributaries of the Amazon. Perhaps no country in the world contains such an amount of vegetable matter as the valley of the Amazon. Its entire extent, with the exception of some very small portions, is covered with dense and high primeval forest. It is far up in the interior where the great mass of this mighty forest is found. Here the birds are so numerous and striking that it is impossible to do more than mention a few of the most interesting and beautiful, so as to give some general idea of the ornithology of the district. Among

¹E. G. Holt, 1924, *Geographical Review*, p. 172.

²Mark Jefferson, 1924, *Geogr. Rev.*, p. 127.

³Alfred Russel Wallace, 1876. ‘The Geographical Distribution of Animals.’ Vols. I and II.

⁴According to Dr. Hellmayr it might almost be said that, in Lower Amazonia, river valleys are the only boundary lines of importance. This holds good, though to a lesser degree, even in upper Amazonas. The number of species affected is considerable.



Distribution of vegetation based on current authorities and data acquired by American Museum Expeditions.

the birds of prey are the king vulture (*Sarcorhamphus papa*) and the harpy eagle (*Harpyia harpyia*). There are also the curious ant-birds and the gray flycatcher (*Lipaugus simplex frederici*). Of parrots and parquets there are many distinct species varying in size from the little *Forpus passerinus*, scarcely larger than a sparrow, to the magnificent macaw.

The climate of the Amazon Valley is remarkable for uniformity of temperature and for a regular supply of moisture. At certain places in the districts of tropical high forest we find rainfall of 200 cm. However, this is only on the Amazon, and more the exception. There the forest owes its luxuriant growth to the water in the soil and it consequently does not form an extensive continuous area, but is confined to the river banks. In addition to the large amount of rainfall there is great atmospheric humidity. The importance of temperature, according to Schimper, is much less a factor than that of atmospheric precipitation. Provided the soil is sufficiently moist the temperature is never high enough to occasion a disproportion between the outgo and intake of water.

The climate of the campo region of Matto Grosso is particularly well suited to produce grassland because of its moderate heat during the vegetative season. The dry, cold winter too, is a factor unfavorable for woodland. The characteristic birds of this country are *Penelope ochrogaster*, *Cariama cristata*, *Chauna cristata*, *Rhea americana rothschildi*, *Nemosia pileata paraguayensis* and *Anthus lutescens lutescens*. The bearable climate of the chapadão of the Parecis plateau lasted throughout the Rio Roosevelt until the Roosevelt Expedition came to the mouth of the Rio Branco where the days became much warmer but the nights continued to be agreeable. Among the birds found here were *Pyrrhura picta amazonum*, *Curucujus melanurus melanurus*, *Rhamphastos cுவieri cுவieri*, *Pygiptila stellaris stellaris*, and *Sittasomus griseicapillus*.

PELZELN'S LOCALITIES WITHIN MATTO GROSSO LIMITS

I do not think it advisable to quote those localities of Pelzeln's which are outside the regions I am dealing with in this paper. Take, for example, a bird collected by the Roosevelt Expedition at Calama or some other place on the Rio Madeira. In that case I am inclined to quote, in referring to Pelzeln's work, only the localities situated on that river, although Natterer might have obtained specimens of the same species on the Rio Negro or elsewhere. The same refers to many southern species which were met with by Natterer in Matto Grosso as well as in Goyaz and São Paulo.

In Pelzeln's book, 'Zur Orn. Bras.,' in Reise V, all localities from Sangrador¹ onward and the entire Reise VI are within Matto Grosso limits. In Reise VII the localities up to the mouth of the Rio Machados or Gy-Paraná belong politically to this state, although the territory comprised between the mouth of the Rio Galera, north of São Vicente,² and the Gy-Paraná can hardly be included in the faunistic zone of Matto Grosso. It is, however, very difficult to draw a line between Matto Grosso and Amazonia since, on the way from the Rio Galera to Forte do Principe da Beira, no collecting was done by Natterer or anyone else, so far as I know. The stretches of the Rio Madeira from Forte do Principe da Beira to the mouth of the Gy-Paraná are clearly Amazonian. So far as I know, the only ornithological collecting previously done on the Rio Madeira is due to J. Natterer and to W. Hoffmanns. Natterer, when on his way from Matto Grosso to the Amazon, stopped at several places on the upper part of the river near Salto do Girão,³ Ribeirão, and made a stay of more than six months at Borba, then the capital of a province. It seems, therefore, from what has been stated before, that the mighty Amazon—though it may in some cases separate allied species—does not constitute the true boundary. To arrive at this boundary we must proceed farther southward nearly to the banks of the Rio Paranahyba where the Amazonian wood-region terminates and the high open country which forms the campos of inner Brazil emerges upon the Atlantic. It is obvious that the wood-inhabiting species, which form so large a proportion of the neotropical fauna, could never pass a barrier of this character which offers as complete a physical obstacle to their passage as would a tract of sea of similar extent.

In some species, however, the river Amazon has operated as a physical barrier, isolating the derivative forms, both in the campo as well as in the river basin, thereby leading to an accumulation of variations which have ultimately resulted in the specific differences now observable.

In this paper we are interested in the fauna of several distinct regions, all influencing the fauna of Matto Grosso.

1. The Southern Fauna extending from Curityba (Paraná) and Paranaguá in the south and from Curityba and Ypanema in the west northward to São Paulo and Rio de Janeiro and its surroundings to the Rio Tieté.

2. The Bolivian-Brazilian Fauna extends from the Rio Araguaya westward through the Sertão to Cuyabá, Caiçara, Villa Bella de Matto Grosso and from there northwestward along the banks of the Rio Guaporé to Forte do Principe da Beira.

¹Sangradouro, visited by Natterer, is in eastern Matto Grosso, on the great road, Cuyabá-Goyaz, close to the Goyaz state line.

²São Vicente, due north of the city of Matto Grosso.

³This is a fall of the Rio Madeira between the Ilha dos tres Irmãos and Santo Antonio.

3. The Fauna of the Rio Madeira adjoins the Bolivian-Brazilian region, and is very close to it in its faunistic character. Birds found along the Rio Negro also show a close resemblance, even if less markedly so, to the western neighboring states, whereas the birds found along the Rio Branco¹ show a relationship to the Guiana-Brazilian fauna.

4. The Guiana-Brazilian Fauna extends from the north bank of the lower Amazon northward to the Forte do S. Joaquim and thence into Guiana.

DISTRIBUTIONAL ANALYSIS OF BIRD LIFE AND ENDEMIC SPECIES AND SUBSPECIES OF MATTO GROSSO

The object of this paper is to make a distributional analysis of the birds of a portion of Matto Grosso, Brazil, for the purpose of determining the affinities of the avifauna of this region.

The specimens on which this paper is based are contained in a collection from Chapada, Matto Grosso, made by Mr. Herbert H. Smith in the years 1882-1886 and in the Roosevelt Collection made by Mr. George K. Cherrie in 1913 and 1916.

For the purpose of this investigation, Matto Grosso may be regarded as divided into three regions, each represented by our principal collecting station. Beginning at its southerly part, the first important collecting station is Corumbá in the flood plain of the Rio Paraguay or, as it is sometimes called, the depression of the Rio Paraguay. The second important collecting station is Chapada in the campo region, three hundred miles in a northerly and slightly westerly direction. Six hundred miles in an almost due northerly direction from Chapada there is the Rio Roosevelt, or the River of Doubt, as it was first called, which is the northernmost important collecting region.

Corumbá is largely marshy. Some of this marshland is covered with reeds and cattails. The birds found here are *Mycteria americana*, *Egretta thula*, *Cochlearius cochlearius*, *Aramides cajanea chircote*, *Thyrorhina schomburgki chapmani*, *Ionornis flavirostris*, *Jacana jacana jacana*. Mr. Cherrie records that "between the ponds and watercourses there are irregular stretches of heavily forested highlands . . . rising abruptly from the generally level grassy plains." Among the characteristic birds of these forests are *Crax sclateri*, *Ortalis canicollis*, *Pipile cumanensis nattereri*, *Pionus maximiliani bridgesi*, *Cranioleuca vulpina vulpina*.

"Chapada is in the campo region of the Bolivian border of Matto Grosso . . . at an altitude of about 2500 feet," we learn from a paper² by the late Dr. J. A. Allen, "and the forests are limited to the edge of the

¹Northern affluent of the Rio Negro.

²On a collection of Birds from Chapada, Matto Grosso, Brasil, made by Mr. Herbert H. Smith. By J. A. Allen.

tableland and the borders of the streams with here and there little islands of forest growth in the campo." It may be of interest to note at this point that campo is a Brazilian word for savannas or stretches of land intermediate between forest and grassland in climates transitional between the temperate and the tropic.

Birds of the forest are *Anisoterus pretrei*, *Dryobates cancellatus*, *Dendrocolaptes platyrostris intermedius*,¹ *pseudocolopteryx sclateri sclateri*, *Phylloscopus fasciatus virescens*, *Philydor rufus*.

Northwesterly from Corumbá, across the divide of the Paraguayan and Amazonian watersheds, and almost due west of the collecting station of Utiarity, are the upper courses of the Rio Roosevelt. According to descriptions in Mr. Cherrie's diary, this river is here a region of cataracts falling from precipitous rocky walls leading to steep hills densely forested and at the same time covered with thick and tangled underbrush. Among the birds here found are *Pyrrhura picta amazonum*, *Curucujus melanurus melanurus*, *Ramphastos cuvieri cuvieri*, *Pygiptila stellaris stellaris*, *Sittasomus griseicapillus amazonum*, *Ochthornis littoralis*, *Pipra rubrocapilla*, and *Lathria cinerea cinerea*.

In its lower course where it has emerged from the hills it becomes a stream gently winding through brush-covered plains. Here Mr. Cherrie secured *Heterocercus lineatus*, *Diplochelidon melanoleuca*, and *Atticora fasciata*.

There are 658 species and subspecies in this volume, of which 36 are listed on page 32 as endemic. Of this number only ten (plus two doubtful cases) are species, none of them strongly marked.

In comparing the avifauna of Matto Grosso with that of Amazonia, Argentina, Goyaz, and São Paulo, the following facts will be of interest. Approximately 372 species and subspecies in Matto Grosso are Amazonian in their origin. They belong to the selva or forested region of Matto Grosso which, in contrast to the campo, is Amazonian because of the fertilizing influence of the tributaries of the Amazon.

The Argentine influence is derived from two principal geographical areas, one of which is characterized by forests, the other by plains. The greater part of the region largely covered by forests lies east of the Paraguay and the Paraná rivers. Of the species and subspecies found here, 248 occur also in Matto Grosso.

From the plains of northwestern Argentina are found approximately 119 species and subspecies that occur also in Matto Grosso.

¹A male from Chapada, though in worn plumage, in the collection of the British Museum is unquestionably referable to *Dendrocolaptes intermedius* Berlepsch (which, however, is but subspecifically distinct from *Dendrocolaptes platyrostris*).

Dr. Hellmayr gives a list of 200 species and subspecies in his paper on Goyaz.¹ Of these, 137 species and subspecies are represented in Matto Grosso, showing the close faunal affinities of Goyaz and Matto Grosso.

São Paulo represents in general a tableland sloping westward. The state is well wooded and there are extensive grassy campos on the plateau. Of the species and subspecies in São Paulo, approximately 286 are represented in Matto Grosso.

It is apparent, therefore, that, having so small a number of endemic species and subspecies, Matto Grosso cannot be said to be a distinct faunal area. It has close faunal affinities in Argentina, São Paulo, Goyaz, and the central portion of the plateau of Brazil along the borders of Bolivia to its northeastern part.

¹'An account of the birds collected by Mons. G. A. Baer in the State of Goyaz, Brazil.' By C. E. Hellmayr, *Nov. Zoöl.*, XV, 1908, pp. 13-102.

A LIST OF THE ENDEMIC SPECIES AND SUBSPECIES OF
MATTO GROSSO

ORIGIN	SPECIES AND SUBSPECIES	RANGE
	<i>Penelope ochrogaster</i>	East to Goyaz
	<i>Ortalis canicollis pantanalensis</i>	
	<i>Oxyypelia cyanopis</i>	South to northern São Paulo
	<i>Pyrrhura hypoxantha</i>	
Amazonian	<i>Chætura chapmani viridipennis</i>	
Amazonian	<i>Nystactes tamatia interior</i>	
	<i>Nystalus maculatus pallidigula</i>	
Amazonian	<i>Nonnula ruficapilla nattereri</i>	
	<i>Picumnus fuscus</i> (status doubtful)	
	<i>Dysithamnus mentalis affinis</i>	East to Goyaz
	<i>Rhamphocœnus melanurus sticturus</i>	
	<i>Synallaxis gujanensis albilora</i>	South to Paraguay
Amazonian	<i>Synallaxis rutilans tertia</i>	South to northern São Paulo
	<i>Philydor dimidiatus</i>	
	<i>Platytricus mystaceus bifasciatus</i>	
	<i>Euscarthmornis nattereri</i>	South to northern São Paulo
	<i>Sirystes sibilator atimastus</i>	
	<i>Ereter leucura</i> (status doubtful)	
	<i>Pheugopedius genibarbis intercedens</i>	East to Matto Grosso
	<i>Basileuterus leucophrys</i>	South to northern São Paulo
	<i>Cœreba chloropyga alleni</i>	
	<i>Tangara flava margaritæ</i>	
Amazonian	<i>Tangara cyanicollis melanogaster</i>	
Amazonian	<i>Tachyphonus nattereri</i>	
	<i>Chrysophilus melanochloros nattereri</i>	East to Goyaz
	<i>Thamnophilus punctatus sticturus</i>	
Amazonian	<i>Myrmophylax atrothorax melanurus</i>	
Amazonian	<i>Pyriglena leuconota maura</i>	
	<i>Furnarius rufus commersoni</i>	
	<i>Pseudoseisura cristata unirufa</i>	
	<i>Dendrocincla atrirostris</i>	
	<i>Xiphorhynchus guttatus d'orbignyanus</i>	East into Goyaz, west to base of Andes
	<i>Heleodytes unicolor</i>	
	<i>Thryophilus guarayanus</i>	
Amazonian	<i>Eucometis penicillata albicollis</i> ¹	
	<i>Icterus pyrrhopterus compsus</i>	

¹No doubt derived from the Amazonian *E. p. penicillata*.

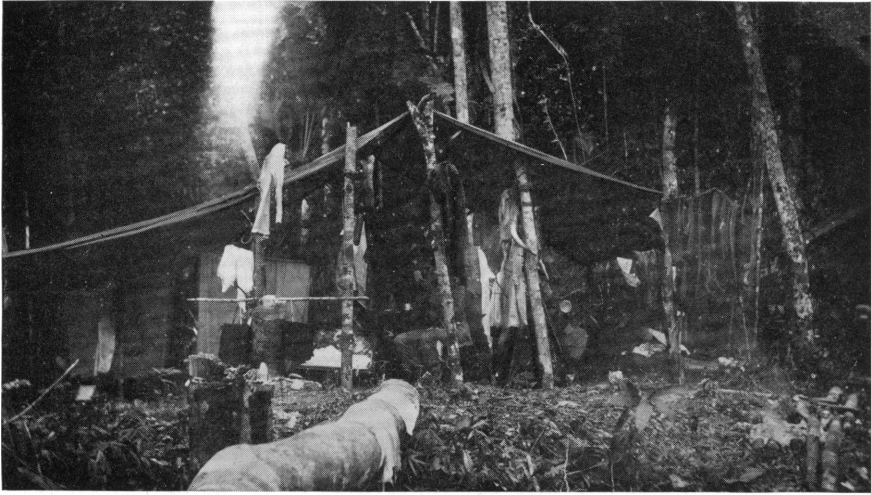


Fig. 1. Camp at the mouth of the Rio Cardozo, Matto Grosso, April, 1914.



Fig. 2. Rio Solimões. Photograph by Leo E. Miller, April, 1914.



Fig. 1. Vegetation on the lower Rio Solimões. Photograph by Leo E. Miller, April, 1914.

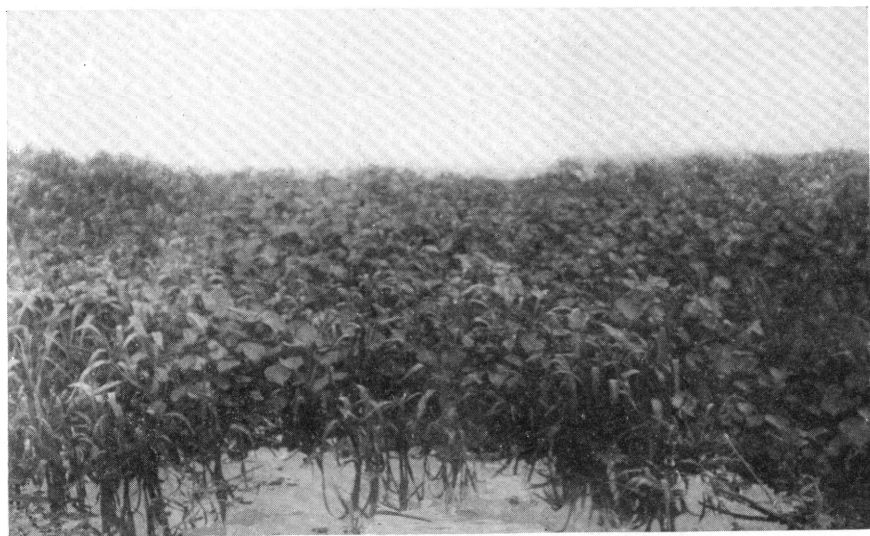


Fig. 2. Along the lower Rio Solimões. Photograph by Leo E. Miller, April, 1914.

LIST OF FAMILIES
NUMBER OF SPECIES AND SUBSPECIES BY WHICH EACH IS REPRESENTED
IN MATTO GROSSO

FAMILY	SPECIES	SUBSPECIES
Rheidae	1	..
Tinamidae	1	5
Cracidae	4	4
Odontophoridae	..	2
Columbidae	5	7
Opisthocomidae	1	..
Rallidae	5	4
Heliornithidae	1	..
Podicipedidae	..	1
Laridae	2	1
Charadriidae	11	5
Jacanidae	..	2
Eurypygidae	1	..
Psophiidae	2	..
Cariamidae	1	..
Ibididae	4	1
Plataleidae	1	..
Ciconiidae	3	..
Ardeidae	13	1
Palamedeidae	2	1
Anatidae	7	1
Phalacrocoracidae	..	1
Plotidae	1	..
Cathartidae	1	2
Falconidae	12	21
Bubonidae	3	7
Psittacidae	24	8
Alcedinidae	1	2
Momotidae	..	2
Caprimulgidae	7	9
Cypselidae	2	3
Trochilidae	12	21
Trogonidae	1	4
Cuculidae	6	7
Capitonidae	1	..
Ramphastidae	3	2
Galbulidae	4	..
Bucconidae	2	6
Picidae	10	12
Conopophagidae	2	..
Formicariidae	10	40
Dendrocolaptidae	11	35
Tyrannidae	23	46

LIST OF FAMILIES (*Continued*)

FAMILY	SPECIES	SUBSPECIES
Pipridæ	7	4
Cotingidæ	8	10
Hirundinidæ	6	5
Muscicapidæ	..	2
Troglodytidæ	3	5
Mimidæ	..	2
Turdidæ	3	5
Vireonidæ	2	7
Mniotiltidæ	4	3
Fringillidæ	12	20
Coerebidæ	3	9
Procnatiidæ	..	1
Tanagridæ	7	30
Icteridæ	5	11
Corvidæ	..	2
	—	—
	262	379

LIST OF DISTINCTIVELY NORTH AMERICAN BIRDS WINTERING IN BRAZIL

- Stercorarius parasiticus*. Parasitic jæger. Brazil.
- Larus pipixcan*. Franklin's gull. Chile and Brazil.
- Larus atricilla*. Laughing gull. Chile and Brazil [breeds south to Venezuela and Trinidad].
- Sterna maxima*. Royal tern. Peru and Brazil.
- Sterna sandvicensis*. Sandwich tern. North Carolina to Brazil.
- Sterna forsteri*. Forster's tern. Casual in Brazil.
- Sterna hirundo*. Common tern. Florida to Brazil.
- Sterna dougalli*. Roseate tern. Bahamas to Brazil.
- Sterna fuscata*. Sooty tern. Louisiana to Brazil.
- Querquedula discors*. Blue-winged teal. Brazil; Ecuador.
- Querquedula cyanoptera*. Cinnamon teal. Peru; Brazil, south to Falkland Islands.
- Pluvialis dominicus*. Golden plover. Campo of Brazil and Argentina.
- Numenius borealis*. Eskimo curlew. Brazil; Argentina; Chile.
- Limosa hæmastica*. Hudsonian godwit. Brazil; Argentina; Falkland Islands.
- Lamnodromus griseus*. Dowitcher. Northern Brazil.
- Catoptrophorus semipalmatus*. Willet. Brazil and Peru.
- Totanus melanoleucus*. Yellowleg. Brazil; Chile; Argentina.
- Tringa solitaria solitaria*. Solitary sandpiper. Brazil; Argentina.
- Tryngites subruficollis*. Buff-breasted sandpiper. Brazil and Argentina.
- Pisobia minutilla*. Least sandpiper. Brazil; Chile; Ecuador; Galápagos Islands.
- Pisobia melanotos*. Pectoral sandpiper. Brazil; Chile; Argentina.
- Pisobia fuscicollis*. White-rumped sandpiper. Brazil; Patagonia; Falkland Islands.

Capella delicata. Wilson's snipe. Colombia and southern Brazil.

Chordeiles minor. Nighthawk. Brazil and Argentina.

Dolichonyx oryzivorus. Bobolink. Southern Brazil; Bolivia; Paraguay.

Petrochelidon lunifrons. Cliff swallow. Brazil; northern Argentina.

Hirundo rustica erythrogaster. Barn swallow. Brazil; northern Argentina; Chile.

Riparia riparia. Bank swallow. Brazil and Peru.

Progne subis. Purple martin. Brazil.

Vireosylva virescens. Red-eyed vireo. Colombia; Ecuador; and northern Brazil.

Dendroica aestiva.¹ Yellow warbler. Southern Mexico to Peru and northeastern Brazil. (Colombia: Barbacoas, October 3; San Agustín, April 12; Santa Marta Region, September 11, May 1. Venezuela: Valle, Mérida, November 30; Escorial, March 19.)

Dendroica striata. Blackpoll warbler. Northern South America to Ecuador, Guiana and eastern Brazil. (Colombia: Rio Frio, November 25; Villavicencio, March 11; Santa Marta Region, September 29, February 28. Venezuela: Mérida, October 4, April 29.) One record (♂, June 17, 1858) from Collico, near Valdivia, southern Chile.

Oporornis agilis. Connecticut warbler. Northern South America; the West Indies in migration. (Colombia: Santa Marta Region, Bonda, October 22.² Venezuela: Maipures, Upper Orinoco, April 28; Cumbre de Valencia, Carabobo, October 10. Brazil: Rio São Lourenço, December 26, January 2; Tonantins, Rio Solimões, April 9; Allianca, Rio Madeira, November 16.)

Hylocichla fuscescens. Veery. Colombia; British Guiana; Brazil.

Hylocichla ustulata. Olive-backed thrush. East Ecuador; British Guiana; Peru; Bolivia; Brazil and Argentina.

BIRDS COMMON TO NORTH AND SOUTH AMERICA AND BREEDING IN BRAZIL

Anous stolidus. Noddy tern. Breeds from Florida Keys to Brazil.

Pelecanus occidentalis. Brown pelican. Breeds from Florida and Louisiana to Brazil.

Guara alba. White ibis. Breeds from Lower California, Texas and South Carolina, to Brazil and Peru.

Ixobrychus exilis. Least bittern. Breeds from Canada to West Indies and Brazil. In this range I include *I. e. erythromelas*, the South American race.

Nyctanassa violacea. Yellow-crowned night heron. Breeds from southern United States to Brazil and Peru.

Himantopus mexicanus. Black-necked stilt. Breeds from California, etc., to northern Brazil and Peru.

Hæmatopus palliatus. Oystercatcher. Breeds from Texas, Louisiana and Virginia to southern Brazil and central Chile.

¹In the collections of The American Museum of Natural History.

²It is not yet clear whether this species actually winters in this region, or is merely a transient during migration.

Speotyto cunicularia.¹ Burrowing owl. Breeds from western United States and southern Florida to Chile, Brazil and Paraguay.

*Glaucidium brasilianum*s.¹ Pigmy owl. Breeds from southern border of the United States to southern Brazil, Colombia, Venezuela, and Peru.

Chloroceryle americana.¹ Texas kingfisher. Breeds from southern Texas to southern Brazil.

Tyrannus melancholicus.¹ Couch's kingbird. Breeds from the lower Rio Grande Valley to Brazil and Paraguay.

Pitangus sulphuratus.¹ Derby flycatcher. Breeds from the lower Rio Grande Valley to Ecuador, Bolivia, and Argentina, Guiana, and southern Brazil.

Pyrocephalus rubinus.¹ Vermilion flycatcher. Breeds from the southern border of the United States to Colombia, Peru, Guiana, Brazil, Argentina and Galápagos.

Progne chalybea.¹ Cuban martin. Breeds from the lower Rio Grande Valley to Peru, Bolivia and southern Brazil.

LIST OF BIRDS IN THE ROOSEVELT COLLECTION FROM PARAGUAY ONLY²

- Nothura maculosa maculosa* (Temminck)
Ortalis canicollis canicollis (Wagler)
Columba picazuro (Temminck)
Zenaida auriculata noronha Chubb
Columbina picui picui (Temminck)
Fulica leucoptera Vieillot
Phæxusa simplex chloropoda (Vieillot)
Belonopterus cayennensis lampronotus (Wagler)
Pluvialis dominicus dominicus (Müller)
Himantopus melanurus (Vieillot)
Bartramia longicauda (Bechstein)
Aramus scolopaceus carau Vieillot
Theristicus caudatus (Boddaert)
Syrigma sibilatrix (Temminck)
Nettion torquatum (Vieillot)
Cathartes urubitinga Pelzeln
Parabuteo unicinctus unicinctus (Temminck)
Heterospizias meridionalis meridionalis (Latham)
Morphnus urubitinga urubitinga (Gmelin)
Herpetoheres cachinnans queribundus Bangs and Penard
Cerchneis sparveria australis (Ridgway)
Rhinoptyx clamator maculatus (Vieillot)
Strix rufipes chacoensis Cherrie and Reichenberger.
Speotyto cunicularia grallaria (Temminck)
Aratinga aurea major Cherrie and Reichenberger
Pyrrhura frontalis borellii Salvadori
Megasceryle torquata torquata (Linnæus)
Chloroceryle amazona (Latham)

¹In every case the name used above comprises several forms and the one breeding in Brazil is invariably different from that breeding in the United States.

²These will be treated in a special report.

- Piaya cayana macroura* Gambel
Colaptes campestris campestris (Vieillot)
Trichopicus cactorum (Lafresnayé and d'Orbigny)
Dryobates mixtus malleator Wetmore
Celeus lugubris kerri Hargitt
Phlæocestes leucopogon (Valenciennes)
Thamnophilus cærulescens paraguayensis Hellmayr
*Melanopareia*¹ *maximiliani maximiliani* (d'Orbigny)
Furnarius rufus paraguayæ Cherrie and Reichenberger
Phleocryptes melanops melanops (Vieillot)
Synallaxis albescens albescens Temminck
Certhiaxis cinnamomea russeola (Vieillot)
Anumbius anumbi (Vieillot)
Xiphocolaptes major major (Vieillot)
Lepidocolaptes angustirostris angustirostris (Vieillot)
Xolmis irupero irupero (Vieillot)
Lichenops perspicillata perspicillata (Gmelin)
Pseudocolopteryx sclateri (Oustalet)
Habrura pectoralis pectoralis (Vieillot)
Serpophaga subcristata (Vieillot)
Serpophaga nigricans (Vieillot)
Camptostoma obsoletum obsoletum (Temminck)
Suiriri suiriri (Vieillot)
Sublegatus modestus modestus (Wied)
Pyrocephalus rubinus rubinus (Boddaert)
Empidonomus aurantio-atro-cristatus aurantio-atro-cristatus (Lafresnayé and d'Orbigny)
Chiroxiphia caudata (Shaw)
Pachyramphus viridis viridis (Vieillot)
Platypsaris rufus (Vieillot)
Iridoprocne leucorrhœa (Vieillot)
Progne chalybea domestica (Vieillot)
Mimus triurus (Vieillot)
Cyclarhis gujanensis viridis (Vieillot)
Compsothlypis pityryumi pityryumi (Vieillot)
Anthus lutescens lutescens Pucheran
Sporophila melanocephala melanocephala (Vieillot)
Saltator atricollis Vieillot
Spinus magellanicus alleni Ridgway
Poospiza melanoleuca (d'Orbigny and Lafresnayé)
Embernagra platensis paraguayensis Chubb
Arremon polionotus polionotus Bonaparte
Cyanocorax chrysops chrysops (Vieillot)
Archiplanus albirostris (Vieillot)
Molothrus bonariensis melanogyna Stolzmann
Molothrus rufo-axillaris Cassin

¹See note on page 211 (2032).

SCOPE OF DATA PRESENTED¹

REFERENCES.—A reference to the original description with the type locality. Where no definite locality is mentioned, as in von Ihering's and Ribeiro's records from Matto Grosso, these are not based on specimens actually collected, but Matto Grosso is merely included in the range of the species.

Most references given are, as a rule, only to original sources of the bird's occurrence in Matto Grosso.

LISTS OF SPECIMENS.—Those collected by George K. Cherrie and Leo Miller plus those contained in the American Museum of the H. H. Smith Collection on which this paper is based. Those examined in the museums of Frankfurt, Munich, Vienna, London and Tring.

RANGES.—I have enumerated the localities in Matto Grosso from which species have been definitely recorded and at which, if any, they have been taken, and I have tried to show the relationship between the area occupied by a bird in Matto Grosso and its entire range.

I have omitted species collected exclusively in Paraguay and restrict my paper to Matto Grosso as the collectors secured only a small fraction of the total number of birds recorded from Paraguay. These I have listed under a separate heading on page 36.

The classification follows *Brabourne and Chubb* ('The Birds of South America'), except in a few cases specified in the text.

GENERA.—In the use of generic names I have most likely erred on the conservative side, but in cases where this has not been done I have come to my conclusions with due deliberation.

MEASUREMENTS.²—"In using dividers as I do, the wing retains the curvature of its primaries as well as the bent position of the manus it has often taken in drying."

For measuring the tail a pair of dividers is inserted between the bases of the middle rectrices to the tip of the longest.

I measure the culmen with dividers and call it culmen from base.

COLOR TERMS.—*Ridgway's* 'Color Standards and Color Nomenclature,' 1912, has been used.

LOCALITIES OF THE ROOSEVELT EXPEDITION³

AGUA BLANCA DE CORUMBÁ (19° S., 57° 45' W.).—Due east and within sight of Corumbá. The beginning of the pantanal: low flat country, shallow ponds interspersed with raised areas, covered with tangled forest.

Supplementary expedition, November 5–10, 1916; 74 specimens.

¹After F. M. Chapman.

²*Auk*, XL, No. 2, 1923.

³The latitude and longitude are taken from the Matto Grosso map of collecting stations prepared by E. M. B. N. for the American Museum.

AGUA VERDE DE DESCALVADOS (17° 12' S., 57° 40' W.).

Supplementary expedition, December 11, 12, 1916; 2 specimens.

ALDEA¹ QUEIMADA (14° 25' S., 58° 45' W.; alt. 1700 ft.).—High, dry country, not marshy. Headwaters of the Rio Juba, a tributary of the Rio Sepotuba and the last of the streams crossed which flows into the Rio Paraguay. All day long the expedition traveled over a high open plateau, a rolling country. From the top of every ridge there is a magnificent view for many miles in every direction. This is the site of a former Indian village which was burned and the inhabitants massacred by a relative of the present governor of Matto Grosso.

January 23, 1914; 3 specimens.

AMARANTE RIVER.—Twenty-five miles from Vilhena.

February 20, 1914; no specimens.

ARIPUANÁ RIVER (9°–7' S., 59° 30'–60° 30' W.).

April 26, 1914; no specimens.

ASUNCIÓN, PARAGUAY (25° 25' S., 57° 50' W.).

November 7–11, 1913; 4 specimens.

BARÃO MELGAÇO (11° 45' S., 60° 40' W.).—The end of the overland trip and the beginning of the trip down the Gy-Paraná. Practically the end of the telegraph line.

Leo E. Miller, March 2, 7, 1914; 53 specimens.

BARRACA DE ARRAS.—Three hours above the mouth of the Rio Branco, a tributary of the Rio Roosevelt.

April 16, 17, 1914; 2 specimens.

BARRACA DE BAGAÇO (near Inferno Rapids).—A place close to the parallel 8° 30' S., through which runs the boundary line of the states of Matto Grosso and Amazonas, traced from Santo Antonio do Madeira to the source of the Urugualas, an affluent of the Tapajóz.

April 21, 1914.

BELVEDERE DE URUCÚM DE CORUMBÁ (18° 40' S., 57° 45' W.; near Urucúm).—A deserted *ranchito* near the top of the Urucúm range of hills about 1200 feet above Urucúm and nearly 10 miles from that city.

December 17–21, 1913; 71 specimens.

BOCAINA DE DESCALVADOS.—See Descalvados.

BRANCO RIVER² (10° 35'–9° 32' S., 60° 45'–60° 30' W.).—A tributary of the Rio Roosevelt.

April 17, 1914; 2 specimens.

BROKEN CANOE RAPIDS (11° 45' S., 60° 20' W.).—Includes Camp 9 on the Rio Roosevelt.

March 10–13, 1914; 11 specimens.

BUENOS AIRES, ARGENTINA (34° 40' S., 58° 40' W.).

October 27, 1913.

BURITY.—Twenty-five miles northwest of Utiarity; on the Rio Burity.

February 4, 1914.

¹The proper spelling may be Aldea=hamlet, though I have found "Aldeia" on labels.

²There are many rivers named Branco in South America, and an approximate location of five of them, also in the Amazonian watershed, is here given:

(1) a northern affluent of the Rio Negro; (2) a southern affluent of the Rio Guaporé, joining the latter east of the Rio São Miguel; (3) a northern affluent of the Guaporé just north of the Rio São Miguel; (4) a northern affluent (known also as Rio Cabity) but farther east of the Rio Guaporé; and (5) a western affluent in the headwaters of the Tapajóz.

BURITY RIVER (13° 35'–12° 10' S., 59° 30'–58° 25' W.).

February 13, 1914; 5 specimens.

CABACERA.—Nine miles northeast of Vilhena; on the Rio Ike.

February 19, 1914; 3 specimens.

CALAMA (8° S., 62° 50' W.).

Leo E. Miller, March 24–April 5, 1914; 30 specimens.

CAMARARÉ RIVER (13° 10'–11° 25' S., 59° 45'–59° 12' W.).

CAMPS OF THE ROOSEVELT EXPEDITION ALONG THE RIO ROOSEVELT.

"1"—February 28, 1914; 5 specimens.

"2"—March 1, 1914; 3 specimens.

"3"—March 1, 1914; 1 specimen.

"4"—March 2–3, 1914. (Vicinity of Salto Navaité; 12° S., 60° 20' W.)
Heavily forested; 5 specimens.

"5"—March 4–5, 1914. ("Do Assahy," above Salto Navaité.) Heavily
forested; 8 specimens.

"6"—March 5–6, 1914. ("Da Canja.") Pantanal country; 4 specimens.

"7"—March 6–7, 1914; 2 specimens.

"8"—March 7–10, 1914. At a point christened 6th of March Rapids (between
Salto Navaité and Broken Canoe Rapids); 26 specimens.

"9"—March 11–13, 1914. (Broken Canoe Rapids or "Quebra Canoas"; 11°
45' S., 60° 20' W.); 11 specimens.

"10"—March 14–15, 1914. ("Gralhão.") The forests change; numerous
rubber trees and also Brazil nuts appear on both sides of the river.
The ground is mountainous and *caucho* is to be found in abundance.
Hard woods are still found, peculiar to the sub-basin of the Rio
Paraguay. 2 specimens.

"11"—March 15, 1914. ("Simpliceo"; 11° 40' S., 60° 20' W.); 2 specimens.

"12"—March 16, 1914. ("Cachoeira Quebra Cabo"; 11° 35' S., 60° 20' W.)

"13"—March 17–18, 1914. (Mouth of the Kermit River; 11° 30' S., 60° 20' W.)

"14"—March 18–21, 1914. ("Las dos Canoas"; "Duas Canoas"); 6 specimens.

"15"—March 22, 1914. ("Cachoeira da Felicidade"); 1 specimen.

"16"—March 23–24, 1914. ("Antaperdida"—Lost Tapir); 1 specimen.

"17"—March 24–25, 1914. (Foot of Taunay Rapids; 11° 25' S., 60° 25' W.)
Jungle country. The Rio Taunay is in front of the waterfall of
the same name. Homage of the Roosevelt-Rondon Expedition at
one quarter of a mile from Passo da Linha Telegraphica; 9 specimens.

"18"—March 26, 1914. (Head of Tocary Rapids.) Jungle country; 3 speci-
mens.

"19"—March 26, 1914. ("Salto das Inscriptões Indigenas"; 11° 20' S., 60° 25'
W.) Jungle country and at the foot of rapids of the same name.

"20"—March 27, 1914. ("Arripadinha.")

"21"—March 28–30, 1914. (Mouth of the Rio Cherrie; 11° 15' S., 60° 25' W.)
Head of a series of rapids and falls. The river banks were steep,
rocky, and heavily forested; 10 specimens.

"22"—March 31–April 1, 1914; 2 specimens.

"23"—April 2–3, 1914.

"24"—April 4, 1914. ("Queizada de Anta.") On the right bank of the river.
Here was found a jaw bone of the well-known *Pachydermata brasiliensis*.

"25"—April 5, 1914. The valley growing wider, the banks of the stream less precipitous, and the river widening.

"26"—April 6-7, 1914. ("*Salto 7 de Abril*"; 10° 55' S., 60° 20' W.) Low, heavily forested region. Just below the mouth of the stream, there is a long series of rapids. A broad nearly level valley; a region where there were many rubber trees and Brazil nuts.

"27"—April 8, 1914. Rapids on the Rio Capitão Cardoso; low rocky hills.

"28"—April 9, 1914. ("*Piranhas Rapids*.") Low hills.

"29"—April 10-11, 1914. Rapids; 2 specimens.

"30"—April 12-13, 1914. ("*Do Peixe*," on the right bank of the Rio Roosevelt.) Rapids; 1 specimen.

"31"—April 13, 1914.

"32"—April 14, 1914. No rapids.

CAMPOS NOVOS (in the Cerro do Norte).—Situating on a hilltop in a very picturesque basin just at the foot of one end of the range of hills known as Cerro do Norte. On all sides are rolling grassy hills, many very steep and some with perpendicular sides of rock of secondary formation. Here and there are flat-topped mesas. Leo E. Miller writes: "The great Cerro do Norte is a vast tract of country comprised of high broken plateaus or mesas covered with luxuriant grass. Many small streams flowed through deep gorges and near some of the watercourses tall dense forests grew. The soil is fertile and would produce crops of corn and rice. Cattle in great numbers could be reared on the extensive mesas. The climate is cool and healthful."¹

February 16, 1914; 13 specimens.

CAPÃO DE ONÇA DE DESCALVADOS (near Descalvados).

Supplementary Expedition, December 13, 1916; 3 specimens.

CAPITÃO CARDOZO RIVER (12° 25'-11° S., 59° 50'-60° 20' W.).

April 6-7, 1914.

CARDOZO RIVER.—See Rio Capitão Cardoso.

CARUPANAN RAPIDS (8° 5' S., 60° 45' W.).

April 24, 1914; 2 specimens.

CASTANHO RIVER.—A name used by rubber gatherers for the Rio Roosevelt.

CATINGUERO CAMP.—About 15 miles from Utiarity. The source of a small tributary on the Rio Papagaio.

February 3, 1914; 1 specimen.

CERRO DO NORTE (region of 9° 30'-13° S., 59° W.).

February 23, 1914; 14 specimens.

CHAPADA (14° 55' S., 59° 58' W.).

CHERRIE RIVER (mouth: 11° 15' S., 60° 25' W.).—See Camp 21.

CHUVISCO RAPIDS (9° 25' S., 60° 25' W.).

April 18, 1914.

COMMEMORAÇÃO RIVER (12° 12'-11° 15' S., 60° 25'-61° 35' W.).

March 2-13, 1914.

CORUMBÁ (19° S., 57° 45' W.).—Low flat country.

November 26-December 21, 1913 (see Belvedere de Urucúm de Corumbá; Urucúm). Supplementary Expedition, November 5-10, 1916 (see Agua Blanca de Corumbá). 600 specimens (total of the aforementioned localities).

¹1915, Amer. Mus. Journ., XV, No. 2, p. 61.

CUYABÁ (15° 35' S., 56° 15' W.).

CUYABÁ RIVER (14° 30'–17° 55' S., 55° 50'–57° 30' W.).

December 27–30, 1913; 40 specimens.

DA CANJA.—See Camp 6.

DESCALVADOS (17° 15' S., 57° 35' W.).

January 4, 1914 (Fazenda do Descalvados). Supplementary Expedition. November 17–20, 1916, December 4–10, 21, 27, 1916 (Descalvados); December 11–12, 1916 (Agua Verde de Descalvados); December 13, 1916 (Capão de Onça de Descalvados); December 15–17, 1916 (Bocaina de Descalvados); December 18–19, 1916 (Sta. Rosa de Descalvados); December 20, 1916 (Tamanduá de Descalvados); 152 specimens (total of the aforementioned localities).

DO ASSAHY.—See Camp 5.

DO COLOR RIVER (a tributary of the Rio Juruena).—A rushing, turbulent brook of delightfully clear cool water.

February 6 and 7, 1914; 4 specimens.

DOZE DE RIO OUTUBRE (13°–11° 30' S., 60°–59° 25' W.).

February 17, 1914; 3 specimens.

DÚVIDA RIVER = RIO ROOSEVELT.

ENCARNACIÓN, PARAGUAY (27° 40' S., 55° 50' W.).

November 3, 1913.

FALLS OF UTIARITY (vicinity of Utiarity).

January 28, 1914.

FEDEGOSO (17° 15' S., 57° 20' W.).—A cowboy camp in the heart of the pantanal country in a low, flat plain, sparsely wooded, interspersed with swampy areas, representing most likely a former river bed.

Supplementary Expedition, November 22–28, 1916; 8 specimens.

FORMIGA RIVER.—Fourteen miles beyond the Rio Juruena.

February 10, 1914.

FORT COIMBRA (19° 50' S., 57° 55' W.).—The fort is built on a rocky hillside with a cluster of thatch-roofed huts nestling against the base. It is near the Bolivian border and in by-gone years figured prominently in several of the bloody controversies between the neighboring republics.

About December 15, 1913.

FORT WHEELER, PARAGUAY (22° 40' S., 59° 35' W.).—Low flat country.

Supplementary Expedition, September 13–October 12, 1916; 313 specimens.

GRAN CHACO (region of 21° S., 60° W.).

November 11–15, 1913.

GUATSUÉ.—Within two days of Utiarity.

Leo E. Miller, February 7, 1914; no specimens.

GY-PARANÁ RIVER (11° 15'–8° S., 61° 40'–63° W.).

INFIERNO RAPIDS (8° 20' S., 60° 40' W.).

April 20–23, 1914; April 20, head of Inferno Rapids, April 21, foot of the rapids, April 22, just above Inferno Rapids, April 23, halfway between Inferno and Carupanan Rapids; 3 specimens.

JOSÉ BONIFACIO (12° 15' S., 60° 5' W.).

February 23, 1914; 1 specimen.

JUENA RIVER (13°–11° 50' S., 59° 40'–59° W.).—A shallow though rapid stream 600 feet wide. The hills beyond the valley have scrub timber and brush.

February 12, 1914; 6 specimens.

- JURUENA RIVER** (13° 30'–7° 25' S., 59° 35'–57° 50' W.).—At the place where the Roosevelt party crossed, the Juruena is a deep, rushing stream 300 feet wide at the bottom of a rather deep valley whose sides are clothed with heavy forest. The hills beyond the valley have scrub timber and brush.
- KERMIT RIVER** (mouth: 11° 30' S., 60° 20' W.).—See Camp 13.
- MADEIRA RIVER** (mouth: 3° 25' S., 58° 30' W.).
- MANÁOS** (3° 15' S., 60° W.).
About April 28, 1914.
- MANDIOCA RIVER** (15°–13° 55' S., 59° 10'–58° 55' W.).—Two days beyond Aldea Queimada. Rubber tappers here found the mandioca plantations of a village of Parecis Indians whose assistance had been indispensable to enable them to maintain themselves in the forests.
January 25–27, 1914.
- MARACANA RIVER**.—Eight miles from the Rio Do Color.
February 7, 1914.
- MATA-MATA** (6° 50' S., 60° 25' W.).
April 28, 1914; 5 specimens.
- MATTO GROSSO** (15° S., 59° 58' W.).
- MELGAÇO**.—See Barão Melgaço.
- MONTE CRISTO** (11° 20' S., 62° 10' W.).
Leo E. Miller, March 17, 1914; 17 specimens.
- MORINHO LYRA** (near Vilhena).—A camp site in the foothills of the Cerro do Norte, at the edge of heavy timber in rough country.
February 17–18, 1914; 12 specimens.
- MUTUM CAVALLO** (vicinity of Rio Burity).—Ten miles from Paca Tirada through heavy forest which would justify the name Matto Grosso.
February 14–15, 1914.
- NEGRO RIVER, PARAGUAY** (25°–23° 25' S., 59° 10'–58° 40' W.).—Low, flat country like Fort Wheeler, marshes, swamps, and large, grass-covered areas.
November 12–15, 1913; 76 specimens.
- NICOLA BUENA RIVER**.—Vicinity of Tres Buritys, 40 miles from Vilhena and 25 miles from the Rio Roosevelt.
February 21, 1914; 2 specimens.
- PACA TIRADA**.—Vicinity of the Rio Burity. A camp site and telegraph pole No. 5123.
February 13–14, 1914; 1 specimen.
- PALMIRAS** (18° 55' S., 56° 45' W.).—The country of the Fazenda das Palmiras comprises three kinds of campo, namely: (1) plains, completely open, on the banks of the Rio Paraguay and Rio Taquary whose waters overflow and cover them from the beginning of the floods; (2) higher plains, but swampy with clumps and belts of woods here and there in which the bushes called *Pipiri*, of the Cyperaceae family, are abundant; and, finally, the fern land on the heights, never reached by the floods and which serve as a last refuge for the cattle during the flooding of the marshes. These are the so-called Carandazaes, named after the Caranda, one of the most beautiful palm trees of the forests.
Leo E. Miller, December, 16–27, 1913.
- PANELLAS RAPIDS** (9° 10' S., 60° 30' W.).
April 19, 1914; 2 specimens.

- PAPAGAIO RIVER (14° 10'–10° 45' S., 59° 30'–58° 45' W.).
February 7, 1914 (descent of the river begun).
- PERDIZ RIVER (14° 50'–13° 50' S., 58° 50' W.; alt. 1850 ft.).
January 24, 1914.
- PILCOMAYO RIVER, PARAGUAY (mouth: 25° 30' S., 58° W.).
November 11, 1913; 1 specimen.
- PIMIENTO BUENO RIVER (12° 30'–11° 15' S., 61° 30'–61° 35' W.).
March 13, 1914.
- PORTO DO CAMPO (16° S., 58° 25' W.).
January 7–13, 1914.
- PORTO GALILEO, PARAGUAY (24° 15' S., 59° 45' W.).
November 11, 1913.
- PRIMAVERA RIVER. Camp on the banks of a rushing brook near the Rio Juena.
February 12–14, 1914; 6 specimens.
- PORTO JACARÉ.—Vicinity of Porto de Campo; on the Sepotuba River.
January 8, 1914.
- RIO ROOSEVELT, ALSO KNOWN AS DÚVIDA, LOWER ARIPUANÁ, AND CASTANHA (12°–5° S., 60° 20'–60° 50' W.).—Heavily forested. Eleven other rivers were discovered conjointly with it on that occasion, along the meridian of 60° 30' W. of Greenwich, some of them being cut by the parallel of 13° and others by parallel 12° S. This region is wedged into the interior of the great wilderness which generally one can describe as enclosed on the north side by a stretch of the course of the Amazon River; on the northwest and southwest by the entire courses of the Rios Madeira and Guaporé; on the south by the Jaurú, Cabaçal, upper Paraguay, and the source of the Cuyabá; and on the east by the Arinos, the lower Juruena, and the Tapajóz. The course of the river took the mean route northward and the survey was made with 114 stations. It is certain that the courses formerly called Dúvida, Castanho, and Lower Aripuaná form one and the same river flowing uniformly south to north close upon 7 degrees without presenting at any point a deflexion which might be considered as the rupture of the continuity of the general direction.
February 27, 1914 (start down the river).
- ROSARIO, ARGENTINA.—Near Buenos Aires.
November 2, 1913.
- SACRE RIVER (14° 30'–12° 45' S., 59° 30'–58° 30' W.).—Otherwise called Timalatia.
Camp at the spot where with a width of 400 feet the river falls from a height of 125 feet and forms the marvelous Salto Bello, the power capacity of which is rated at 30,000 H. P.
January 28–29, 1914; 12 specimens.
- SALTO DAS INSCRIÇÕES INDÍGENAS (11° 20' S., 60° 25' W.).—See Camp 19.
- SALTO DE 7 ABRIL (11° 55' S., 60° 20' W.).—See Camp 26.
- SALTO BELLO FALLS.—Vicinity of Utiarity.
January 28–29, 1914.
- SALTO NAVAITÉ (12° S., 60° 20' W.).—See Camp 4.
- SAN JUAN.—See São João.
- SÃO LUIZ DE CACERES (16° 30' S., 57° 40' W.).—Formerly called Villa Maria.
January 5, 6, 1914.
- SANTA ROSA DE DESCALVADOS.—Near Descalvados.

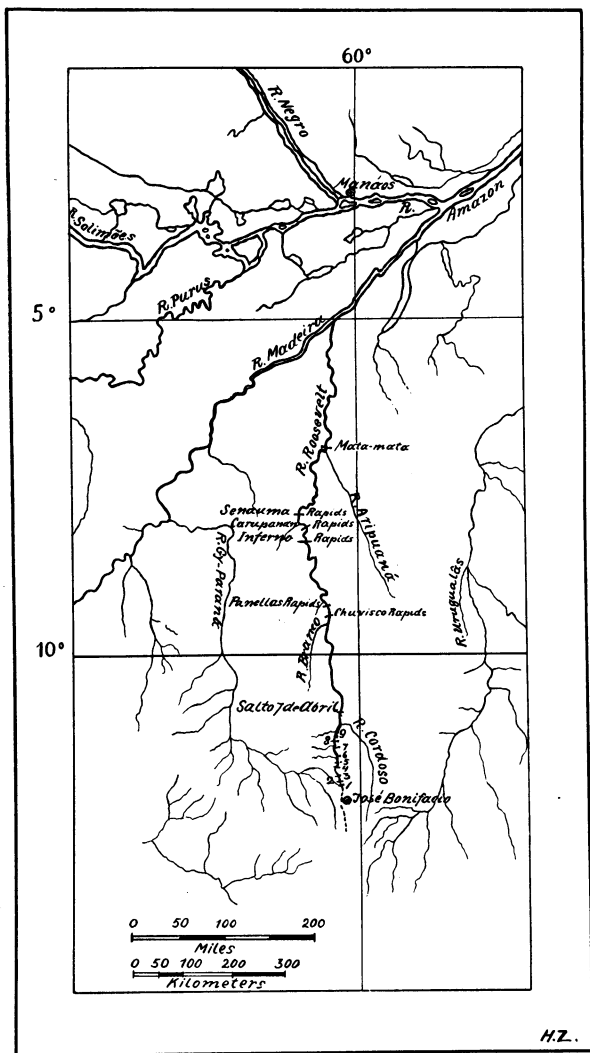
- Supplementary Expedition, December 18-19, 1916; 2 specimens.
- SÃO JOÃO.—On the Cuyabá River.
December 28-30, 1913; 5 specimens.
- SÃO LOURENÇO (16° 40' S., 55° 25' W.).
SÃO LOURENÇO RIVER (15° 50'-17° 25' S., 54° 30'-56° 55' W.).
December 26, 29, and 31, 1913; 58 specimens.
- SENAUMA RAPIDS (7° 55' S., 60° 50' W.).—Camp site.
April 25-26, 1914.
- "SIMPLICEO" (11° 40' S., 60° 20' W.).—See Camp 11.
- SETE DE SETEMBRE RIVER.—Near José Bonifacio.
February 24, 1914.
- SIXTH OF MARCH RAPIDS.—See Camp 8.
- SOLIMÕES RIVER (mouth: 3° 15' S., 60° W.).—About 50 miles above the mouth of the river.
Leo E. Miller, April 16-30, 1914; 33 specimens.
- TAMANDUÁ DE DESCALVADOS.—Near Descalvados.
Supplementary Expedition, December 20, 1916; 3 specimens.
- TAPIRAPOAN (15° S., 58° 40' W.).—Heavily forested along the river. Farthest outpost on the frontier of the Chapadão of Matto Grosso. Opened in 1908 by the telegraph line commission for the purpose of providing the necessary facilities for the supplies required for their work in the Chapadão dos Parecis (Parecis Highlands) to a point far beyond the Juruena River and Cerro do Norte.
January 11-20, 1914; 149 specimens.
- TRES BURITYS (12° S., 60° 15' W.).—Center of a large cattle ranch maintained by the Brazilian telegraphic commission.
February 22, 23, 1914; 4 specimens.
- TRINIDAD, PARAGUAY (25° 25' S., 57° 50' W.).—An agricultural experiment station is located here.
November 9-11, 1913; 64 specimens.
- URUCÚM (18° 40' S., 57° 40' W.).—Low, flat country, not marshy. "A garden spot of clear, cold springs, shady groves, and plantations of tropical fruits and vegetables. Easy of access were fields, forested hillsides, marshes, and lagoons in which dwelt an abundant and varied fauna."
November 26-December 15 and 21, 1913; 457 specimens.
- URUGUAS RIVER (9° 25'-8° 45' S., 58° 25'-58° 10' W.).
URUPÁ (10° 50' S., 61° 35' W.).
Leo E. Miller, March 15, 1914; 4 specimens.
- UTIARITY (12° 50' S., 58° 40' W.).—A village of the Parecis Indians. The first telegraph station in operation along the new line. Utiarity designates one of the most wonderful waterfalls of the world; village close by.
January 28-February 2, 1914; 60 specimens.
- VILHENA (12° 20' S., 60° W.).—A telegraphic station at the source of the Gy-Paraná, 2500 ft. alt.; situated on the central plateau that forms the divide between the Tapajóz and Madeira rivers. In a nearly treeless country, dotted with clumps of heavy timber. On the plain itself is a sparse scattering of stunted trees that are even less prominent in the landscape than the great termite nests that look like rough-hewn monoliths.
February 18-19, 1914; 6 specimens.

ITINERARY OF THE ROOSEVELT-RONDON EXPEDITION

October 27, 1913	Buenos Aires, Argentina
November 2	Rosario, "
November 3	Encarnación, Paraguay
November 7-11	Asunción, "
November 9-11	Trinidad, "
November 11-15	Gran Chaco, Bolivia
November 11	Porto Galileo, Paraguay
November 12-15	Rio Negro
November 26-December 21	Corumbá
December 17-21	Belvedere de Urucúm
December 16-27	Palmiras (Leo E. Miller)
December 15	Fort Coimbra, Bolivia
December 26-29-31	Rio São Lourenço
December 27-30	Rio Cuyabá
December 28-30	São João
January 4, 1914	Fazenda do Descalvados
January 5-6	São Luiz de Cáceres
January 7-13	Porto do Campo
January 8	Porto Jacaré
January 11-20	Tapirapoa
January 23	Aldea Queimada
January 24	Rio Perdiz
January 25-27	Rio Mandiocá
January 28	Falls of the Utiarity (on the Rio Papagaio)
January 28-29	Salto Bello Falls
January 28-February 2	Utiarity
January 29	Rio Sacre
February 3	Catinguero Camp
February 4	Burity on Rio Burity
February 6-7	Rio Do Color
February 7	Rio Papagaio (descent of river begun)
February 7	Guatsué (Leo E. Miller)
February 7	Rio Maracana
February 7-9	Rio Juruena (The Nambiquara head-hunters met with)
February 10	Rio Formiga
February 12	Rio Juena
February 12	Rio Primavera
February 13-14	Paca Tirada
February 13	Rio Burity (on the left bank of the Rio Papagaio)
February 14-15	Mutum Cavallo
February 16	Campos Novos
February 17	Rio Doze de Outubro
February 17-18	Morinho Lyra
February 18-19	Vilhena

February 19	Cabacera, Rio Ike
February 20	Rio Amarante
February 21	Rio Nicola Buena
February 22-23	Tres Buritys
February 23	Cerro do Norte
February 23-24	José Bonifacio
February 24	Rio Sete de Setembro
February 27	Rio Roosevelt
February 28	Camp 1
March 1	Camps 2 and 3
March 2-13	Rio Comemoração
March 2-3	Salto Navaité
March 2-7	Barão Melgaço (Leo E. Miller)
March 4-5	Camp 5 Do Assahy
March 5-6	Camp 6 Da Canja
March 6-7	Camp 7
March 7-10	Camp 8 6th of March Rapids
March 10-13	Broken Canoe Rapids
March 11-13	Camp 9 Broken Canoe
March 13	Rio Pimiento Bueno
March 15	Urupá (Leo E. Miller)
March 14-15	Camp 10
March 15	Camp 11
March 16	Camp 12
March 17	Monte Cristo (Leo E. Miller)
March 17-18	Camp 13
March 18	Rio Kermit
March 18-21	Camp 14
March 22	Camp 15
March 23-24	Camp 16
March 24-April 5	Calama (Leo E. Miller)
March 24-25	Camp 17
March 26	Camp 18
March 26	Camp 19
March 27	Camp 20
March 28-30	Camp 21
April 1	Bivouac on the Rio Roosevelt
April 1	Camp 22
April 2-3	Camp 23
April 4	Camp 24 (on right bank)
March 24-April 5	Calama (Leo E. Miller)
April 5	Camp 25
April 6-7	Camp 26 (at mouth of Rio Cardozo)
April 8	Camp 27
April 9	Camp 28
April 10-11	Camp 29
April 12-13	Camp 30
April 13	Camp 31

April 14	Camp 32
April 15-26	Rio Roosevelt
April 16	Barraca de Arras
April 16-30	Rio Solimões
April 17	Barraca
April 17	Rio Branco (a tributary of the Rio Roosevelt)
April 18	Chuvisco Rapids
April 19	Panellas Rapids
April 21	Barraca de Bagaço
April 15-26	Rio Castanho (Rio Roosevelt)
April 20-23	Inferno Rapids
April 16-30	Rio Solimões (Leo E. Miller)
April 24	Carupanan Rapids
April 25-26	Senauma Camp
April 26	Rio Aripuaná
April 28	Mata-mata Rapids



- KEY TO THE RIO ROOSEVELT MAP
1. Salto Navaité (Camp 4)
 2. 6th of March Rapids (Camp 8)
 3. Broken Canoe Rapids (Camp 9)
 4. Simplicio (Camp 11)
 5. Cachoeira Quebra Cabo (Camp 12)
 6. Rio Kermit (Camp 13)
 7. Rio Taunay (Camp 17)
 8. Salto das Incrições Indigenas Rapids (Camp 19)
 9. Rio Cherrie (Camp 21)

Map of the Rio Roosevelt with Camps of the Roosevelt-Rondon Expedition (1913).

Prepared for The American Museum of Natural History by E. M. B. N., 1924.

Sources for the map:

Roosevelt, 1914, 'Through the Brazilian Wilderness,' p. 338; 1921, National Geographic map of South America.

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The most important of all books, as it is based on the first extensive collection made by Johann Natterer in Brazil during the years 1817-1835 when he collected 12,293 bird-skins. The work appeared in four parts. Pt. I bears the date 1868 but the preface is dated Sept., 1867.¹

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¹See Catalogue of the Edward E. Ayer 'Ornithological Library,' Part II, p. 486, Field Mus. Nat. Hist., XVI, Zoöl. Series, 1926.

TABLE I.—CUYABÁ, MATTO GROSSO^{1,2}
(1911-1919)

Months	CENTIGRADE TEMPERATURE IN THE SHADE						RAIN (In mm.)					
	Mean	Mean of the Maxima	Mean of the Minima	Absolute Maxima	Date	Absolute Minima	Date	Mean of Wet-bulb Thermometer	Relative Humidity (Per Cent)	Total Amount	Maximum in 24 Hrs.	Date
January	27.2	30.1	24.8	34.0	20, 1916	22.0	1, 1917	24.4	78.7	240.7	97.0	5, 1917
February	27.0	30.0	24.7	35.0	27, 1915	22.3	28, 1916	24.3	79.6	214.9	118.0	25, 1916
March	27.2	30.0	24.7	34.5	6, 1919	20.5	8, 1916	24.6	80.5	232.9	78.0	22, 1919
April	27.1	30.1	24.1	34.1	15, 1915	16.7	30, 1914	24.2	78.8	119.6	80.0	29, 1914
May	25.9	29.2	22.3	34.0	6, 1915	10.2	31, 1917	22.2	74.2	48.8	34.5	12, 1919
June	24.3	28.0	19.9	33.7	5, 1914	10.6	25, 1918	19.9	69.6	3.9	6.8	13, 1919
July	24.3	29.0	19.6	34.0	25, 1916	9.9	9, 1918	19.2	62.4	6.2	10.2	28, 1914
August	25.7	30.5	21.3	35.7	19, 1912	11.7	7, 1918	19.9	59.1	51.1	133.6	31, 1911
September	27.5	31.8	23.6	37.2	27, 1916	12.4	3, 1912	21.6	60.5	50.1	55.5	19, 1913
October	28.2	31.7	24.8	36.6	5, 1915	18.5	27, 1914	23.4	67.1	104.5	63.8	11, 1917
November	27.8	31.2	25.0	36.8	19, 1913	21.7	18, 1913	23.9	73.4	165.6	77.5	22, 1911
December	27.3	30.4	24.8	35.2	1, 1914	18.6	25, 1915	24.2	76.0	221.9	90.0	28, 1913
Averages and Extremes	26.6	30.2	23.3	37.2	27, IX, '16	9.9	9, VII, '18	22.7	71.7	1460.2	133.6	31, VII, '11

¹Ministerio da Agricultura, Industria e Commercio, Directoria de Meteorologia; Director: Sampaio Ferraz. Boletim de Normães, Observações meteorológicas feitas no ex-Observatorio Nacional, hoje Instituto Central, do Rio de Janeiro, e nas Estação da rede Nacional, 1922, pp. 60 and 61. Republica dos Estados Unidos do Brasil.

²Para o elemento temperature (media) o periodo é de 8 annos, isto é, de 1912 a 1919.

TABLE II.—CORUMBÁ, MATTO GROSSO,²
(1912-1919)

Months	CENTIGRADE TEMPERATURE IN THE SHADE							RAIN (In mm.)				
	Mean	Mean of the Maxima	Mean of the Minima	Absolute Maxima	Date	Absolute Minima	Date	Mean of Wet-bulb Thermometer	Relative Humidity (Per Cent)	Total Amount	Maximum in 24 Hrs.	Date
January	27.0	34.3	22.5	40.0	3, 1916	16.4	19, 1918	23.3	84.1	166.1	63.4	12, 1918
February	26.5	34.0	22.2	39.0	dv.'16-'17	17.0	12, 1914	23.4	86.1	158.4	69.0	20, 1917
March	26.9	33.9	22.5	39.0	dv.'16-'17	13.8	12, 1918	23.2	86.2	122.9	70.0	2, 1915
April	26.1	33.3	22.8	40.0	dv. 1915	12.0	30, 1914	22.3	85.6	123.8	80.0	6, 1915
May	23.5	31.5	20.0	39.4	5, 1917	5.4	27, 1912	20.0	84.8	84.7	52.0	3, 1919
June	21.1	27.7	17.9	39.0	1, 1916	0.8	25, 1918	17.7	82.5	47.7	64.6	12, 1919
July	21.8	28.9	18.0	38.0	dv. 1917	5.0	10, 1918	16.9	75.3	7.1	11.0	26, 1914
August	22.9	29.9	19.0	39.0	dv. 1916	7.2	6, 1918	17.8	68.1	34.1	36.0	21, 1915
September	24.9	32.6	20.4	40.0	dv.'15-'16	6.2	2, 1912	19.9	72.6	57.9	60.0	28, 1915
October	25.9	33.8	21.3	41.0	5, 1915	10.0	20, 1915	21.1	74.9	101.6	70.4	29, 1913
November	26.8	34.3	23.5	40.0	dv.'15-'16	11.0	8, 1915	22.8	80.4	151.1	104.0	20, 1916
December	26.9	34.1	22.4	39.5	dv.'15-'17	17.2	3, 1913	23.9	84.0	189.7	80.0	8, 1916
Averages and Extremes	25.0	32.4	21.0	41.0	5, X, '15	21.0			80.4	1245.1	104.0	20, XI, '16

¹Boletim de Notícias. Observações meteorológicas feitas no ex-Observatório Nacional, and hoje Instituto Central, do Rio de Janeiro, e nas Estação da rede Nacional, 1922, pp. 60 and 61. República dos Estados Unidos do Brasil.

²Para os meses de Janeiro a Abril, o período é de 7 annos, isto é, do 1913 a 1919.

TABLE III.—S. LUIZ DE CACERES, MATTO CROSSO¹
(1912-1919)

Months	CENTIGRADE TEMPERATURE IN THE SHADE							RAIN (In mm.)				
	Mean	Mean of the Maxima	Mean of the Minima	Absolute Maxima	Date	Absolute Minima	Date	Mean of Wet-bulb Thermometer	Relative Humidity (Per Cent)	Total Amount	Maximum in 24 Hrs.	Date
January	25.9	32.6	22.2	37.1	7, 1915	16.0	2, 1919	23.7	91.9	200.7	109.0	6, 1916
February	25.5	31.8	22.1	36.6	1, 1919	17.0	29, 1916	23.5	93.3	208.4	92.2	7, 1913
March	25.6	32.5	22.1	35.8	6, 1919	15.6	12, 1918	23.6	93.2	145.1	80.0	4, 1914
April	25.1	32.3	21.2	36.8	22, 1915	14.5	24, 1917	23.0	93.3	96.2	59.2	8, 1913
May	22.4	30.3	17.9	35.2	d v	3.8	31, 1917	20.0	92.9	50.8	60.0	2, 1916
June	20.6	29.6	15.2	34.4	6, 1914	3.8	26, 1918	18.0	91.2	18.0	61.9	13, 1919
July	19.8	31.9	14.6	35.6	31, 1913	5.0	11, 1918	17.1	88.3	5.6	9.4	14, 1914
August	22.1	32.7	15.6	38.2	21, 1916	5.4	7, 1918	17.9	82.8	20.4	26.8	20, 1913
September	24.9	34.1	19.1	40.8	27, 1916	8.1	3, 1912	20.7	79.2	48.6	69.6	5, 1913
October	26.0	34.2	20.9	40.6	28, 1916	10.6	1, 1913	22.5	84.0	109.6	94.2	14, 1916
November	26.1	33.6	21.6	39.2	19, 1913	14.0	16, 1917	23.2	89.9	182.5	90.2	11, 1919
December	26.7	32.5	21.9	38.2	3, 1913	14.6	25, 1915	23.4	91.6	190.3	57.2	24, 1919
Averages and Extremes	24.2	32.3	19.5	40.8	27, IX, '16	3.8	26, VI, '18	21.4	89.3	1276.2	109.0	6, I, '16

¹Ministerio da Agricultura, Industria e Commercio, Directoria de Meteorologia, Director: Sampiao Ferraz. Boletim de Normas, Observações meteorológicas feitas no ex-Observatorio Nacional, hoje Instituto Central, do Rio de Janeiro, e nas Estação da rede Nacional, 1922, pp. 62 and 63. Republica dos Estados Unidos do Brazil.

DISTRIBUTIONAL LIST OF SPECIES AND SUBSPECIES

(2) *Rhea americana* subspecies?¹

Figures 1 to 3

Rhea americana PELZELN, 'Orn. Bras.,' III, 1870, p. 295 (Cuyabá, Caiçara, Matto-grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 152 (no data); IHERING, 'Cat. F. Braz.,' I, 1907, p. 3 (Matto Grosso).²

No specimens collected.

RANGE.—Southern Brazil: São Paulo, Minas Geraes, Matto Grosso (Cuyabá, Caiçara), Rio Grande do Sul. Uruguay; Paraguay; Argentina.

"Our first sight of young rhea was in October, 1916. We were in the Paraguayan Chaco at Ft. Wheeler, back from Puerto Pinasco about forty



Fig. 1. *Rhea americana* (Linnæus), Fedegoso, Brazil.

miles, where we had been collecting for some days. It had been seen at a distance several times, but the birds were wary and we had not been near enough to get a shot at one; one morning, however, an old male was observed in the open campo some hundred and fifty meters from a patch of woodland. Ordinarily the rhea when alarmed would keep to the open and depend on its speed to get out of sight, but this fellow as he saw us

¹Very little is known about the distribution of the three races of *Rhea*. Brazilian birds (São Paulo to Matto Grosso) are possibly referable to *R. americana intermedia* (Rothschild and Chubb, Nov. Zoöl., XXI, 1914, p. 223), south Brazil to Uruguay. It is, however, unlikely that they belong to *rothschildi* (Argentina). We have no material.

²I am giving the Matto Grosso records found in the 'Cat. Fauna Brazil,' Museu Paulista, though the majority are based on a compilation of other papers such as von Pelzeln, etc. Only those references based on actual specimens collected in Matto Grosso are of any real value.



Fig. 2. Young of *Rhea americana* (Linnæus), Descalvados, Brazil.



Fig. 3. Young of *Rhea americana* (Linnæus), Descalvados, Brazil.

made a quick dash for the woods. We hurried after him as fast as possible, hoping that he might skulk along the edge only of the woodland, and give us a chance for a shot. Reaching the edge of the woods we stopped to listen; presently we heard the low plaintive whistle of a young rhea in distress. Up to that time we had not suspected that there was a family with the old bird. Hearing the young, and carefully noting the direction we immediately plunged into the tangle of wood, working our way as rapidly as possible in the direction of the plaintive calls. Regardless of torn clothing and lacerated hands and faces, we forced a way through the undergrowth and were at last rewarded by a glimpse of the old male frantically rushing back and forth from side to side at once urging and encouraging his charges in their flight, and endeavoring to lead us off the trail. Every few minutes he would shake his wings in a way that gave off a peculiar rustling sound—no doubt a signal to the young to run or to conceal themselves for safety. He would also emit frequent peculiar little grunt-like sounds. Apparently, most of the young were being driven ahead of their protector; a few, perhaps the weaker ones, were falling behind, and it was the desire and effort to succor these weaker ones that brought about the undoing of the gallant parent. One of the weaker ones was caught in a tangle of burrs (similar to the New England beggar's lice) that had completely imprisoned the poor things; others were caught in a wild scramble through the bush. When caught, the young would seem to submit instantly and without a struggle; but let your hold relax ever so little and, with a sudden jump, your prisoner would be at liberty and the race renewed.

"We had not brought any receptacle for carrying a dozen lusty young rheas, but our Indian guide and helper was equal to the occasion. Quickly stripping off his cotton shirt (which he felt more comfortable without), it took only a minute to convert it into a bag and transfer our charges thereto."

(4) *Tinamus tao tao* Temminck¹

Tinamus tao TEMMINCK, 'Hist. Nat. Fig. et Gall.,' III, 1815, pp. 569, 749 ("dans la province de Pará au Brésil"); PELZELN, 'Orn. Bras.,' III, 1870, p. 290 (Cidade de Matogrosso, banks of the Rio Guaporé); IHERING, 'Cat. F. Braz.,' I, 1907, p. 4 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Cidade de Matto Grosso; Jamarysinho, Rio Machados); Amazonia² (Borba, Rio Madeira; Diamantina, near Santarém; Cussary).

¹Brabourne and Chubb [Ann. Mag. Nat. Hist., XII (8th ser.), 1913, pp. 577, 579] distinguish three races:

(a) *Tinamus tao tao*, from Brazil; (b) *Tinamus tao kleei*, from Peru; (c) *Tinamus tao venezuelensis*, Venezuela to Colombia.

²This is a zoogeographical region and comprises the Brazilian states Pará, Amazonas, part of Matto Grosso, and a part of Peru, Ecuador, and Colombia.

(6) *Tinamus serratus serratus* (Spix)

Pezus serratus SPIX, 'Av. Bras.,' II, 1825, p. 61, Tab. LXXVI ("in sylvis campestribus fl. Nigri").

Tinamus brasiliensis (not of Latham) PELZELN, 'Orn. Bras.,' III, 1870, p. 291 (Matogrosso, banks of the Rio Guaporé, Cachoeira da Bananeira).

Tinamus major (not of Gmelin) SALVADORI, 'Cat. B. Brit. Mus.,' XXVII, p. 502 (part; ♀).

Tinamus serratus IHERING, 'Cat. F. Braz.,' I, 1907, p. 4 (Matto Grosso); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 46 (Rio Negro, Rio Madeira).

No specimens collected.

RANGE.—Central and northern Brazil: Amazonia (Rio Negro, Rio Juruá, Rio Purús and Rio Madeira, Borba, Humaythá, Calama); Matto Grosso (Rio Guaporé, Cachoeira da Bananeira).

(22) *Crypturellus*¹ *soui hoffmannsi* (Brabourne and Chubb)

Crypturus soui hoffmannsi BRABOURNE AND CHUBB, Ann. and Mag. Nat. Hist., XIV (8th ser.), 1914, p. 321 (Humaythá, Rio Madeira).

Tinamus pileatus PELZELN, 'Orn. Bras.,' III, 1870, p. 294 (Engenho do Gama, Rio Guaporé, Matogrosso).

Crypturus pileatus SALVADORI, 'Cat. B. Brit. Mus.,' XXVII, 1895, p. 522 (Matto Grosso, Brazil); IHERING, 'Cat. F. Braz.,' I, 1907, p. 6 (part; Matto Grosso).

No specimens collected.

RANGE.—Lower Amazonia, from the Tapajóz westward, south to western Matto Grosso (Engenho do Gama, Rio Guaporé).

(24) *Crypturellus tataupa tataupa* (Temminck)

Tinamus tataupa TEMMINCK, 'Hist. Nat. Fig. et Gall.,' III, 1815, pp. 590, 752 (described from Brazilian examples in the collection at Lisbon and Paris, mentions also Azara, No. 329); PELZELN, 'Orn. Bras.,' III, 1870, p. 294 (Engenho do Cap. Gama).

Pezus niambu SPIX, 'Av. Bras.,' II, 1825, p. 63, Tab. LXXVIII (part; ♂, in campis districtus Adamantini et Bahiæ).

Crypturus tataupa ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 151 (part; Chapada); SALVADORI, 'Cat. B. Brit. Mus.,' XXVII, 1895, p. 526 (Chapada); Boll. Mus. Torino, XV, 1900, No. 378, p. 16 (Urucúm); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, p. 24 (Caceres, Poconé); IHERING, 'Cat. F. Braz.,' I, 1907, p. 6 (Matto Grosso).

Rio Negro, Paraguay, 1 ♂; feet grayish purple, bill reddish, blackish at tip; eye reddish brown. Urucúm, 1 ♀, feet and bill red; ovaries active, eggs in oviduct.

RANGE.—Eastern Brazil, from Piahy, Ceará and Pernambuco south to São Paulo and possibly even Rio Grande do Sul, west to Matto Grosso (Chapada, Engenho do Gama, Urucúm, Caceres, Poconé). Paraguay (Rio Negro).

(26) *Microcrypturus parvirostris* (Wagler)

Crypturus parvirostris WAGLER, 'Syst. Av.,' *Crypturus*, sp. 13, 1827 (Brazil); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 151 (Chapada); SALVADORI, 'Cat. B. Brit. Mus.,' XXVII, 1895, p. 526 (Pansecco, Chapada); Boll. Mus. Torino, XV, 1900, No. 378, p. 16 (Urucúm); IHERING, 'Cat. F. Braz.,' I, 1907, p. 6 (Matto Grosso).

¹Peters, Proc. New Eng. Zool. Cl., X, 1929, pp. 113-114.

Tinamus parvirostris PELZELN, 'Orn. Bras.,' III, 1870, p. 294 (Caiçara, Pansecco, Engenho do Cap. Gama).

No specimens collected.

RANGE.—From the Island of Marajó, Piauhý, and Ceará south to Matto Grosso (Pansecco, Chapada, Caiçara, Engenho do Gama) and São Paulo. Paraguay.

(28) *Crypturellus undulatus undulatus* (Temminck)

Tinamus undulatus TEMMINCK, 'Hist. Nat. Pig. et Gall.,' III, 1815, pp. 582, 751 (based on Azara, No. 331, Paraguay, au 24° degré de latitude sud).

Nothocercus scolopax BONAPARTE, 'Tabl. Parall. Ord. Gallin.' (extract), 1856, p. 18 (Santa Cruz, Bolivia).

Tinamus undulatus PELZELN, 'Orn. Bras.,' III, 1870, p. 292 (part; Cuyabá, Barra do Jaurú, Caiçara, Engenho do Cap. Gama, Matto Grosso).

Crypturus undulatus ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, pp. 151, 158 (Chapada, Matto Grosso).

Crypturus scolopax SALVADORI, 'Cat. B. Brit. Mus.,' XXVII, 1895, p. 528 (Villa Maria, Chapada, Matto Grosso); Boll. Mus. Torino, XV, No. 378, 1900, p. 16 (Urucúm, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 7 (Bolivia, Matto Grosso).²

Urucúm, 3 ♂, 2 ♀.

RANGE.—Central Brazil: Matto Grosso (Cuyabá, Villa Maria, Barra do Jaurú, Caiçara, Engenho do Cap. Gama, Urucúm, Chapada). Bolivia (Santa Cruz).

(35) *Crypturellus strigulosus* (Temminck)

Tinamus strigulosus TEMMINCK, 'Hist. Nat. Pig. et Gall.,' III, 1815, pp. 594 752 (dans la province de Pará, Brésil); PELZELN, 'Orn. Bras.,' III, 1870, p. 293 (Cidade de Matogrosso in the woods of Cravari).

Crypturus strigulosus SALVADORI, 'Cat. B. Brit. Mus.,' XXVII, 1895, p. 533 (Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 7 (Matto Grosso); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 50 [Rio Guamá (Ourém), Rio Capim (Resacca), Rio Acará].

No specimens collected.

RANGE.—Northern Brazil, south of the Amazon, from Pará (Pará, Rio Guamá, Rio Capim; Rio Acará), west to the Rio Madeira (Borba, Humaythá) and south to western Matto Grosso (Villa Bella).

(45) *Rhynchotus rufescens rufescens* (Temminck)

Tinamus rufescens TEMMINCK, 'Hist. Nat. Pig. et Gall.,' III, 1815, pp. 552, 747 [type-locality "Brésil," by subsequent designation (Cherrie and Reichenberger, 1923), Province of São Paulo].

Rhynchotus rufescens ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 158 (Chapada, Matto Grosso); SALVADORI, 'Cat. B. Brit. Mus.,' XXVII, p. 548 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 8 (Matto Grosso, Porto da Faya).

¹Dr. Hellmayr tells me that he has recently compared three topotypes of *C. undulatus* Temm. from Paraguay with twelve from near Santa Cruz (*scolopax* Bonap., *radiatus* Gray), in the Conover Collection, which proved to be identical.

²Dr. von Ihering ('Cat. F. Braz.,' I, 1907, p. 7) records *Crypturus adpersus vermiculatus* from Matto Grosso, but I believe he has confused it with *Crypturus undulatus* (cf. Hellmayr, 'Rev. Spix,' p. 703).

Rhynchotus rufescens alleni CHUBB, Bull. Brit. Orn. Club, XXVIII, 1917, p. 30 (Chapada).

Vilhena, 1 ♂, 1 ♂ juv.

RANGE.—South and southeastern Brazil: Matto Grosso (Chapada, Porto da Faya, Descalvados, Vilhena); São Paulo (Mattodentro, Tatutuba, near São José, Ypanema, Itararé); Paraná; Rio de Janeiro (Itatiaya); Bahia. Paraguay; Argentina (Misiones).

Temminck, when proposing *Tinamus rufescens* for the first time, quoted Azara's account of "Inambu guacú" from Paraguay. He added a description of the bird which, while the author obviously took some expressions from Sonnini's French edition of Azara's work, seems to have been mainly based upon the Brazilian specimen in the Paris Museum examined by him. So I think I am justified in regarding Brazil as the type-locality and, as a more exact place, I suggest the Province of São Paulo.

Four specimens from Matto Grosso (*Rhynchotus rufescens alleni* Chubb) are practically identical with the São Paulo birds, showing the same amount of individual variation. Mr. Chubb obviously compared his alleged new race with examples from Buenos Aires and Uruguay which have indeed less ochraceous coloring on the neck and chest and are also paler, more grayish on the lowerparts, beside having the bars more whitish and less buffy above. This southern bird constitutes a fairly distinct race which is entitled to the name of *Rhynchotus rufescens pallescens* Kothe. Thanks to the courtesy of Dr. Stresemann and Dr. Hartert, I have been enabled to see the type and several other examples from Buenos Aires and the Argentine Chaco. The Chaco birds being in every respect similar to those from Buenos Aires, I believe *Rhynchotus arcanus* Wetmore to have been based upon an individual aberration of *Rhynchotus rufescens pallescens*, inasmuch as Dr. Wetmore does not refer to this name and as his chief distinguishing character, the blackish barring on the outer primaries and wing coverts, is subject to much individual variation in this and in all other races.

The species was frequently seen through Matto Grosso and specimens were collected at Descalvados. A nest containing seven fresh eggs was found near Bocaina de Descalvados, Matto Grosso, December 15, 1916. It was in the open campo, a slight depression in the ground, lined with a small quantity of dead grasses, not in any way concealed. The eggs of this species have a brilliant, glossy surface, like burnished metal, and vary in color from a light seal-brown to a pale vinaceous-drab. They are short ovate in form and average about 47×56 mm. in size. Five of the seven eggs of the set measured 45.5×58.5; 47×36; 47×56.5; 47×56; and 46×54.5 mm., respectively.

Measurements¹

	SEX	WING	EXPOSED	
			CULMEN	MUSEUM
<i>Rhynchotus rufescens rufescens</i>				
Brazil, São Paulo, Ypanema	♂	190	39	Vienna
" " "	♂	192	38	
" Matto Grosso, Chapada	♂	197	38	A. M. N. H.
" " Vilhena	♂	193	37	"
" " " juv.	♂	157	27	
" São Paulo, or Minas Geraes (type of <i>R. fasciatus</i> Spix)	?	199	39	Munich
" São Paulo, Itararé,	♀	178	34	Vienna
" " Mattodentro	♀	195.5	38.5	
" Matto Grosso, Chapada	♀	190.5	39	A. M. N. H.
<i>Rhynchotus rufescens pallescens</i>				
Argentina, Buenos Aires, Coronel				
" Doreggo	♂	201	45	Tring
" Chaco, Mocovi	♀	196	39	
" Buenos Aires, S. Vicente	♀	201	44.5	
" " " Tornquist (type)	♀	204	48.5	Berlin
" Prov. Santa Fé, Chaco Austral, Rio de Oro, Colonia Grande Vedia	♀	201	40.5	Munich
<i>Rhynchotus rufescens catiugæ</i>				
Brazil, Piauh, Corrientes on the				
" Parnahyba	♂	190	43	Vienna
" Piauh, Palmeirinhas, type, No. 687	♂	192	39.5	
" Humaythá, Rio Madeira	♂	173	37	Tring
" " "	♀	180	41.5	"
<i>Rhynchotus rufescens maculicollis</i>				
Bolivia, Tanampaya	♂	189	42	Munich

(67) *Nothura minor* (Spix)

Tinamus minor SPIX, 'Av. Bras.,' II, 1825, p. 65, Tab. LXXXII ("in campis prope-pagum Tejuco").

Nothura media (not *Tinamus medius* Spix) SALVADORI, 'Cat. B. Brit. Mus.,' XXVII, 1895, p. 563 (Chapada, Matto Grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 152 (Chapada, Matto Grosso).

Nothura minor IHERING, 'Cat. F. Braz.,' I, 1907, p. 9 (Matto Grosso).

No specimens collected.

RANGE.—South Brazil: Matto Grosso (Chapada); Minas Geraes (Lagôa Santa, Diamantina); São Paulo (Itararé, Irisanga, Itatinga).

Differs from *N. m. maculosa* in smaller size and chestnut color of the back.

¹No tail measurements given.

(75) *Craz sclateri sclateri* Gray

Craz sclateri GRAY, 'List B. Brit. Mus.,' Part V, Gall., 1867, p. 14 (part; ♂, ♀ ad.—"Mexico," error = Central Brazil); PELZELN, 'Orn. Bras.,' III, 1870, p. 287 (Matto Grosso: Rio dos Porrudos, Engenho do Pari, Villa Maria on the right bank of the Rio Cabaçal, Rio de Sipotuba, Caiçara, Rio Guaporé); IHERING, 'Cat. F. Braz.,' I, 1907, p. 10 (Matto Grosso); HELLMAYR, 'Revis. Spix,' 1906, p. 682 (Rio de Sipotuba, Rio Guaporé, Caiçara, Matto Grosso); Nov. Zoöl., XV, 1908, p. 94 (Matto Grosso, Rio Pilcomayo, Paraguay); MÉNÉGAUX, Rev. Franç. d'Orn., IX, 1917, p. 24 (Poconé, Matto Grosso).

Craz fasciolata OGILVIE-GRANT, XXII, 1893, p. 47 (Rio do Cabaçal); SALVADORI, Boll. Mus. Zool. Torino, XV, 1900, No. 378, p. 15 (Urucúm).

Agua Verde, 1 ♂.

RANGE.—Central Brazil: Matto Grosso (Rio dos Porrudos, Engenho do Pari, Villa Maria on the right bank of the Rio Cabaçal, Rio de Sepotuba, Caiçara, Rio Guaporé, Poconé); São Paulo (Itapura, Santa Cruz do Rio Pardo, Barretos); Goyaz (Rio Araguaya, Faz. Esperança). Paraguay (Rio Pilcomayo).

(80) *Craz globulosa* Spix

Craz globulosa SPIX, 'Av. Bras.,' II, 1825, p. 50, Tab. LXV (mas.), LXVI (fem.), (in sylvis fluminis Solimões); PELZELN, 'Orn. Bras.,' III, 1870, p. 288 (Rio Guaporé, Volta do Gentio, Cachoeira da Bananeira, Salto Theotônio, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 12 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Rio Guaporé, Volta do Gentio, Cachoeira da Bananeira, Salto Theotônio); Amazonas¹ (Barra do Rio Negro, Borba). Eastern Ecuador; eastern Peru.

(84) *Mitu mitu* (Linnæus)

Craz mitu LINNÆUS, 'Syst. Nat.,' I, 12th Ed., 1766, p. 270 ["Brasilia, Guiana"—ex Marcgrave, p. 194 (Northeast Brazil)].

Craz tuberosa SPIX, 'Av. Bras.,' II, 1825, p. 51, Tab. LXVIIA (in sylvis flum. Solimões).

Ourax mitu PELZELN, 'Orn. Bras.,' III, 1870, p. 288 (Matto Grosso: Engenho do Cap. Gama, on the bank of the Rio Guaporé, Nas Laranjeiras, Salto Theotônio)

Mitua mitu OGILVIE-GRANT, 'Cat. B. Brit. Mus.,' XXII, 1893, p. 485 (Matto Grosso).

Mitu mitu IHERING, 'Cat. F. Braz.,' I, 1907, p. 12 (Matto Grosso).

Morinho Lyra, 1 ♂; feet reddish pink, bill bright orange.

RANGE.—Brazil: Matto Grosso (Engenho do Cap. Gama, Rio Guaporé, Salto Theotônio, Morinho Lyra); Amazonia (Rio Capim, Rio Acará, Rio Tapajóz, Rio Madeira, Rio Solimões, Rio Jurua). Eastern Peru; northern Bolivia.

(89) *Penelope superciliaris jacupemba* Spix

Penelope jacupemba SPIX, 'Av. Bras.,' II, 1825, p. 55 (part; Piahy); ALLEN Bull. Amer. Mus. Nat. Hist., V, 1893, p. 149 (Matto Grosso, Chapada); OGILVIE-GRANT, 'Cat. B. Brit. Mus.,' XXII, 1893, p. 491 (Matto Grosso, Chapada); HELLMAYR, 'Revis. Spix,' 1906, pp. 690, 691 (Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 13 (Matto Grosso).

¹Amazonas is a political unit (one of the Brazilian states).

Tapirapoan, 1 ♂.

RANGE.—From Maranhão south to Rio Grande do Sul; Matto Grosso (Chapada, Tapirapoan).

According to my knowledge, typical *P. s. superciliaris* (with greenish general coloration, rather narrow deep hazel margins to inner secondaries, wing- and tail-coverts, and obsolete pale grayish superciliaries) is restricted to the south bank of the Amazon from Pará to the upper Rio Madeira (Forte do Principe).

According to Hellmayr, birds from the semi-arid districts of eastern Brazil (Maranhão to Rio Grande do Sul) are duller, more of a grayish green, the rufous markings on wing and tail wider and paler (hazel to ochraceous-tawny), the superciliaries much more strongly pronounced, often bright ochraceous-tawny (*P. s. jacupemba*). My bird from Tapirapoan agrees with this description.

(100) *Penelope*¹ *ochrogaster* Pelzeln

Penelope ochrogaster PELZELN, 'Orn. Bras.,' III, 1870, pp. 282, 337 (Nas Frechas, and Engenho do Pari, near Cuyabá, Matto Grosso); OGILVIE-GRANT, 'Cat. B. Brit. Mus.,' XXII, 1893, p. 501 (Engenho do Pari, near Cuyabá, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 14 (Matto Grosso).

Descalvados, 1 ♂ ad.; throat reddish flesh-color, bare skin on sides slate-gray; feet bay-brown.

RANGE.—Brazil: Matto Grosso (Cuyabá, Engenho do Pari, Nas Frechas, Descalvados) and Goyaz (Rio Araguaya).

Nearly allied to *P. jacu-caca* Spix, of eastern Brazil (Bahia to Piahy).

According to Natterer this bird has a voice like a crow.

(108a) *Ortalis canicollis pantanalensis* Cherrie and Reichenberger

Ortalis canicollis pantanalensis CHERRIE AND REICHENBERGER, Amer. Mus. Novitates, No. 27, 1921, p. 2 (near mouth of Rio São Lourenço, Matto Grosso, Brazil).

Ortalida canicollis PELZELN, 'Orn. Bras.,' III, 1870, p. 286 (Villa Maria, in the forest on the banks of the Paraguay, Caiçara).

Ortalis canicollis IHERING, 'Cat. F. Braz.,' I, 1907, p. 15 (part; Matto Grosso). Palmiras, Rio Taquary, 1 ♀; Rio São Lourenço, 1 ♀.

RANGE.—Brazil: Matto Grosso (Palmiras, Rio Taquary, Rio São Lourenço, Villa Maria, Caiçara).

The type has the outer four pairs of rectrices tipped with rufous, while in the specimen from the Rio São Lourenço, as in three additional ones from São Luiz de Cáceres in the Vienna Museum, only the outer three pairs are marked that way.

¹*Penelope pileata* Wagler: a reference given by von Ihering, 'Cat. F. Braz.,' I, 1907, p. 14 (Matto Grosso), is erroneous, as this species does not occur in Matto Grosso, but only on the lower Amazon.

The only difference from *O. c. canicollis* of Paraguay and Argentina is that in *O. c. pantanalensis* the three or four (instead of only two) lateral pairs of rectrices are tipped with rufous.

(112) *Ortalis guttata guttata* (Spix)

Penelope guttata SPIX, 'Av. Bras.,' II, 1825, p. 55, Tab. LXXIII ("ad flumen Solimões").

Ortalida albiventris PELZELN, 'Orn. Bras.,' III, 1870, p. 286 (Engenho do Gama, São Vicente, Matogrosso, Forte do Principe).

Ortalis guttata OGILVIE-GRANT, 'Cat. B. Brit. Mus.,' XXII, 1893, p. 510 (Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 16 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Forte do Principe, São Vicente, Engenho do Gama). Amazonia: Rio Solimões; Rio Purús (Bom Lugar, Cauacury); Rio Juruá; Borba; Calama; Jamarysinho; Rio Madeira. Bolivia (S. Antonio, Yungas, S. Mateo)¹; eastern Ecuador.

(116) *Pipile cumanensis nattereri* Reichenbach

Pipile nattereri REICHENBACH, 'Columb.,' 1862, p. 154, Novit. Suppl., Pl. IX, fig. 5060—based on *Penelope cumanensis* PELZELN, Sitz. Ak. Wiss. Wien, math-natur. Kl., XXXI, 1858, p. 330, spec. ex Rio Nas Frechas.

Penelope nattereri PELZELN, 'Orn. Bras.,' III, 1870, p. 283 (Nas Frechas, Villa Maria, Rio Guaporé, Ilha do Carvalho, Matto Grosso).

Pipile cumanensis GRANT, Ibis, 1911, p. 461 (Pan de Azucar).

Descalvados, 1 ♀; feet carmine; claws blackish; bill black, but from the gonyes and anterior edge of the nostrils backward, including the loreal region and the bare space about the eyes, the color is pale greenish blue; the upper throat from between the rami of the mandible to a point directly below the posterior edge of eye is slate-blue; lower throat and throat-wattle bright reddish flesh-color.

RANGE.—Brazil: Matto Grosso (Villa Maria, Rio Guaporé, Ilha do Carvalho, Nas Frechas, Descalvados, Pan de Azucar) east to Goyaz, north to the south bank of the Solimões.

Two races of *P. cumanensis* are supposed to exist in this region: (1) *P. c. nattereri* in eastern Matto Grosso (Nas Frechas and Sangrador, east to Goyaz, north to the south bank of the Solimões; (2) *P. c. greyi* in western Matto Grosso, drainage of the Paraguay and upper Guaporé.

Material has been scarce and even with the aid of Dr. Hellmayr's article (Nov. Zool., XV, 1908, pp. 96-98) and Salvadori's monograph of the genus *Pipile* (Rev. Ital. Orn., III, 1914, pp. 51-53) I cannot throw much light on the subject of these little-known birds. I notice that Salvadori refers a bird from Carandasinho to *nattereri*, which from geographical considerations I should expect to be *greyi*.

I have investigated all the available material in The American Museum of Natural History and have come to the following conclusions:

¹Bolivian birds may be separable.



Penelope ochrogaster Pelzeln, ♂; Descalvados, Matto Grosso, Brazil, December 5, 1916, Roosevelt Expedition; George K. Cherrie.

A specimen from Descalvados, which I identify as *P. c. nattereri*, has the lower throat, fore neck, and wattle bright reddish orange; chin and upper throat alone being slaty blackish; also the upperparts are darker, more steel-green instead of bronze-green. Our bird possesses a large, rounded wattle "joined to the throat for the whole of its length."

I have compared our specimen from Descalvados to a series of Bolivian specimens, all of which have a long, slender wattle as in *greyi*, and to typical *cumanensis* from Colombia. Colombian specimens have the general color bronze-green instead of steel-green, have the naked portions on throat and fore neck, including the wattle, slate blackish, and have the wattle large and rounded instead of long and narrow, and joined to the throat for the whole of its length. A bird from Descalvados, which I identify as *P. c. nattereri*, having a broad wattle, seems to occur in the range of *P. c. greyi*; that is, in western Matto Grosso in the drainage of the Paraguay and upper Guaporé. Perhaps the two forms are not separable, and due to lack of material I can come to no conclusion.

Pipile cumanensis subspecies?

Rio Roosevelt, Camp 6, 1 ♀. Upper throat and chin blue; lower throat and wattle red; tip of bill blackish; feet red; eye dark brown; sides of face and base of bill pale sky-blue.

The bird from the Rio Roosevelt agrees in color above with typical *cumanensis*, being bronze-green, but due to the orange throat and slender wattle it cannot be typical *cumanensis* which has the naked portions on throat and fore neck, including wattle (large and round), slate blackish.

The wattle of the bird from the Rio Roosevelt is not so extreme as in *greyi*; in fact, all its characters are intermediate, agreeing with the intermediate locality in which it occurs. Therefore, I cannot identify this specimen. Its range approaches *P. c. nattereri*; that is, eastern Matto Grosso, north to the south bank of the Solimões.

(130e) **Odontophorus gujanensis rufinus** (Spix)

Perdix rufina SPIX, 'Av. Bras.,' II, 1825, p. 60, Tab. LXXVI, b (in sylvis fl. Amazonum).

Odontophorus gujanensis PELZELN, 'Orn. Bras.,' III, 1870, p. 289 (São Vicente, Forte do Principe da Beira, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 17 (Matto Grosso).

No specimens collected.

RANGE.—Northern Brazil, south of the Amazon, from Pará to the Rio Madeira, south to western Matto Grosso (São Vicente, Forte do Principe da Beira).

(140) *Odontophorus stellatus* (Gould)

Ortyx stellata GOULD, P. Z. S., X, 1842, p. 183, pub. Feb., 1843 (Brazil).

Odontophorus stellatus PELZELN, 'Orn. Bras.,' III, 1870, p. 290 (Cachoeira da Bananeira, Rio Mamoré); IHERING, 'Cat. F. Braz.,' I, 1907, p. 18 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Cachoeira da Bananeira,¹ Rio Mamoré); Borba, Rio Madeira; Rio Solimões; Rio Purús. East Ecuador; eastern Peru.

(149) *Columba speciosa* Gmelin

Columba speciosa GMELIN, 'Syst. Nat.,' I, part 2, 1789, p. 783 (based on Buffon and Daubenton 'Pl. Enl.,' 213, Cayenne); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 148 (Chapada); SALVADORI, 'Cat. B. Brit. Mus.,' XXI, 1893, p. 281 (Engenho do Gama, Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 19 (Matto Grosso).

Lepidoenas speciosa PELZELN, 'Orn. Bras.,' III, 1870, p. 274, (Engenho do Cap. Gama, Rio Guaporé, Destacamento do Ribeirão).

Rio Roosevelt, Camp 5, 1 ♀; tip of bill horny white, base coral-red; feet purple; eye red-brown.

RANGE.—The whole of Brazil from Counany south to Santa Catharina and Matto Grosso (Chapada, Engenho do Gama, Rio Guaporé, Destacamento do Ribeirão, Rio Roosevelt); N. E. Bolivia; eastern Peru; Ecuador; Colombia; Venezuela; Guiana; Trinidad; also in Central America.

(151) *Columba rufina sylvestris* Vieillot

Columba sylvestris VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXVI, 1818, p. 366 (based on Azara, No. 319, Paraguay).

Columba rufina ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 148 (Chapada); SALVADORI, 'Cat. B. Brit. Mus.,' XXI, p. 287 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 19 (Matto Grosso).

Agua Blanca de Corumbá, 1 ♂ ad.

RANGE.—Brazil: south of the Amazon, from Pará south to Matto Grosso (Chapada, Agua Blanca de Corumbá); São Paulo (Ypanema, Itararé, Tejuco, Borda do Matto). Northern Argentina (Misiones, Corrientes, Tucumán, etc.); south-eastern Bolivia (Caiza); Peru.

(157) *Columba plumbea pallescens* Sneathlage

Columba plumbea pallescens SNEATHLAGE, Journ. f. Ornith., LVII, Heft 1, 1908, p. 22 (Bom Lugar, Rio Purús, W. Brazil).

Columba plumbea PELZELN, 'Orn. Bras.,' III, 1870, p. 274 (Engenho do Cap. Gama, Rio Guaporé); IHERING, 'Cat. F. Braz.,' I, 1907, p. 20 (Matto Grosso).

Tapirapoan, 1 ♂ ad.

RANGE.—From Pará to the confines of Peru, down to Matto Grosso (Tapirapoan) and eastern Bolivia.

¹Matto Grosso politically. Here the fauna is already Amazonian in character.

Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Columba plumbea pallescens</i>					
Brazil, Pará, Ipitinga, Rio Acará	1 ♀	170	140	15	Munich
“ Matto Grosso, Tapirapoan	1 ♂	168.5	141	14.5	A. M. N. H.
<i>Columba plumbea plumbea</i>					
Brazil, São Paulo, S. Sebastião	3 ♂	189.3	152.1	16.5	Tring
“ Espirito Santo, Victoria	1 ♂	189	148.5	16.5	Munich
“ Espirito Santo, Victoria	1 ♀	172	150	15	Munich
“ Paraná, Roça Nova, Serra do Mar	1 ♂	188	155.5	17	Tring
“ Paraná, Rio Boraxudo	1 ♀	186.5	154.5	18	Munich
<i>Columba plumbea berti</i>					
Brazil, Goyaz	4 ♂	176.1	147	14.8	Tring (type) and Vienna
“ Minas Geraes, Rio Jordão	1 juv.	181	146	15.5	Tring

(162a) *Zenaida auriculata virgata* Bertoni

Zenaida virgata BERTONI, Anal. Cient. Parag., I, 1901, p. 24 (Alto Paraná, Paraguay).

Zenaida maculata PELZELN, 'Orn. Bras.', III, 1870, p. 276 (Cuyabá, Cidade de Matto Grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 149 (Chapada); SALVADORI, Boll. Mus. Torino, XV, 1900, No. 378, p. 14 (Urucúm).

Zenaida auriculata noronha CHUBB, Ibis, 1919, p. 36 (Fernando Noronha).

RANGE.—Brazil: Noronha Islands; Matto Grosso (Chapada, Cuyabá, Cidade de Matto Grosso, Urucúm); São Paulo; Paraná; Rio Grande do Sul; Rio de Janeiro; Minas Geraes; Bahia; Piahy; Maranhão. Paraguay.

Zenaida auriculata virgata differs from *Z. auriculata auriculata* of Chile, Argentina, etc., by smaller size (wing of males 133–137, rarely to 142, against 147–157) and by having the anterior underparts generally of a paler vinaceous-pink. Two birds from Matto Grosso (Cuyabá, Chapada) appear to be inseparable from a large series from Piahy, Maranhão and Bahia, which agree with topotypes from Fernando Noronha in The American Museum of Natural History. Also one bird, a female, from Trinidad, Paraguay (*Z. virgata* Bertoni) agrees in size and coloration with the Matto Grosso birds. The proper name of the eastern form of this dove is, therefore, as above, since *Z. virgata* has many years priority over *Z. a. noronha* Chubb (Ibis, 1919, p. 36, Fernando Noronha).

(169a) **Scardafella squammata squammata** (Lesson)

Columba squammata LESSON, 'Traité d'Orn.,' 1831, p. 474; based on *Columba squamosa* (not of Bonnaterre, 1792) Temminck and Knip, 'Les Pigeons,' I, 1810, Colombes, p. 127, Pl. LIX (Bahia).

Piraputanga, Matto Grosso, 1 ♂ ad., July 23, 1926; Geo. K. Cherrie (Field Museum).

RANGE.—Tableland of Brazil from the interior of Maranhão, Piauí, Ceará, and Parahyba south to northern São Paulo and Matto Grosso (Piraputanga).

(176) **Chamæpelia minuta minuta** (Linnæus)

Columba minuta LINNÆUS, 'Syst. Nat.,' I, 12th Ed., 1766, p. 285 (based on Brisson, 'Orn.,' I, p. 116, Pl. VIII, fig. 2; San Dominguo; error, type loc. subst. Cayenne).¹

Columba grisea BONNATERRE, 'Tabl. Enc. Meth. Ornith.,' I, 1792, p. 252 (Cayenne).

Chamæpelia amazilia PELZELN, 'Orn. Bras.,' III, 1870, p. 277 (Cuyabá, Engenho do Cap. Gama, Matogrosso, on the banks of the Guaporé).

Chamæpelia minuta SALVADORI, 'Cat. B. Brit. Mus.,' XXI, 1893, p. 481 (Chapada).

Columbigallina minuta IHERING, 'Cat. F. Braz.,' I, 1907, p. 22 (Matto Grosso).

Palmiras, 1 ♀; Urucúm, 1 ♀.

RANGE.—Throughout the campo districts of Brazil from Maranhão, Ceará and Pernambuco south to São Paulo and Matto Grosso (Palmiras, Urucúm, Chapada, Engenho do Gama, banks of the Rio Guaporé) and Paraguay; in the savannah around Ciudad Bolívar, Venezuela; reappears in French and British Guiana, and in the Urubamba Valley, Peru.

(179) **Chamæpelia talpacoti talpacoti** (Temminck and Knip)

Columba talpacoti TEMMINCK AND KNIP, 'Les Pigeons,' I, Colombi-Gall., 1811, p. 22, Tab. XII (*C. minuta*), "l'Amérique méridionale" = Brazil (auct. Brabourne and Chubb).

Columbigallina talpacoti ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 149 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 22 (Matto Grosso).

Chamæpelia talpacoti PELZELN, 'Orn. Bras.,' III, 1870, p. 277 (São Vicente); SALVADORI, 'Cat. B. Brit. Mus.,' XXI, 1893, p. 485 (Chapada); Boll. Mus. Torino, XV, 1900, No. 378, p. 14 (Urucúm); GRANT, Ibis, 1911, p. 460 (Rabicho, Rio Paraguay); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 25 (Caceres, Poconé).

Urucúm, 3 ♂, 2 ♀; Solimões, 1 ♀.

RANGE.—From the confines of Guiana all over Brazil, south to Matto Grosso (Chapada São Vicente, Urucúm, Caceres, Poconé, Rabicho), and Rio Grande do Sul, west to northern Argentina, eastern Bolivia, and eastern Peru.

This species is found in a large part of tropical South America; abundant about Urucúm during December.

¹Berlepsch and Hartert, Nov. Zoöl., IX, 1902, p. 119.

(181) *Uropelia campestris* (Spix)

Columbina campestris SPIX, 'Av. Bras.,' II, 1825 p. 57, Tab. LXXV, fig. 2 ("in campis Bahiæ").

Columbula campestris PELZELN, 'Orn. Bras.,' III, 1870, p. 276 (Cuyabá); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 149 (Cachoeira).

Uropelia campestris SALVADORI, 'Cat. B. Brit. Mus.,' XXI, 1893, p. 489 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 22 (Matto Grosso).

Tapirapoan, 2 ♂, 2 ♀; eye gray, feet and bare skin about eye, including the eyelids, yellow.

RANGE.—Brazil: Matto Grosso (Chapada, Cuyabá, Cachoeira, Tapirapoan); Goyaz (Uruhú, Bacalhão, Estrella, Rio Thesouras, City of Goyaz); Minas Geraes, (Paracatú); Bahia (São Marcello, Rio Preto); Piauh (Santa Philomena, Lagôa do Saco); Island of Marajó (Pindobal, Pacoval, Rio Arary, S. Natal). Eastern Bolivia (Chiquitos).

(182) *Oxyptilia cyanopsis* (Pelzeln)

Peristera cyanopsis (NATTERER MS.) PELZELN, 'Orn. Bras.,' III, 1870, pp. 277, 336 (Cuyabá); SALVADORI, 'Cat. B. Brit. Mus.,' XXI, 1893, p. 490, Pl. x, fig. 1 (Cuyabá); IHERING, 'Cat. F. Braz.,' I, 1907, p. 23 (Cuyabá).

No specimens collected.

Natterer collected three specimens, 2 males and 1 female, at Cuyabá, Matto Grosso, and the late E. Garbe secured one at Itapura near the junction of the Tieté with the Paran , in northern S o Paulo. One adult male is in the British Museum, and the other specimens are still in the Natural History Museum in Vienna,¹ except one which has recently been acquired by the American Museum.

(183) *Claravis pretiosa* (Ferrari-Perez)

Peristera pretiosa FERRARI-PEREZ, Proc. U. S. Nat. Mus., IX, 1886, p. 175, new name for *Columba cinerea* (not of Scopoli, 1786) Temminck and Knip, 'Les Pigeons,' I, 1811, Colombes, p. 126, Pl. LVIII, Brazil.

Peristera cinerea PELZELN, 'Orn. Bras.,' III, 1870, p. 278 (Cidade de Matogrosso, right bank of the Guapor ); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 149 (Chapada); SALVADORI, 'Cat. B. Brit. Mus.,' XXI, 1893, p. 491 (Chapada); Boll. Mus. Torino, XV, 1900, No. 378, p. 14 (Carandasinho).

Claravis pretiosa IHERING, 'Cat. F. Braz.,' I, 1907, p. 23 (Matto Grosso).

Uruc m, 2 ♂, 2 ♀.

RANGE.—Brazil, Matto Grosso (Chapada, Uruc m, Carandasinho). Widely distributed in Central and South America down to Paraguay and northern Argentina.

(193) *Leptotila rufaxilla reichenbachii* Pelzeln

Leptoptila reichenbachii PELZELN, 'Orn. Bras.,' III, 1870, pp. 279, 337 (Ypanema, S o Paulo).

Engyptila rufaxilla ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 149 (Chapada).

¹Ann. des K. K. Natur. Hist. Hof. Mus., III, 1888, p. 48.

Engyptila erythrothorax ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 149 (Chapada).

Rio São Lourenço, 1 ♂; feet coral-red; eye dusky yellowish; eyelids dark reddish.

RANGE.—Brazil: Matto Grosso (Chapada, Rio São Lourenço); Espírito Santo (Victoria); Rio de Janeiro; São Paulo (Ypanema, Fazenda Cayoá); Paraná; Rio Grande do Sul. Uruguay; Paraguay; Argentina (Misiones).

With the material at hand I fail to see anything but a subspecific difference between the birds from São Paulo and Matto Grosso (*Leptotila reichenbachii*) and the specimens from British Guiana (*Leptotila rufaxilla*). The northern race appears to average somewhat smaller. The upperparts of *L. rufaxilla* are olive-brown, while in *L. reichenbachii* they are brown. The northern bird averages paler vinous on the breast and more extensively white on the abdomen.

Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM	
<i>Leptotila rufaxilla reichenbachii</i>						
Brazil, Matto Grosso, 4 ♂						
“	Chapada, Rio São Lourenço, 1 ♂	5 ♂	145.2	108.7	17.1	A. M. N. H.
“	Espírito Santo, Victoria	1 ♂	153.5	104	15.5	Dwight Coll.
“	São Paulo, Fazenda Cayoá	1 ♂	148	111	18	“ “
“	São Paulo, Fazenda Cayoá	1 ♂	150	111.5	17.5	“ “
<i>Leptotila rufaxilla rufaxilla</i>						
Brit. Guiana, Tumatumari, 1 ♂						
Brit. Guiana, Potaro River, 1 ♂						
Brit. Guiana, Potaro Landing, 2 ♂						
4 ♂		143.1	106.3	15.5	A. M. N. H.	
Brit. Guiana, Tumatumari, 1 ♀						
Brit. Guiana, Rockstone, Essequibo River, 1 ♀						
Brit. Guiana, Minnehaha Creek, 1 ♀						
3 ♀		138.8	96.8	16.3	“ “	

(194) *Leptotila verreauxi decipiens* (Salvadori)¹

Homoptila decipiens SALVADORI, Atti Acc. Sci. Torino, VI, 1871, p. 131 (Brazil).

Leptotila ochroptera SALVADORI, 'Cat. B. Brit. Mus.,' XXI, 1893, p. 555 (Chapada, Corumbá); Boll. Mus. Torino, XV, 1900, No. 378, p. 15 (Urucúm); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 24 (Poconé).

Leptotila ochroptera IHERING, 'Cat. F. Braz.,' I, 1907, p. 24 (Matto Grosso).

Leptotila chloroauchenia GRANT, Ibis, 1911, p. 460 (near Porto Martinho).

Urucúm, 1 ♂, 1 ♀; Rio São Lourenço, 1 ♀; Tapirapoan, 1 ♂.

RANGE.—Brazil: Matto Grosso (Chapada, Corumbá, Urucúm, Poconé, Porto Martinho); Rio de Janeiro (Sapitiba); São Paulo (Mattodentro, Ypanema, Porto do Jaguariba).

(204) *Oreopeleia montana montana* (Linnæus)

Columba montana LINNÆUS, 'Syst. Nat.,' I, 10th Ed., 1758, p. 163 (Jamaica; based on *Columba minor fulva* EDWARDS, 'Nat. Hist. Birds,' Pl. CXIX; SLOANE, Jamaica, II, 304, Pl. CCLXI, fig. 1).

Oreopeleia montana PELZELN, 'Orn. Bras.,' III, 1870, p. 279 (Matogrosso).

Geotrygon montana ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 149 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 25 (Matto Grosso).

No specimens collected.

RANGE.—Guiana; Venezuela; Colombia; Ecuador; Bolivia; Paraguay. Brazil: Pará; Rio Capim; Diamantina, near Santarém; Humaythá, Rio Madeira; Rio Purús; upper Rio Negro; Pernambuco; Bahia; Rio de Janeiro (Cantagallo and Nova Friburgo); São Paulo (Iguapé); Matto Grosso (Chapada, Villa Bella); Santa Catharina.

(212) *Opisthocomus hoazin* (P. L. S. Müller)

Phasianus hoazin P. L. S. MÜLLER, 'Syst. Nat. Suppl.,' 1776, p. 125 (based on Daubenton, 'Pl. Enl.,' 337, Cayenne).

Opisthocomus cristatus DEVILLE, Rev. Mag. Zool., (2), IV, 1852, p. 222 (Rio Paraguay or Cuyabá, Matto Grosso); PELZELN, 'Orn. Bras.,' III, 1870, p. 280 (Engenho do Cap. Gama, on the banks of the Guaporé, Cidade de Matogrosso).

Solimões, 3, ♂, 2 ♀; Calama, 1 ♂.

RANGE.—Brazil: Matto Grosso (Engenho do Cap. Gama, on the banks of the Guaporé; Cidade de Matto Grosso); Goyaz (Rio Araguaya, Rio de Crixas); Piauhy (Rio Parnahyba); Maranhão (Rio Itapicurú); Rio Solimões; Calama; Rio Tapajóz (Santarém); Rio Tocantins (Vista Alegre); Pará, Ilha das Onças, St. Antonio do Prata; Marajó. Guiana; Venezuela; Colombia; Ecuador; Peru; Bolivia.

(232) *Aramides cajanea chircote* (Vieillot)²

Rallus chircote VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXVIII, 1819, p. 551 (ex Azara, No. 368, Paraguay).

Aramides cayennensis PELZELN, 'Orn. Bras.,' III, 1870, p. 315 (part; Cuyabá, Matogrosso); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 150 (Chapada).

Aramides chircote SHARPE, 'Cat. B. Brit. Mus.,' XXIII, 1894, p. 58 (Chapada); GRANT, Ibis, 1911, p. 462 (Pan de Azucar).

¹As pointed out by Dr. Hellmayr (Field Mus. Nat. Hist., Zool. Ser., XII, 1929, p. 472) *L. ochroptera* cannot stand and has to be replaced by *decipiens* Salvadori.

²This form does not appear to be separable from *A. c. cajanea* (see Hellmayr, Field Mus. Nat. Hist., Zool. Ser., XII, 1929, p. 482).

Aramides cajanea IHERING, 'Cat. F. Braz.,' I, 1907, p. 28 (part; Matto Grosso).
Urucúm, 2 ♂, 1 ♀, 1 ? Adult male; eye red; feet red; bill apple green at tip gradually changing to orange-yellow at base.

RANGE.—Brazil: Matto Grosso (Pan de Azucar, Chapada, Urucúm); Paraná (Paranaguá, Rio do Boraxudo); Rio Grande do Sul. Argentina (San Lorenzo).

(235) *Amaurolimnas concolor* (Gosse)

Rallus concolor GOSSE, 'Birds of Jamaica,' 1847, p. 369, Pl. ciii (Jamaica).

Porzana concolor PELZELN, 'Orn. Bras.,' III, 1870, p. 316 (Engenho do Cap. Gama, on the shores of the Rio Guaporé).

Amaurolimnas concolor IHERING, 'Cat. F. Braz.,' I, 1907, p. 29 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Engenho do Cap. Gama, Rio Guaporé); São Paulo (Iguapé, Ubatuba); Bahia. British Guiana (Merumé Mts.); Ecuador; Colombia; Panama; Nicaragua; Honduras; Guatemala; Jamaica.¹

(242a) *Thyrorhina schomburgki chapmani*, new subspecies

SUBSPECIFIC CHARACTERS.—Male: larger throughout, bill longer, relatively slenderer. General color above umber-brown instead of sepia-brown; spots of white more ovate and smaller, each spot bordered with less black than in *Thyrorhina schomburgki* from Roraima, Venezuela. The black-bordered white spots entirely lacking on lower back, rump and upper tail-coverts and tail feathers which are uniform umber-brown without any darker or white markings; crown a brighter russet; the occiput, nape, hindneck without spots; sides of face, under surface of body and lores slightly paler ochraceous tawny; chin having only a small white area, as the ochraceous tawny color is more extended than in the bird from Venezuela. Breast and abdomen also less white.

TYPE.—No. 127,262, Amer. Mus. Nat. Hist., ♂; Morinho de Lyra, Matto Grosso, Brazil; Feb. 16, 1914, Roosevelt Expedition, Leo E. Miller. Wing, 81.5; tail, 39; culmen, 15.5 mm.

RANGE.—Brazil: Matto Grosso (Morinho de Lyra).

REMARKS.—The above specimen, the only one from Matto Grosso in the collection of The American Museum of Natural History, was compared with four males and one female of *Thyrorhina schomburgki*, from Roraima, which are practically topotypes. The sexes in the Roraima skins appear to be similar, but the material at hand either from Brazil or Venezuela is not sufficient to form a definite conclusion. If intermediates are not ultimately discovered in the intervening territory this form may prove to be a species, due to its marked difference in size, color, and shape of bill. There is a gap of 6 mm. in the length of the wing of the only female specimen from Roraima, Venezuela, and the male from Morinho de Lyra, Matto Grosso.

¹No museum in the world has enough material to make sure that specimens from these widely separated localities are all the same. Certain authors distinguish *A. c. guatemalensis*, ranging throughout Central America south to Ecuador. The absence of Jamaican specimens prevents the solution of the problem.

There is little doubt but that the birds recorded by Pelzeln ('Orn. Bras.,' III, 1870, p. 317) from Borda do Matto do Paranahyba (Goyaz), Bahia, and Matto Grosso (between Porto Feliz and Cuyabá), will turn out to belong to *T. s. chapmani*.

The range, so far as known, of *Thyrorhina schomburgki schomburgki* is French and British Guiana (Abary, Ireng River, Merumé Mts.), and Venezuela. Schomburgk ('Reis. Brit. Guin.,' II, p. 245) says that he obtained this bird in the vicinity of Mt. Roraima.

Measurements

Thyrorhina schomburgki schomburgki. Venezuela: Roraima, Arabupu, male (4 adults), wing, 70.5-74 (72.6); tail, 32-35.5 (34.3); culmen, 14 mm. Venezuela: Paulo, Roraima, alt. 4000 ft.; female (1 adult), wing, 79; tail, 34; culmen, 14 mm.

(245) *Creciscus¹ exilis exilis* (Temminck)²

Rallus exilis TEMMINCK, 'Pl. Col.,' 1831, Pl. DXXIII (Cayenne).

Solimões (above mouth of Rio Negro), 1 ♀.

RANGE.—Brazil: Amazonas, Rio Negro (Marabitanas); Teffé, Rio Solimões; Pará. Guiana; Trinidad; Peru.

(251) *Creciscus viridis viridis* (P. L. S. Müller)

Rallus viridis P. L. S. MÜLLER, 'Syst. Nat. Suppl.,' 1776, p. 120 (based on Daubenton, 'Pl. Enl.,' 360, Cayenne).

Porzana cayanensis PELZELN, 'Orn. Bras.,' III, 1870, p. 316 (Engenho do Cap. Gama).

Ruftrallus cayanensis ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 150 (Chapada).

Creciscus viridis IHERING, 'Cat. F. Braz.,' I, 1907, p. 31 (Matto Grosso).

Urucúm, 1 ♀; brooding; eye orange-red; bill dusky slate, slightly paler clear slate color at base of the mandible; feet bright Indian red.

RANGE.—French, Dutch, and British Guiana, and the whole of Brazil, south to Rio de Janeiro and Matto Grosso (Engenho do Cap. Gama, Chapada, Urucúm).

This rail was found inhabiting the thick bushes bordering heavy forest at some distance from any marshy spot.

(253) *Neocrex erythrops erythrops* (Sclater)

Porzana erythrops SCLATER, P. Z. S., 1867, p. 343, Tab. XXI (Lima); PELZELN, 'Orn. Bras.,' III, 870, p. 317 (S. Vicente, Matogrosso).

Neocrex erythrops IHERING, 'Cat. F. Braz.,' I, 1907, p. 31 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (S. Vicente); Bahia; Pará, Rio Jamundá (Faro). Argentina (Tucumán); Peru (Lima, etc.).

¹Ridgway refers it to the genus *Limnocrex* Ridgw.

²A subspecies (*C. exilis vagans* Ridgw.) was described from the Segovia River, Honduras.

(255) *Gallinula chloropus galeata* (Lichtenstein)

Crex galeata LICHTENSTEIN, 'Verz. Säugeth. und Vögel Berliner Mus.,' 1818, p. 36 (based on Azara, No. 379, Paraguay).

Gallinula galeata PELZELN, 'Orn. Bras.,' III, 1870, p. 318 (Caiçara); SHARPE, 'Cat. B. Brit. Mus.,' XXIII, 1894, p. 177 (Caiçara); IHERING, 'Cat. F. Braz.,' I, 1907, p. 31 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Caiçara); Rio Grande do Sul; São Paulo; Rio de Janeiro; Minas Geraes (Lagôa Santa); Bahia (Joazeiro); Pará, Guiana; Trinidad; Paraguay; Uruguay; northern Argentina.

(258) *Ionornis martinica* (Linnæus)

Fulica martinica LINNÆUS, 'Syst. Nat.,' I, 12th Ed., 1766, p. 259 ("Martinica inundatus").

Porphyrio martinicus PELZELN, 'Orn. Bras.,' III, 1870, p. 317 (Caiçara).

Ionornis martinica ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 150 (Cachoeira); SALVADORI, Boll. Mus. Torino, XV, 1900, No. 378, p. 15 (Carandasinho); IHERING, 'Cat. F. Braz.,' I, 1907, p. 32 (Matto Grosso).

Urucúm, 1 ♀; eye red-brown; bill terminally greenish yellow, basally bright red; shield blue-gray; feet clear pale yellow.

RANGE.—The whole of Brazil from the confines of Guiana south to Matto Grosso (Caiçara, Cachoeira, Carandasinho, Urucúm) and Rio Grande do Sul; also in Paraguay; northern Argentina; Peru; Colombia; Guiana; Trinidad; West Indies; etc.

(259) *Ionornis flavirostris* (Gmelin)

Fulica flavirostris GMELIN, 'Syst. Nat.,' I, part 2, 1789, p. 699 (based on Daubenton, 'Pl. Enl.,' 897, and Buffon, Cayenne).

Glaucetes parvus ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 150 (Corumbá).

Porphyrio parvus PELZELN, 'Orn. Bras.,' III, 1870, p. 318 (Caiçara).

Ionornis parva IHERING, 'Cat. F. Braz.,' I, 1907, p. 32 (Matto Grosso).

Urucúm, 1 ♀; Bocaina de Descalvados, 1 ♀; the specimens from both localities have the eye red-brown; bill and shield green; feet yellow with greenish shade.

RANGE.—Brazil: Amazonia (Pará, Monte Alegre, Cussary, Rhomes, Rio Tapajóz); Goyaz (Porto do Rio Araguay); Minas Geraes (Lagôa Santa); Matto Grosso (Corumbá, Caiçara, Urucúm, Bocaina de Descalvados). Guiana; Paraguay (lower Pilcomayo).

(267) *Helionis fulica* (Boddaert)

Colymbus fulica BODDAERT, 'Tabl. Pl. Enl.,' 1783, p. 54 (based on "Grebifoulque de Cayenne," Daubenton, 'Pl. Enl.,' 893).

Helionis fulica PELZELN, 'Orn. Bras.,' III, 1870, p. 318 (Matogrosso); SHARPE, 'Cat. B. Brit. Mus.,' XXIII, 1894, p. 233 (Matogrosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 33 (Matto Grosso).

RANGE.—Trinidad; Guiana; Venezuela; Colombia; Ecuador; Peru; the whole of Brazil, south to Matto Grosso and São Paulo; Paraguay; Argentina (Misiones); eastern Bolivia; and Central America, north to British Honduras.

(268) *Colymbus dominicus brachyrhynchus* Chapman

Colymbus dominicus brachyrhynchus CHAPMAN, Bull. Amer. Mus. Nat. Hist., XII, 1899, p. 255 (Chapada, Matto Grosso).

Colymbus dominicus ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 151 (Chapada).

Podiceps dominicus PELZELN, 'Orn. Bras.,' III, 1870, p. 322 (Caçara); OGILVIE-GRANT, 'Cat. B. Brit. Mus.,' XXVI, 1898, p. 520 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 34 (Porto da Faya, Matto Grosso).

Urucúm, 4 ♂, 2 ♀.

RANGE.—All of tropical South America: Guiana; Colombia; Brazil [Pará; Monte Alegre; Rio Branco (Forte do Rio Branco); Goyaz (Catalão, Ponte de Ipé Arcado); Minas Geraes; Matto Grosso (Chapada, Porto da Faya, Urucúm, Caçara); Bahia; Rio de Janeiro]; Paraguay; Uruguay.

Every small pond had its quota of these small divers.

(319) *Phaethusa simplex chloropoda* (Vieillot)

Sterna chloropoda VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXXII, 1819, p. 171 (based on Azara, No. 412, Paraguay).

Sterna magnirostris PELZELN, 'Orn. Bras.,' III, 1870, p. 324 (Cuyabá, Caçara).

Phaethusa magnirostris SALVADORI, Boll. Mus. Torino, XV, 1900, No. 378, p. 16 (Carandasinho).

RANGE.—According to Wetmore,¹ the southern race of the large-billed tern inhabits Uruguay, Entre Rios, northern Argentina. Birds from southern Brazil and Matto Grosso doubtless belong here, too. Matto Grosso (Cuyabá, Caçara, Carandasinho).

(330) *Sterna superciliaris* Vieillot

Sterna superciliaris VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXXII, 1819, p. 176 (based on Azara, No. 415, Paraguay); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 16 (Carandasinho); IHERING, 'Cat. F. Braz.,' I, 1907, p. 41 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Carandasinho); São Paulo (Iguapé, S. Sebastião); Rio de Janeiro; Minas Geraes. Paraguay (Desaguadero, Colonia Risso, near Puerto Braga); Argentina.

The northern limit of the range of *S. superciliaris* (typical) may reasonably be given as Bahia. The status of the birds breeding on the coast of Piauh, in the Amazon Valley, in Guiana, and on the Orinoco, must be left in abeyance for the present. They appear, according to Dr. Hellmayr, to be intermediate between *S. superciliaris* and *S. antillarum*, of the West Indies, and may ultimately prove to be separable.

¹Bull. U. S. Nat. Mus., No. 133, 1926, pp. 140, 141.

(337) *Rynchops nigra intercedens* Saunders

Rynchops intercedens SAUNDERS, Bull. Brit. Orn. Club, IV, 1895, p. 26 (type from São Paulo).

Rynchops nigra (not of Linnæus) PELZELN, 'Orn. Bras.,' III, 1870, p. 324 (Rio de Cabaçal, Caiçara, Mattogrosso).

Rynchops nigra intercedens IHERING, 'Cat. F. Braz.,' I, 1907, p. 43 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Caiçara, Rio de Cabaçal); Goyaz (Rio Araguaia); São Paulo (Irisanga, Ypanema); Rio de Janeiro (Sapitiba); Piauhy (Ilha Grande, Parnaguá); Maranhão (Bôa Vista). Uruguay; Argentina; Paraguay.

(344) *Larus cirrocephalus cirrocephalus* Vieillot

Larus cirrocephalus VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXI, 1818, p. 502 ('Brésil' = Rio de Janeiro); IHERING, 'Cat. F. Braz.,' I, 1907, p. 43 (Matto Grosso).

Larus maculipennis PELZELN, 'Orn. Bras.,' III, 1870, p. 323 (Cidade de Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso; Rio de Janeiro (Registro do Sai); São Paulo (Ypanema). Uruguay; Chile; Argentina (Los Yngleses, Ajó, Luiconia, Cape San Antonio, Rio Paraná, La Paz).

(369) *Hoploxypterus cayanus* (Latham)

Charadrius cayanus LATHAM, Ind. Orn., II, 1790, p. 749 (based on Buffon and Daubenton, 'Pl. Enl.,' 633, Cayenne).

Hoploxypterus cayanus PELZELN, 'Orn. Bras.,' III, 1870, p. 296 (Cuyabá); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 149 (Cachoeira, Corumbá).

Hoploxypterus cayanus SHARPE, 'Cat. B. Brit. Mus.,' XXIV, p. 135 (Corumbá); IHERING, 'Cat. F. Braz.,' I, 1907, p. 46 (Matto Grosso).

Rio São Lourenço, 1 ♂, 1 ♀.

RANGE.—Brazil: Matto Grosso (Rio São Lourenço, Corumbá, Cuyabá, Cachoeira); Goyaz; Rio de Janeiro; Minas Geraes; Piauhy; Maranhão; São Paulo (Itararé, Piracicaba, Iguapé, Franca, Itapura, Rio Paraná); Amazonia [Barra do Rio Negro, Rio Juruá, Rio Guamá (Sta. Maria de S. Miguel, Ourém); Rio Capim; Rio Tocantins (Arumatheua); Rio Tapajóz (Goyana); Rio Purús (Cachoeira, Bom Lugar); Rio Maecurú]. Peru; Guiana; Ecuador; Paraguay.

This species was common along the Rio Paraguay.

(371a) *Belonopterus cayennensis lampronotus* (Wagler)

Figure 4

Charadrius lampronotus WAGLER, 'Syst. Av.,' 1827, Genus *Charadrius*, sp. 48; part, descr. ♂, ♀ ad. ptil. æstiv. Paraguay at Brasilia (type from Brazil in Munich Museum).

Vanellus cayennensis PELZELN, 'Orn. Bras.,' III, 1870, p. 296 (Cuyabá, Caiçara); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 149 (Cuyabá).

Belonopterus cayennensis IHERING, 'Cat. F. Braz.,' I, 1907, p. 46 (Matto Grosso). No specimens collected.

RANGE.—The greater part of Brazil, south of the Amazon: Matto Grosso¹ (Cuyabá, Caiçara). Uruguay, Paraguay, and northeastern Argentina (Buenos Aires, Misiones, eastern Rio Negro).

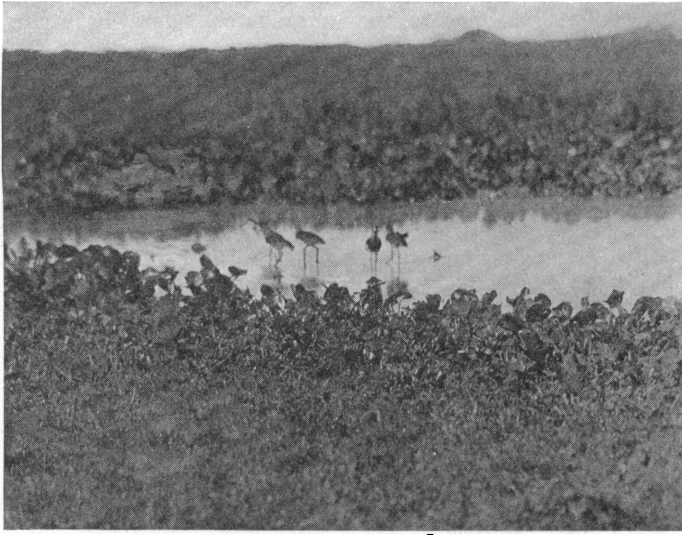


Fig. 4. *Belonopterus cayennensis lampronotus* (Wagler), Fazenda do São João, Matto Grosso, Brazil.

(381) *Charadrius collaris collaris* Vieillot

Charadrius collaris VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXVII, 1818, p. 136 (based on Azara, No. 392, Paraguay).

Charadrius azaræ PELZELN, 'Orn. Bras.,' III, 1870, p. 297 (Cuyabá, Caiçara).

Ægialitis collaris ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 149 (Chapada); SHARPE, 'Cat. B. Brit. Mus.,' XXIV, 1896, p. 288 (Corumbá); IHERING, 'Cat. F. Braz.,' I, 1907, p. 48 (Matto Grosso).

Rio São Lourenço, 2 ♀.

RANGE.—Guiana; Venezuela; Trinidad and Tobago Islands. Brazil: Bahia; Pernambuco; Pará; Amazon; Rio Negro; Rio Purús; Matto Grosso (Cuyabá, Caiçara, Chapada, Rio São Lourenço); Minas Geraes; Rio de Janeiro (Sapitiba, Marambaya); São Paulo (Cimenterio do Lambari, Iguapé, S. Sebastião, Ubatuba, Itapura). Uruguay (Montevideo, Concepción, Rio Negro); Argentina (Cordova, Tucumán, Tala, Santa Ana, Orán, Salta, Barracas al Sud, Rio Pilcomayo, Bella Vista, Punta Lara,

¹Field Museum has specimens from Conceição, Rio Paraguay, Matto Grosso, July 29, 1926; Geo. K. Cherrie.

Mendoza); Paraguay (Monte Alto, Desaguadero, Colonia Risso, near Puerto Braga); Bolivia (Reyes, Falls of Madeira, Caiza); Peru.

I refer our birds to *Ægialitis collaris collaris*, though I have seen no specimens from Paraguay, the type-locality. However, I have examined specimens from Mexico, Nicaragua, and Argentina, with which they agree. Birds from the mountains of Bolivia may possibly be referable to an undescribed race, as they average considerably larger.¹ This species was observed along the Rio Paraguay and indeed along all of the streams that the expedition navigated.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Mexico, Tehuantepec	1 ♂	99	47	15	A.M.N.H.
“ Mazatlan	1 ♂	90	43.5	13.5	“
Nicaragua, Tipitapa	1 ♂	95	42	14.5	“
Panama	1 ♂	91	43	14.5	“
Brazil, Matto Grosso, Corumbá	1 ♂	101	51	13	“
“ “ “ “	1 ♂	98.5	50.5	14.5	“
Argentina, Prov. Salta, Embarcación,	1 ♂	101	45.5	15.5	“
Bolivia, Dep. Cochabamba, Vinto	1 ♂	107	53	14.5	“
Nicaragua, Tipitapa,	1 ♀	94.5	40	14.5	“
Matto Grosso, Rio São Lourenço, 2 ♀; Corumbá, 2 ♀	4 ♀	97.8	47.3	14.7	“
Bolivia, Dept. Cochabamba, Parotani,	5 ♀	103.5	50	15.7	“

(391) *Numenius borealis* (Forster)

Scolopax borealis FORSTER, Phil. Trans., LXII, 1772, p. 431 (“Habitat in sinu Hudsonis”).

Numenius brevirostris PELZELN, ‘Orn. Bras.,’ III, 1870, p. 308 (Xavier, October 7, 1826).²

Numenius borealis SHARPE, ‘Cat. B. Brit. Mus.,’ XXIV, 1896, p. 368 (Xavier); IHERING, ‘Cat. F. Braz.,’ I, 1907, p. 50 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Xavier); São Paulo (Ypanema); Rio Amazon. Paraguay; Uruguay; Argentina (Rosas, Buenos Aires); Chile.

Winter visitant to South America.

¹For racial variation of *C. collaris*, see HARTERT AND JACKSON, Ibis, 1915, pp. 530-531. I am at present unable to discriminate any races.

²Fazenda do Francisco Xavier, Matto Grosso.

(392) *Limosa hæmastica* Linnæus

Limosa hæmastica LINNÆUS, 'Syst. Nat.,' I, 10th Ed., 1758, p. 147 (Hudson Bay); IHERING, 'Cat. F. Braz.,' I, 1907, p. 50 (Matto Grosso).

Limosa hudsonica PELZELN, 'Orn. Bras.,' III, 1870, p. 308 (Caiçara, Engenho do Gama, Cidade de Matogrosso, near the banks of the Rio Guaporé).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Caiçara, Engenho do Gama, Cidade de Matogrosso, near the banks of the Rio Guaporé); Rio Grande do Sul to São Paulo (Iguapé). Argentina (Cape San Antonio, Los Yngleses, Ajó); Chile.

Winter visitant in South America.

(396) *Catoptrophorus semipalmatus semipalmatus* (Gmelin)

Scolopax semipalmatus GMELIN, 'Syst. Nat.,' I, part 2, 1789, p. 659 (New York; based on "Semipalmated Snipe," Pennant, Arctic Zoöl., II, 1785, p. 469, Pl. xx, fig. 2).

Symphemia semipalmata PELZELN, 'Orn. Bras.,' III, 1870, p. 309 (Praia de Cajutuba, shores of the Rio Guaporé); IHERING, 'Cat. F. Braz.,' I, 1907, p. 51 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Rio Guaporé). Northern South America; from Venezuela (Margarita Island) to Trinidad; British Guiana; Brazil; Bolivia; and Peru.

Only a winter visitant to South America.

(397) *Totanus melanoleucus* (Gmelin)

Scolopax melanoleuca GMELIN, 'Syst. Nat.,' I, part 2, 1789, p. 659 ("Habitat auctumno in arenis littoris Labrador" =sandy shores of Labrador).

Totanus melanoleucus PELZELN, 'Orn. Bras.,' III, 1870, p. 308 (Caiçara, Matogrosso); SALVADORI, Boll. Mus. Torino, XV, 1900, No. 378, p. 15 (Carandasinho); IHERING, 'Cat. F. Braz.,' I, 1907, p. 51 (Porto da Faya, Matto Grosso).

No specimens collected.

RANGE.—Brazil: Pará; Matto Grosso (Caiçara, Carandasinho, Porto da Faya); São Paulo (Iguapé, S. Sebastião, Itapura, Rio Paraná); Rio Grande do Sul. Uruguay; Paraguay; Argentina (Los Yngleses, Ajó, Luiconia); Venezuela; Colombia. Chile; South America generally to the Straits of Magellan.

Only a winter visitor to South America.

(398) *Totanus flavipes* (Gmelin)

Scolopax flavipes GMELIN, 'Syst. Nat.,' I, part 2, 1789, p. 659 ("Habitat in auctumno in Noveboraco" =New York; based on "Yellow-Shank," Pennant, Arctic Zoöl., II, 1785, p. 468).

Totanus flavipes PELZELN, 'Orn. Bras.,' III, 1870, p. 309 (Caiçara, Engenho do Gama); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 15 (Carandasinho); IHERING, 'Cat. F. Braz.,' I, 1907, p. 51 (Porto da Faya, Matto Grosso); GRANT, Ibis, 1911, p. 469 (Porto Esperança).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Caçara, Engenho do Gama, Carandasinho, Porto da Faya, Porto Esperança); São Paulo (Iguapé, S. Sebastião, Itapura, Ypanema); Rio Grande do Sul; Rio Negro; Marajó (Livramento, S. Natal); Mexiana; Pará. Paraguay (Santa Rosa); Uruguay; Argentina (Los Yngleses, Ajó, near Esquina); South America generally to Chile and Patagoña.

Only a winter visitor to South America.

(399) *Tringa solitaria solitaria* Wilson

Tringa solitaria WILSON, Amer. Orn., VII, 1813, p. 53, Pl. LVIII, fig. 3 (probably Pennsylvania).¹

Totanus solitarius PELZELN, 'Orn. Bras.,' III, 1870, p. 309 (Caçara, Engenho do Gama); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 150 (Chapada).

Helodromas solitarius SHARPE, 'Cat. B. Brit. Mus.,' XXIV, p. 444 (Chapada); SALVADORI, Boll. Mus. Torino, XV, No. 378, p. 15 (Urucúm).

Rhyncophilus solitarius GRANT, Ibis, 1911, p. 469 (Porto Esperança).

Tapirapoan, 1 ♀.

RANGE.—Brazil: Matto Grosso (Chapada, Caçara, Engenho do Gama, Urucúm, Tapirapoan Porto Esperança, Riacho Paraguay, Mirim); Amazonia (Capanema, Bragança); Rio Guamá (Ourém); Rio Tapajóz (Goyana); Rio Negro; Marajó (Pindobal, Pacoval, S. Natal); Pará; Pernambuco; Bahia; Rio de Janeiro; São Paulo (Ypanema, Itapura, Rio Mogy-Guassú, Franca, Taixera); Paraná (Curitiba); Rio Grande do Sul. Peru; Paraguay (Monte Alto); Uruguay; Argentina; South America generally to Argentina.

Only a winter visitor to South America.

Noted at all points visited.

(400) *Actitis macularia* (Linnæus)

Tringa macularia LINNÆUS, 'Syst. Nat.,' I, 12th Ed., 1766, p. 249 ("habitat in Europa et America septentrionali" = Pennsylvania).[•]

Actitis macularia ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 150 (Corumbá).

Tringoides macularia PELZELN, 'Orn. Bras.,' III, 1870, p. 309 (Engenho do Gama); IHERING, 'Cat. F. Braz.,' I, 1907, p. 52 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Engenho do Gama, Corumbá); São Paulo (Ypanema); Rio de Janeiro (Sapitiba); Paraná (Paranaguá); Rio Negro (Marabitanas, Praia de Cajutuba); Pará; Marajó (Pacoval, Soure); Mexiana; Cunany; Maranhão (Guimarães). Bolivia (Caiza); and South America generally.

(405) *Tryngites subruficollis* (Vieillot)

Tringa subruficollis VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXXIV, 1819, p. 465 (Paraguay).

Tringoides rufescens PELZELN, 'Orn. Bras.,' III, 1870, p. 310 (Matogrosso).

Tryngites subruficollis IHERING, 'Cat. F. Braz.,' I, 1907, p. 53 (Matto Grosso).

No specimens collected.

¹"Type locality probably Pocono Mountains in Pennsylvania where Wilson says they regularly breed." Bull. U. S. Nat. Mus., 50, pt. 8, 1919, p. 359.

RANGE.—Brazil: Matto Grosso (Villa Bella); São Paulo (Ypanema); Rio Grande do Sul; Borba; Rio Negro (Marabitanas). Paraguay; Peru; South America to Argentina.

Only a winter visitor to South America.

(407) *Pisobia minutilla* (Vieillot)

Tringa minutilla VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXXIV, 1819, p. 466 ("à Halifax et dans la Nouvelle Ecosse, mais . . . beaucoup moins nombreux que dans les Iles Antilles").

Tringa wilsoni PELZELN, 'Orn. Bras.,' III, 1870, p. 311 (Cuyabá, Engenho do Cap. Gama).

Leimonites minutilla IHERING, 'Cat. F. Braz.,' I, 1907, p. 54 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Cuyabá, Engenho do Cap. Gama); Pernambuco; Pará; Bahia; Marajó (Tapera, S. Natal). Peru; Colombia; South America to southeastern Brazil.

A common winter visitor to South America.

(408) *Pisobia melanotos* (Vieillot)¹

Tringa melanotos VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXXIV, 1819, p. 462 (based on Azara, No. 401, Paraguay).

Tringa maculata PELZELN, 'Orn. Bras.,' III, 1870, p. 311 (Caiçara, Engenho do Gama, Matogrosso); GRANT, Ibis, 1911, p. 468 (Porto Esperança).

Heteropygia maculata SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 15 (Carandasinho); IHERING, 'Cat. F. Braz.,' I, 1907, p. 54 (Matto Grosso).

Paraguay, Fort Wheeler, 1 ♀; Matto Grosso, Agua Blanca de Corumbá, 1 ♀.

RANGE.—Brazil: Matto Grosso (Caiçara, Engenho do Gama, Matogrosso, Carandasinho, Agua Blanca de Corumbá, Porto Esperança); Amazonas; Rio Jurua; Rio Purús (Bom Lugar); São Paulo (Ypanema, Iguapé, S. Sebastião); Santa Catharina; Rio Grande do Sul. Bolivia; Paraguay (Fort Wheeler, Medano); Uruguay; Argentina (Cordoba, Los Yngleses, Ajó); Venezuela (Mérida); Colombia; South America generally.

At Agua Blanca de Corumbá the species was very abundant early in November and common about Ft. Wheeler in summer.

Winter visitor in South America.

(410) *Pisobia fuscicollis* (Vieillot)

Tringa fuscicollis VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXXIV, 1819, p. 461 (based on Azara, No. 404, Paraguay); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 150 (Chapada).

Tringa bonapartei PELZELN, 'Orn. Bras.,' III, 1870, p. 311 (Cuyabá, Caiçara, Engenho do Gama, Matogrosso).

Heteropygia fuscicollis IHERING, 'Cat. F. Braz.,' I, 1907, p. 54 (Matto Grosso).

No specimens collected.

¹See Wetmore, Bull. U. S. Nat. Mus., No. 133, 1926, p. 153.

RANGE.—Brazil: Matto Grosso (Chapada, Caiçara, Engenho do Gama); Rio Grande do Sul; Rio Tocantins; Rio Negro (Marabitanas); Bragança. Paraguay (Rio Pilcomayo, Rio Paraná); Uruguay (Montevideo); Argentina (Buenos Aires, Los Yngleses, Ajó, Cape San Antonio, near Esquina); South America generally to the Straits of Magellan.

Winter visitor to South America.

(414) *Capella paraguayæ paraguayæ* (Vieillot)¹

Scolopax paraguayæ VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., III, 1816, p. 356 (based on Azara, No. 387, Paraguay).

Scolopax frenata PELZELN, 'Orn. Bras.,' III, 1870, p. 312 (Caiçara).

Gallinago frenata ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 150 (Chapada).

Gallinago paraguayæ MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 25 (Caceres, Cuyabá).

Agua Blanca de Corumbá, 2 ♂.

RANGE.—Brazil: Matto Grosso (Agua Blanca de Corumbá, Caiçara, Chapada, Caceres, Cuyabá); Rio de Janeiro (Sapitiba); São Paulo (Ypiranga, Ypanema, Iri-sanga, S. Caetano, Penha, Itapura, Cachoeira, Campos de Jordão); Paraná (Villa de Castro); S. Catharina (S. Francisco do Sul); Rio Grande do Sul (Nova Hamburgo). Paraguay (Ybytimi); Uruguay; Argentina (Los Yngleses, Ajó).

This snipe was abundant at Agua Blanca de Corumbá in the early part of November.

(418) *Capella gigantea* (Temminck)

Scolopax gigantea TEMMINCK, 'Pl. Col.,' 1826, Pl. ccccliii ("Brésil").

Gallinago gigantea ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 149 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 56 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Chapada); Goyaz; Minas Geraes; São Paulo (Itararé, Delgado, Jaguaraiaba, Murungaba, Puritis, Capital, Penha, S. Caetano); Rio Grande do Sul (Porto Alegre). Paraguay; Uruguay; Argentina (Buenos Aires).

(426) *Steganopus tricolor* Vieillot

Steganopus tricolor VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXXII, 1819, p. 136 (based on Azara, No. 407, Paraguay); SHARPE, 'Cat. B. Brit. Mus.,' XXIV, 1896, p. 705 (Caiçara); IHERING, 'Cat. F. Braz.,' I, 1907, p. 57 (Matto Grosso).

Phalaropus wilsoni PELZELN, 'Orn. Bras.,' III, 1870, p. 313 (Caiçara).

No specimens collected.

RANGE.—Brazil, Matto Grosso (Caiçara); Bolivia (Alto Paraguay); Paraguay; Argentina (Barracas al Sud, Buenos Aires; Calchaquies, Tucumán; Mendoza; Misiones; Chubut Valley, Patagonia).

Winter visitor only to South America.

¹There are two races of this snipe: (a) *C. p. paraguayæ (braziliensis* Sw. and *frenata* Licht.) breeding from Colombia and Guiana south to Uruguay and Buenos Aires; (b) *C. p. magellanica* (King) breeding in southern Argentina and Chile, migrating northwards in winter. Dr. Hellmayr (*in lit.*) states: "Mrs. Meinertzhagen (Ibis, 1926, 506-509) and Wetmore (Bull. U. S. Nat. Mus., No. 133, 1926, pp. 61, 62) both recognize two races, but are wrong in their nomenclature, since Azara described the breeding form of Paraguay."

(427) *Jacana jacana jacana* (Linnæus)

Parra jacana LINNÆUS, 'Syst. Nat.,' I, 12th Ed., 1766, p. 259. (Excl. quot. Hernandez; based on Maregrave, Brazil, and Edwards, Surinam); PELZELN, 'Orn. Bras.,' III, 1870, p. 313 (Cuyabá, Caiçara, Matogrosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 57 (Matto Grosso).

Jacana jacana ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 149 (Chapada); SHARPE, 'Cat. B. Brit. Mus.,' XXIV, 1896, p. 82 (Caiçara).

Paraguay, Rio Negro, 1 ♂; Puerto Pinasco, 1 ♂, 1 ♀; Brazil, Palmiras, 1 ♂, 1 ♀.

RANGE.—Brazil: Matto Grosso (Cuyabá, Caiçara, Chapada, Palmiras); Rio de Janeiro (Sapitiba); São Paulo (Ypanema, Ubatuba, Pirituba, Itapura); Paraná (Ourinho); Rio Grande do Sul. Paraguay (Rio Negro, Puerto Pinasco, Tayrú, Ybitimi, Curuzú Chica); Guiana; Argentina; Bolivia (Caiza).

A breeding female was collected at Puerto Pinasco, October 17.

(428) *Jacana jacana intermedia* (Sclater)

Parra intermedia SCLATER, P. Z. S., XXIV, 1856, p. 282 (pub. Jan. 1857), (Venezuela; ex Verreaux manuscript).

Solimões, 1 ♂, 4 ♀.

RANGE.—North coast of Venezuela; Rio Solimões, Brazil.

Breeding female and four immature birds collected by Leo Miller.

The Rio Solimões birds having been carefully identified are a new record for this race which has been known only from the north coast of Venezuela.

(433) *Eurypyga helias helias* (Pallas)

Ardea helias PALLAS, 'Neue Nord. Beyr.,' II, 1781, p. 48, Pl. III ("Brasilien").

Eurypyga helias PELZELN, 'Orn. Bras.,' III, 1870, p. 300 (Engenho do Pari, Villa Maria, Caiçara, Engenho do Gama, Matogrosso); SHARPE, 'Cat. B. Brit. Mus.,' XXIII, 1894, p. 240 (Engenho do Gama); IHERING, 'Cat. F. Braz.,' I, 1907, p. 58 (Matto Grosso).

No specimens collected.

RANGE.—From Venezuela and Guiana south to Piauh, southern Goyaz and Matto Grosso (Engenho do Pari, Villa Maria, Caiçara, Engenho do Gama); north-eastern Bolivia; ? eastern Peru.

(438) *Psophia leucoptera leucoptera* Spix

Psophia leucoptera SPIX, 'Av. Bras.,' II, 1825, p. 67, Tab. LXXXIV (in sylvis campestribus fl. Rio Negro; error; I suggest left bank of the Rio Madeira); PELZELN, 'Orn. Bras.,' III, 1870, p. 299 (Cachoeira das Pederneiras²); IHERING, 'Cat. F. Braz.,' I, 1907; p. 59 (Matto Grosso).

No specimens collected.

¹These are, of course, only a few samples of the numerous localities recorded in literature. It occurs in suitable places everywhere in the eastern half of Brazil (lower Amazon, Pará, Maranhão, Piauh, Bahia, etc).

²In Matto Grosso politically, on the Rio Madeira.

RANGE.—Western Brazil from south bank of the Rio Solimões, east to the left bank of Rio Madeira, extending into eastern Peru and northern Bolivia.

(440) *Psophia viridis viridis* Spix

Psophia viridis SPIX, 'Av. Bras.,' II, 1825, p. 66, Tab. LXXXIII ("in campis sylvestribus ad pagum Villa Nuova" = Parintins, lower Amazon); PELZELN, 'Orn. Bras.,' III, 1870, p. 299 (Cachoeira de Guajara-guaçú,¹ Salto do Theotonio²); IHERING, 'Cat. F. Braz.,' I, 1907, p. 59 (Matto Grosso).

No specimens collected.

RANGE.—Right bank of the Rio Madeira (and tributaries), north to south side of lower Amazon (Parintins).

(442) *Cariama cristata* (Linnæus)

Figure 5



Fig. 5. *Cariama cristata* (Linnæus), Matto Grosso, Brazil.

Palamedea cristata LINNÆUS, 'Syst. Nat.,' I, 12th Ed., 1766, p. 232 (based on Maregrave, "Cariama," N. E. Brazil).

Dicholophus cristatus PELZELN, 'Orn. Bras.,' III, 1870, p. 299 (Cuyabá, Pouzo dos Irmãos, Matogrosso).

Ceriana cristata ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 148 (Chapada).

Cariama cristata IHERING, 'Cat. F. Braz.,' I, 1907, p. 60 (Matto Grosso); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 24 (Poconé).

¹Matto Grosso politically, on the Rio Mamoré.

²Matto Grosso politically, on the Rio Madeira.

Paraguay, Fort Wheeler, 1 ♀; eye silver-gray; bare skin about the eye grayish slate-blue; feet, legs, and bill scarlet; Matto Grosso, 1 ?

RANGE.—Brazil: Matto Grosso (Cuyabá, Pouzo dos Irmãos, Chapada, Poconé); Minas Geraes; São Paulo (Framca); Goyaz (Sitio do Bahú); Rio Grande do Sul. Paraguay (Fort Wheeler); Argentina (Tala, Salta).

The specimen from Fort Wheeler was shot as it flew from its nest, a platform of dead sticks and twigs placed in the crotch of a big tree and about thirty feet from the ground. The nest tree stood in the open at the edge of a forested area. A second specimen was collected by Miller on a journey across the central plateau in Matto Grosso, but, while its loud calls were frequently heard very few birds were seen.

(447) *Molydophanes cærulescens* (Vieillot)

Ibis cærulescens VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XVI, 1817, p. 18 (Paraguay).

Geronticus cærulescens PELZELN, 'Orn. Bras.,' III, 1870, p. 307 (Villa Maria, Caiçara).

Molydophanes cærulescens SHARPE, 'Cat. B. Brit. Mus.,' XXVI, p. 24 (Villa Maria); IHERING, 'Cat. F. Braz.,' I, 1907, p. 60 (Matto Grosso).

Bocaina de Descalvados, 1 ♂; eye orange-yellow; bill black; bare skin about the face slate-black; feet dusky reddish.

RANGE.—Brazil: Matto Grosso (Villa Maria, Caiçara, Bocaina de Descalvados, Agua Blanca de Corumbá); Rio Grande do Sul. Argentina; Paraguay (Fort Wheeler, Puerto Pinasco); Uruguay.

Usually seen in pairs, but not common. It was observed at Fort Wheeler, Puerto Pinasco, Agua Blanca de Corumbá, and Descalvados.

(448) *Harpiprion cayennensis* (Gmelin)

Tantalus cayennensis GMELIN, 'Syst. Nat.,' I, part 2, 1789, p. 652 (based on Daudenton 'Pl. Enl.,' 820, Cayenne).

Geronticus cayennensis PELZELN, 'Orn. Bras.,' III, 1870, p. 307 (Cuyabá, Caiçara); IHERING, 'Cat. F. Braz.,' I, 1907, p. 61 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Cuyabá, Caiçara); São Paulo (Iguapé, Rio Mogy-Guassú, Rio Grande, Barretos, Mattodentro, Ypanema, Irisanga); Bahia, Amazonia; Rio Purús (Bom Lugar); Rio Tapajóz (Goyana); Mexiana; Rio Negro. Guiana; Colombia; Ecuador; Panama.

(449) *Phimosus infuscatus nudifrons* (Spix)

Figure 6

Ibis nudifrons SPIX, 'Av. Bras.,' II, 1825, p. 69, Tab. LXXXVI (ad littora lacuum St. Francisci).

Geronticus infuscatus PELZELN, 'Orn. Bras.,' III, 1870, p. 307 (Caiçara).

Phimosus infuscatus SHARPE, 'Cat. B. Brit. Mus.,' XXVI, 1898, p. 26 (Caiçara).

Phimosus nudifrons IHERING, 'Cat. F. Braz.,' I, 1907, p. 61 (Matto Grosso).

Agua Blanca de Corumbá, 1 ♂.

RANGE.—Brazil, south of the Amazon: Matto Grosso (Caçara, Agua Blanca de Corumbá); Minas Geraes; São Paulo (Porto do Rio Paraná); Rio de Janeiro; Piauhy (Parnaguá and the Rio Parnahyba).

“This was a common bird at Fort Wheeler, Puerto Pinasco, Agua Blanca de Corumbá, and Descalvados. At all of the points above indicated, from September to December inclusive, they were seen in flocks;



Fig. 6. *Phimosus infuscatus nudifrons* (Spix), Agua Blanca de Corumbá, Matto Grosso, Brazil. A rookery of the whispering, bare-fronted ibis.

sometimes not more than half a dozen individuals but more frequently the flocks were made up of from fifty to one hundred birds. Often the flocks were mixed, containing many white-faced glossy ibises. The bird seen at Fort Wheeler and Puerto Pinasco was most likely *Phimosus infuscatus infuscatus* (Licht).”

(452) *Cercibis oxycercus* (Spix)

Ibis oxycercus SPIX, ‘Av. Bras.,’ II, 1825, p. 69, Tab. LXXXVII (“in provincia Pará”).

Geronticus oxycercus PELZELN, ‘Orn. Bras.,’ III, 1870, p. 307 (Rio Guaporé, Estivão de Formigueiro).¹

¹Matto Grosso politically.

Cercibus oxycerca IHERING, 'Cat. F. Braz.,' I, 1907, p. 61 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Rio Guaporé, Estivão de Formigueiro); Rio Amazon; Rio Branco (Forte do Rio Branco, Barra do Rio Negro). Guiana; Colombia; Venezuela.

(453) *Plegadis guarauna* (Linnæus)

Scolopax guarauna LINNÆUS, 'Syst. Nat.,' I, 12th Ed., 1766, p. 242 ("Habitat in America australi" = Brazil).

Ibis falcinellus PELZELN, 'Orn. Bras.,' III, 1870, p. 306 (Pansecco, Caiçara).

Plegadis guarauna IHERING, 'Cat. F. Braz.,' I, 1907, p. 62 (Matto Grosso).

Agua Blanca de Corumbá, 1 ♀ im.

RANGE.—Brazil: Matto Grosso (Pansecco, Caiçara, Agua Blanca de Corumbá); Minas Geraes; São Paulo (Iguapé); Rio de Janeiro; Santa Catharina; Rio Grande do Sul. Argentina (Los Yngleses, Ajó); Paraguay (Tebicuari); temperate and tropical America from southern Oregon, Arizona, Texas, and Florida south through Mexico to southern South America.

This species was common.

(457) *Ajaja ajaja* (Linnæus)

Platalea ajaja LINNÆUS, 'Syst. Nat.,' I, 10th Ed., 1758, p. 140 ("Habitat in America australi" = Brazil).

Platalea ajaja PELZELN, 'Orn. Bras.,' III, 1870, p. 304 (Cuyabá, Villa Maria, Caiçara, Rio Guaporé Nas Laranjeiras).

Ajaja ajaja IHERING, 'Cat. F. Braz.,' I, 1907, p. 62 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Cuyabá, Villa Maria, Caiçara, Rio Guaporé, Nas Laranjeiras); Santa Catharina; São Paulo (Iguapé, Ypanema, Rio de Boraxudo); Minas Geraes; Rio de Janeiro; Bahia; Amazonia [Salvaterra; Marajó (Pindobal, Pacoval); Forte do Rio Branco; Cauamé (on the Rio Branco); Cajutuba (Rio Negro); Pará]. Paraguay (Tebicuari); Argentina (Los Yngleses, Ajó, Las Violetas, Monsalvo). North and South America from Texas, Louisiana, Florida and Georgia, south to Patagonia and Falkland Islands.

(458) *Mycteria americana* Linnæus¹

Mycteria americana LINNÆUS, 'Syst. Nat.,' I, 10th Ed., 1758, p. 140 (based on "Jabiru-guacú" Marcgrave, N. E. Brazil).

Tantalus loculator PELZELN, 'Orn. Bras.,' III, 1870, p. 305 (Cuyabá, Villa Maria, Caiçara); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 150 (Chapada).

Tantalus americanus IHERING, 'Cat. F. Braz.,' I, 1907, p. 64 (Matto Grosso).

Rio Taquary, 1 ♂.

RANGE.—Brazil: Matto Grosso (Cuyabá, Villa Maria, Caiçara, Descalvados, Rio Taquary, Agua Blanca de Corumbá); Minas Geraes; São Paulo (Ypiranga, Porto do Rio Paraná); Rio Grande do Sul; Amazonia; Rio Negro (Barra do Rio Negro); Marajó

¹*Tantalus loculator* auct.

(Pacoval); Rio Juruá. Argentina (Los Yngleses, Ajó); Paraguay; British Guiana to Uruguay and Argentina. Temperate and tropical America from Southern California, Arizona, Texas, Ohio Valley and South Carolina south to Argentina.

"Few, if any, species among the larger birds were seen in such great numbers as the wood ibis. It was especially common in the Paraguayan Chaco, and the pantanales about Agua Blanca de Corumbá, and at Descalvados. Late in November, a rookery was discovered near Fedegosa, occupied, approximately, by about five hundred pairs of breeding birds. In all probability this rookery was occupied for a number of years successively, as many of the nests were nearly a foot thick with the sticks at the bottom old and rotten. It was near the close of the breeding season when this colony was found, so that the young that were in the nests were nearly full grown. There was a strong wind blowing the day the colony was visited, and it was interesting to observe that every bird in the colony, as they perched on the branches or in the nests, was faced in the same direction—head to the wind. On the ground underneath the trees of the rookery, the young that had left the nests assembled in closely huddled flocks. At the approach of any of the parent birds, there arose a mighty uproar from throats and beating wings, each young bird clamoring as lustily as his or her throat would permit for food and more food.

"In the center of this rookery was a tree, a trifle taller than its fellows, the entire top of which was occupied by a jabiru stork's great platform of a nest."

(459) *Euxenura maguari* (Gmelin)

Ardea maguari GMELIN, 'Syst. Nat.,' I, part 2, 1789, p. 623 ("Habitat in calidiori America"); = Brazil (ex Brisson).

Ciconia maguari PELZELN, 'Orn. Bras.,' III, 1870, p. 304 (Caiçara); SALVADORI, Boll. Mus. Torino, X, 1895, No. 208, p. 24 (Corumbá).

Euxenura maguari IHERING, 'Cat. F. Braz.,' I, 1907, p. 64 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Caiçara, Corumbá); São Paulo (Itapura, Tapucaja, Irisanga); Rio Grande do Sul; Rio de Janeiro; Minas Geraes; Marajó (Livramento); Mexiana; Rio Branco (Forte do Rio Branco). Paraguay (Puerto Pinasco, Tebicuari); Argentina (Luiconia, Ajó, Tuyú, Los Yngleses, Ajó); Uruguay; Guiana.

Several flocks of Maguari storks were seen in the neighborhood of Fort Wheeler during September and October; and single individuals or groups of two or three were observed at Puerto Pinasco, at Agua Blanca de Corumbá, and in the pantanales across the river at Descalvados.

(460) *Jabiru mycteria* (Lichtenstein)

Figure 7

Ciconia mycteria LICHTENSTEIN, 'Verz. Doubl., Berliner Mus.,' 1823, p. 76; ex *Mycteria americana* LATHAM (not of Linnæus), Ind. Orn., II, p. 670 (São Paulo, Brazil).

Mycteria americana PELZELN, 'Orn. Bras.,' III, 1870, p. 305 (Cuyabá, Retiro da Barra, Caiçara).

Mycteria mycteria, IHERING, 'Cat. F. Braz.,' I, 1907, p. 64 (Matto Grosso).

Palmiras, 2 ?

RANGE.—Brazil: Matto Grosso (Cuyabá, Caiçara, Palmiras); São Paulo (Porto do Rio Paraná, Capital); Minas Geraes; Goyaz; Amazonia; Borba; Rio Branco

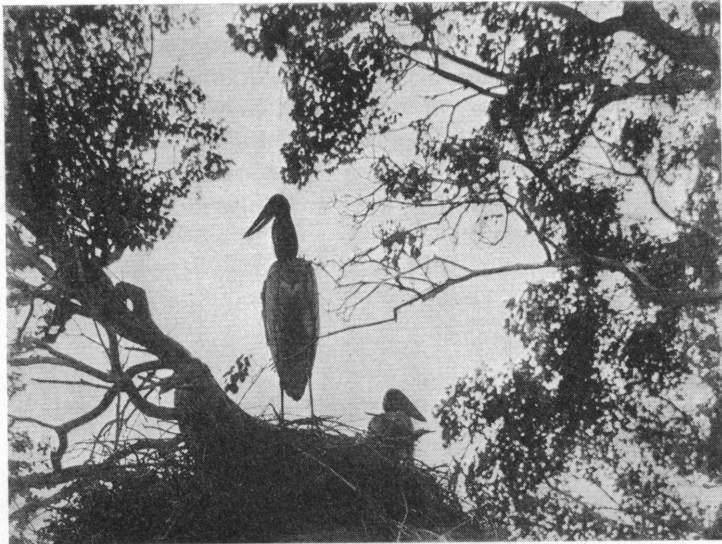


Fig. 7. *Jabiru mycteria* (Lichtenstein) and nest, Palmiras (?), Matto Grosso, Brazil.

(Forte do Rio Branco); Pará. Argentina; Paraguay, Peru; Guiana; north to Central America.

"The jabiru was observed at practically every camping place where we camped from Paraguay northward and in the pantanal region of Matto Grosso it was abundant. As many as two or three hundred individuals frequently were seen assembled along the shores of some inland pond, or scattered over the open campo. Quite a number of nests were seen from the deck of the little river boat while the expedition was traveling on the Paraguay. The nests were usually located in big trees that stood

isolated from other forest growth. They are great platforms of sticks often as much as eight feet in diameter, and some of the sticks employed were from three to five feet in length and an inch to an inch and a half in diameter. The breeding in Matto Grosso begins in October and continues until the end of February. Two eggs would seem to be the number that is normally laid because, while no eggs were collected, the number of young seen in the nests was usually two.

"In the neighborhood of Fedegosa, in the pantanal country, the tuyuyú (or jabiru) is common, so also is the common green parrakeet, and possibly in every tree where there was a jabiru nest there was also a colony of the parrakeets, the latter not infrequently having its foundation in the bottom of the jabiru's platform of sticks.

"While ordinarily the nests are placed in trees that stand apart from or, at least, at the edge of other forest growth, one was discovered near Fedegosa in the very midst of an island of trees that constituted a big rookery of wood ibis. This nest occupied the extreme top of the tree where the tuyuyús, from their platform of sticks, could overlook the entire wood ibis colony and also have an unobstructed view of the surrounding open campo.

"The performance of two half-grown young jabiru was curious and interesting. When discovered, they were sitting quietly side by side in the nest, but at our approach, although we were forty feet below them, they got to their feet and commenced walking about and around on the edge of the nest. Whenever they came to the side from which we were approaching, they would snap the mandibles together with a vicious rattle. They kept this up pretty continuously for the best part of an hour. At the end of this time one of the parent birds arrived on the scene. Hardly had the old bird settled on the nest before the two young crouched close down and remained in that position during the stay of the parent. The old bird did a lot of snapping of her mandibles, but the young were seen only and not heard in the presence of their elders."

(461) *Ardea cocoi* Linnæus

Ardea cocoi LINNÆUS, 'Syst. Nat.,' I, 12th Ed., 1766, p. 237 (based on Brisson, Cayenne); PELZELN, 'Orn. Bras.,' III, 1870, p. 300 (Cuyabá, Caiçara, Matogrosso).

Ardea socoi IHERING, 'Cat. F. Braz.,' I, 1907, p. 65 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Cuyabá, Caiçara); São Paulo (Ypanema, Barretos); Rio Grande do Sul; Paraná (Villa de Castro); Rio de Janeiro; Santa Catharina (Colonia Hansa); Minas Geraes; Amazonia [Rio Juruá; Rio Negro (Barra do Rio Negro; Forte do Rio Branco)]. Argentina (Tuyú; Ajó); Paraguay; Guiana; Colombia; east Peru; South America generally.

(463) *Casmerodius albus egretta* (Gmelin)

Ardea egretta GMELIN, 'Syst. Nat.,' I, part 2, 1789, p. 629 (Cayenne); PELZELN, 'Orn. Bras.,' III, 1870, p. 300 (Caiçara, Matogrosso); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 150 (Chapada); SALVADORI, Boll. Mus. Torino, X, 1895, No. 208, p. 21 (Corumbá).

Herodias egretta IHERING, 'Cat. F. Braz.,' I, 1907, p. 65 (Matto Grosso).

Descalvados, 1 ♂.

RANGE.—Brazil: Matto Grosso (Caiçara, Descalvados, Corumbá); São Paulo (Ypanema, Rio do Boraxudo, Ypiranga, Itapura); Rio de Janeiro (Sapitiba); Rio Grande do Sul; Paraná (Paranaguá); Mexiana; Rio Jamauchim. Argentina (Los Yngleses, Ajó); Paraguay; Chile; Colombia; South America generally to Straits of Magellan and greater part of Central and temperate North America.

There are countless thousands of American egrets distributed throughout the vast pantanales of Matto Grosso. The breeding season lasts from the end of July until early October. Birds in full plumage seem, however, to be found throughout the entire year. At the present time and for several years past, there have been comparatively few of the birds killed by plume hunters in Matto Grosso. The owners of the vast cattle estates in that region, on which may be located many breeding colonies, guard them with jealous care for the revenue that is derived from the sale of the shed plumes. During the nesting season and immediately afterward men are employed to collect the plumes that fall so abundantly in the rookeries.

(464) *Egretta thula thula* (Molina)

Ardea thula MOLINA, Saggio Stor. Nat. Chili, 1782, pp. 235, 344 (Chili).

Ardea candidissima PELZELN, 'Orn. Bras.,' III, 1870, p. 30 (Caiçara); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 150 (Chapada).

Leucophoyx candidissima IHERING, 'Cat. F. Braz.,' I, 1907, p. 66 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Caiçara, Pansecco, Chapada); São Paulo (Ypiranga, Ypanema); Rio de Janeiro (Sapitiba, Marambaya); Minas Geraes; Bahia; Rio Branco (Forte do Rio Branco); Marajó (Magoary). Argentina; Chile; Guiana; South America generally and North America, north nearly to the northern border of the United States.

While none was secured, it was nevertheless common at many points in the pantanales region, although I believe it was greatly outnumbered by the great white egret.

(468) *Agamia agami* (Gmelin)

Ardea agami GMELIN, 'Syst. Nat.,' I, part 2, 1789, p. 629 (based on Buffon and Daubenton, 'Pl. Enl.,' No. 859) ("Habitat in Cayenna"); PELZELN, 'Orn. Bras.,' III, 1870, p. 301 (Villa Maria, in the bay of the Rio Cabaçal, Caiçara, Matogrosso).

Agamia agami IHERING, 'Cat. F. Braz.,' I, 1907, p. 67 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Villa Maria in the bay of the Rio Cabaçal, Caiçara); Amazonia (Rio Juruá); Rio Branco; Rio Negro; Rio Purús (Bom Lugar); Rio Tapajóz (Itaituba); Pará; Marajó (Dunas); Monte Alegre. Guiana; Trinidad; Colombia; Peru; etc.

(470) *Nycticorax nycticorax nævius* (Boddaert)¹

Ardea tayazu-guira VIEILLOT, 'Nouv. Diet. d'Hist. Nat.,' nouv. éd., XIV, 1817, p. 417 (Paraguay).

Nycticorax gardeni PELZELN, 'Orn. Bras.,' III, 1870, p. 303 (Cuyabá, Caiçara).

Nycticorax nycticorax nævius IHERING, 'Cat. F. Braz.,' I, 1907, p. 67 (Matto Grosso).

Nycticorax griseus SALVADORI, Boll. Mus. Torino, X, No. 208, 1895, p. 22 (Corumbá).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Cuyabá, Caiçara, Corumbá); Rio Grande do Sul (Nova Hamburgo); Paraná (Curytiba); São Paulo (Irisanga, Rio Paraná); Rio de Janeiro (Sapitiba); Minas Geraes; Bahia; Pará; Marajó (Pacoval, Livramento, Arary); Mexiana; Rio Paraguay. Uruguay (Rio Negro, São Vicente); Argentina (Buenos Aires, Tala, Cara-huassi, Salta); Chile; Peru; Bolivia (Caiza).

(473) *Cochlearius cochlearius* (Linnæus)

Cancroma cochlearia LINNÆUS, 'Syst. Nat.,' I, 12th Ed., 1766, p. 233 (based on Brisson, Cayenne); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 151 (Chapada); PELZELN, 'Orn. Bras.,' III, 1870, p. 303 (Cuyabá, Engenho do Pari, Rio do Cabaçal, Caiçara, Matogrosso); SHARPE, 'Cat. B. Brit. Mus.,' XXVI, 1898, p. 163 (Engenho do Pari); IHERING, 'Cat. F. Braz.,' I, 1907, p. 67 (Matto Grosso); GRANT, Ibis, 1911, p. 339 (Passage de Bugre).

Urucúm, 1 ♂; feet yellowish green.

RANGE.—British Guiana; Trinidad; Venezuela; Colombia; Ecuador; Peru. Brazil: Amazonia (Rio Juruá); Rio Purús (Bom Lugar); Rio Tocantins (Cameté); Rio Negro; Rio Branco; Borba, on the left bank of the Madeira; Pará; Marajó (Dunas); Mexiana; Matto Grosso (Cuyabá, Engenho do Pari, Rio do Cabaçal, Caiçara, Urucúm, Passage de Bugre); Goyaz; Minas Geraes; São Paulo; Rio de Janeiro.

(475) *Pilherodius pileatus* (Boddaert)

Ardea pileata BODDAERT, 'Tabl. Pl., Enl.,' 1783, p. 54 (based on Daubenton, 'Pl. Enl.,' 907, Cayenne).

Nycticorax pileatus PELZELN, 'Orn. Bras.,' III, 1870, p. 302 (Cuyabá, Pari, Coutinho, Villa Maria, Caiçara, Matogrosso).

Pilherodius pileatus ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 150 (Chapada); SALVADORI, Boll. Mus. Torino, XV, 1900, No. 378, p. 15 (Carandasinho); IHERING, 'Cat. F. Braz.,' I, 1907, p. 68 (Matto Grosso).

No specimens collected.

RANGE.—Guiana; Colombia; eastern Peru. Brazil: Amazonia; Rio Negro; Rio Solimões (Manaqueri); Monte Alegre; Mexiana; Bahia; Matto Grosso (Cuyabá,

¹I am unable to make out two races of night herons in South America. Birds from northern Brazil are indistinguishable from Guianan specimens, so I must refer them to *N. n. nævius* (Boddaert), Wetmore (Bull. U. S. Nat. Mus., No. 133, 1926, p. 54) and Dr. Hellmayr (*in lit.*) also regard *tayazu-guira* as inseparable from *nævius*.

Pari, Coutinho, Villa Maria, Caiçara, Chapada, Rio Roosevelt); Minas Geraes; São Paulo (Ypanema, near Serapo); Rio de Janeiro; Santa Catharina.

Seen at several points on the high central plateau of Matto Grosso and observed a number of times while descending the Rio Roosevelt.

(476) *Butorides striata* (Linnæus)

Ardea striata LINNÆUS, 'Syst. Nat.,' I, 12th Ed., 1766, p. 238 (Surinam).

Ardea scapularis PELZELN, 'Orn. Bras.,' III, 1870, p. 301 (Cuyabá, Caiçara, Matogrosso).

Butorides cyanurus ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 150 (Cachoeira); GRANT, Ibis, 1911, p. 337 (Rabicho).

Butorides striata SALVADORI, Boll. Mus. Torino, X, No. 208, 1895, p. 21 (Corumbá); SHARPE, 'Cat. B. Brit. Mus.,' XXVI, 1898, p. 175 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 68 (Matto Grosso).

Paraguay, Rio Negro, 1 ♂ ad. Brazil: Agua Blanca de Corumbá, 1 ♂ ad.; Palmiras, 1 ♂ im.

RANGE.—Venezuela; Trinidad; Colombia. Brazil: Maranhão; Amazonia; Rio Negro (Marabitanas); Rio Guamá (Ourém); Rio Capim (Resacca); Rio Mojú; Counany; Monte Alegre; Marajó (Rio Arary, Pacoval); Minas Geraes (Vargem Alegre); Matto Grosso (Cuyabá, Caiçara, Cachoeira, Chapada, Agua Blanca de Corumbá, Palmiras, Porto Faya, Rabicho); São Paulo (Jaboticabal, Iguapé, Rio Mogy-Guassú, Ypanema, Itararé, Teixeira); Paraná (Paranaguá); Rio Grande do Sul; Rio de Janeiro. Paraguay (Rio Negro); Bolivian Chaco (Caiza); Argentina.

(480) *Tigrisoma lineatum marmoratum* (Vieillot)

Figures 8 and 9

Ardea marmorata VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XIV, 1817, p. 415 (based on Azara, No. 353 = juv., Paraguay).

Tigrisoma brasiliense PELZELN, 'Orn. Bras.,' III, 1870, p. 302 (Engenho do Pari, Caiçara).

Tigrisoma fasciatum ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 151 (Chapada)¹; IHERING, 'Cat. F. Braz.,' I, 1907, p. 69 (Matto Grosso).

Tigrisoma marmoratum MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 26 (Caceres).

Matto Grosso, 1 ♂; Fazenda São João, Rio Cuyabá, 1 ♂.

RANGE.—Brazil: Matto Grosso (Caceres, Engenho do Pari, Caiçara); São Paulo (Itapura, Taipa, Ypanema); Paraná (Curytiba); Goyaz (Ponte Alta, Rio Araguaya); Minas Geraes (Vargem Alegre); Bahia; Piahy (Lake Parnaguá and Riacho da Raiz). Argentina (San Lorenzo); Bolivian Chaco (Caiza); Bolivia (Alto Paraguay); Paraguay (Fort Wheeler).²

In the characters by which the single specimen from Chapada, a female, differs from *Tigrisoma fasciatum* it agrees with *Tigrisoma salmoni*.

¹Female specimen collected by H. H. Smith, from Chapada, Matto Grosso.

²And many other localities.

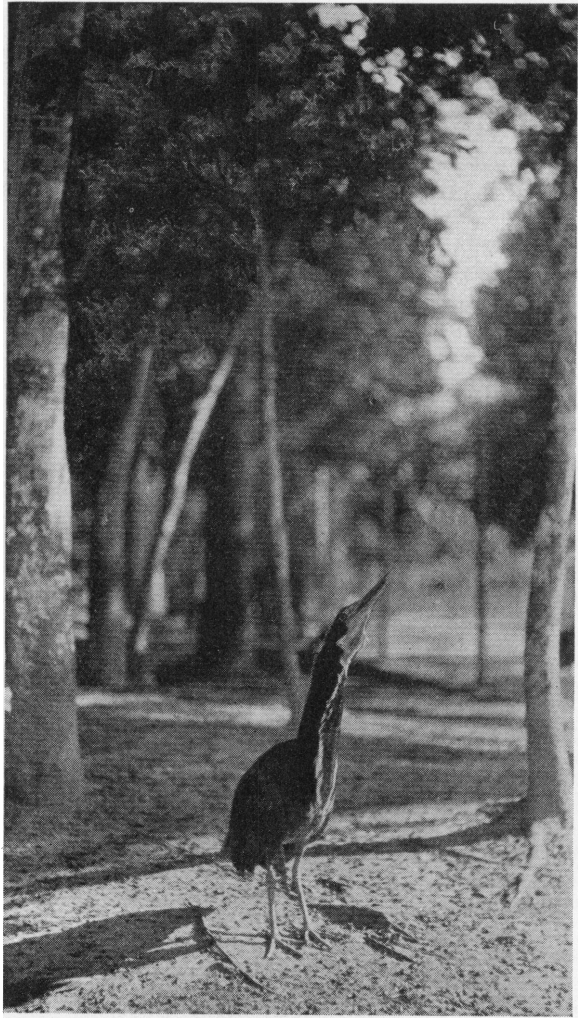


Fig. 8. *Tigrisoma lineatum marmoratum* (Vieillot),
Descalvados, Matto Grosso, Brazil.

The rump, upper tail-coverts, crown and crest, flanks and abdomen are unbarred (character of *Tigrisoma salmomi*). It differs, however, from *Tigrisoma salmomi* in having the axillaries barred and the throat feathered.



Fig. 9. *Tigrisoma lineatum marmoratum* (Vieillot), Rio Cuyabá, Matto Grosso, Brazil.

(485) ***Ixobrychus exilis erythromelas*** (Vieillot)

Ardea erythromelas (err. typog) VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XIV, 1817, p. 422 (based on Azara, No. 360, Rio Paraguay).

Ardetta erythromelas IHERING, 'Cat. F. Braz.,' I, 1907, p. 70 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso; São Paulo (Iguapé, Ypanema); Goyaz (Rio Araguaya); Rio de Janeiro; Bahia; Pará; Marajó (Rio Arary); Monte Alegre; Cussary; Rio Negro (Barra do Rio Negro). East Peru; Colombia, Venezuela; Guiana; Bolivia; Paraguay.

(487) ***Zebrilus undulatus*** (Gmelin)

Ardea undulata GMELIN, 'Syst. Nat.,' I, part 2, 1789, p. 637 (based on Daubenton, 'Pl. Enl.,' No. 763, Cayenne).

Tigrisoma undulatus PELZELN, 'Orn. Bras.,' III, 1870, p. 302 (Caiçara, Engenho do Cap. Gama, on the right bank of the Rio Guaporé).

Zebrilus pumilus IHERING, 'Cat. F. Braz.,' I, 1907, p. 70 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Caiçara, Engenho do Cap. Gama, on the right bank of the Rio Guaporé); Humaythá, Rio Madeira; Pará; Rio Tocantins (Arumatheua); Cussary; Santarém; Rio Jamundá (Faro). Guiana.

(489) *Botaurus pinnatus* (Wagler)

Ardea pinnata WAGLER, Isis, 1829, p. 663 ("Habitat in Brasiliæ provincia Bahía").

Botaurus pinnatus IHERING, 'Cat. F. Braz.,' I, 1907, p. 70 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso; São Paulo (Ipiranga); Goyaz (Porto do Rio Araguaya); Rio de Janeiro; Bahia; Pernambuco. Argentina (Tucumán); Guiana.

(490) *Anhima cornuta* (Linnæus)

Palamedea cornuta LINNÆUS, 'Syst. Nat.,' 12th Ed., I, 1766, p. 232; based on Marcgrave's 'Anhima' (N. E. Brazil) and Brisson's 'Kamichy' (Cayenne); PELZELN, 'Orn. Bras.,' III, 1870, p. 313 (Engenho do Cap. Gama, on the banks of the Rio Guaporé, Cachoeira da Bananeira); IHERING, 'Cat. F. Braz.,' I, 1907, p. 78 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Engenho do Cap. Gama, on the banks of the Rio Guaporé, Cachoeira da Bananeira); Goyaz (Rio Araguaya); Rio Maracana (Livramento); Rio Amazon (Cara-raucú); Peixe-Boi Pará; São Paulo, (Ypanema, Itapura); Minas Geraes; Bahia; Piauhy (Lake Parnaguá). East Peru; Bolivia; Ecuador; Colombia; Guiana; Venezuela.

(492) *Chauna torquata* (Oken)

Figure 10

Chaja torquata OKEN, 'Lehrb. Naturg.,' Th. 3, Zool., Abth. 2, p. 639 (based on Azara, No. 341, Paraguay and La Plata).

Chauna chavaria PELZELN, 'Orn. Bras.,' III, 1870, p. 314 (Cuyabá, Villa Maria, Rio do Cabaçal, Matogrosso, Rio Guaporé para cima da Barra do Rio Paragú, Nas Laranjeiras).

Chauna cristata SALVADORI, 'Cat. B. Brit. Mus.,' XXVII, 1895, p. 7 (Rio Guaporé); IHERING, 'Cat. F. Braz.,' I, 1907, p. 78 (Matto Grosso); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 26 (Corumbá).

Rio São Lourenço, 1 ♀.

RANGE.—Brazil: Matto Grosso (Cuyabá, Villa Maria, Rio do Cabaçal, Rio Guaporé, Nas Laranjeiras, Corumbá, Rio São Lourenço); Rio Grande do Sul; São Paulo. Paraguay (bank of the Rio Paraguay); Uruguay; Argentina (Los Yngleses, Ajó).

Very common on the São Lourenço and Cuyabá rivers and the upper Paraguay.

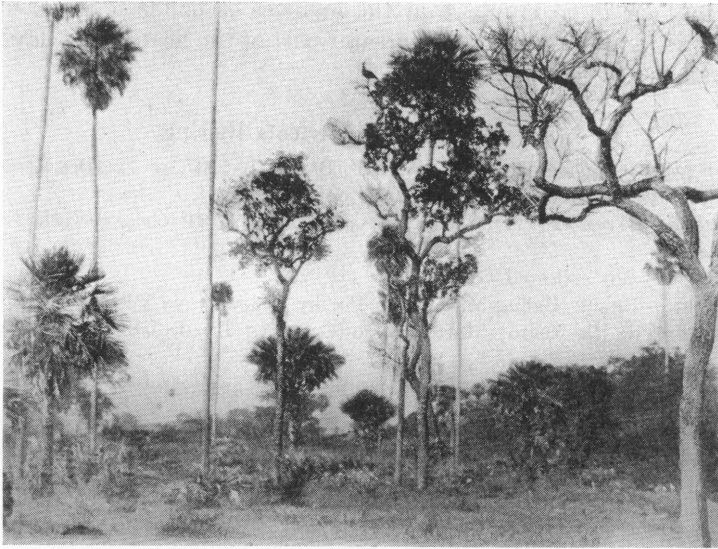


Fig. 10. *Chauna torquata* (Oken), Corumbá, Rio São Lourenço, Matto Grosso, Brazil.

(499) *Cairina moschata* (Linnæus)

Anas moschata LINNÆUS, 'Syst. Nat.,' 10th Ed., I, 1758, p. 124 ("Habitat in India" = Brazil, see Berl. and Hart., Nov. Zoöl., IX, 1902, p. 131).

Cairina moschata PELZELN, 'Orn. Bras.,' III, 1870, p. 320 (Caiçara); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 151 (Chapada); SALVADORI, Boll. Mus. Torino, XV, 1900, No. 378, p. 16 (Carandásinho); IHERING, 'Cat. F. Braz.,' I, 1907, p. 72 (Matto Grosso); GRANT, Ibis, 1911, p. 345 (Pan de Azucar).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Caiçara, Urucúm, Chapada, Agua Blanca de Corumbá, Descalvados, Carandásinho, Pan de Azucar; Puerto Maria); São Paulo; (Itapura, Itararé, Ypanema, Rio Paraná); Goyaz (Nos Puritis); Rio Grande do Sul; Minas Geraes; Rio de Janeiro; Bahia; Amazonas; Marajó (Cabo de Magoary). Guiana; Argentina; Paraguay (Puerto Pinasco, Fort Wheeler); Peru; Colombia; South America generally, casually to the Rio Plata.

"Very common in the neighborhood of Puerto Pinasco and about Fort Wheeler in the Paraguayan Chaco, and equally common throughout the vast pantanal region of the Rio Paraguay. Many were observed about Urucúm, Agua Blanca de Corumbá, and Descalvados. In the vicinity of Fort Wheeler, they were frequently put up in flocks of from fifty to sixty birds. Usually when flushed from the marshes they would fly only a short distance and alight among the limbs of trees growing in

the thinly scattered groups near the marshes or ponds. So far as observations went, they spend the greater part of the heat of the day amid the branches of the trees."

(500) **Sarkidiornis sylvicola** Ihering

Sarkidiornis sylvicola IHERING, 'Cat. F. Braz.,' I, 1907, p. 72 (Brazil; nomen novum pro *Anas carunculata* Lichtenstein, not of Vieillot).

Sarkidiornis regia PELZELN, 'Orn. Bras.,' III, 1870, p. 319 (Caçara on the Lagoon of Chacururé).

No specimens collected.

RANGE.—Brazil: Bahia; Maranhão; Piauhý (below Nova York, Marúas); Rio Negro; Barra do Rio Negro; Matto Grosso (Caçara); Rio de Janeiro (Sapitiba).

(507) **Dendrocygna viduata** (Linnæus)

Anas viduata LINNÆUS, 'Syst. Nat.,' 12th Ed., I, 1766, p. 205 (Cartagena); PELZELN, 'Orn. Bras.,' III, 1870, p. 319 (Cuyabá, Caçara); SALVADORI, 'Cat. B. Brit. Mus.,' XXVII, 1895, p. 145 (Cuyabá); IHERING, 'Cat. F. Braz.,' I, 1907, p. 73 (Matto Grosso).

Bocaina de Descalvados, 1 ♂.

Fazenda do São João, Rio Cuyabá, 1 ♂; eye dark; feet and tip of maxilla slate-gray.

RANGE.—Brazil: Bahia; Piauhý¹; Amazonas (Forte do Rio Branco); Matto Grosso (Agua Blanca de Corumbá, Cuyabá, Caçara, Bocaina de Descalvados, Fazenda do São João, Rio Cuyabá); São Paulo; Paraná; Rio Grande do Sul. Antilles; Guiana; Colombia; Peru; Paraguay; Argentina (Buenos Aires).

Ducks of this species were observed at many points on the Rio Paraguay. At Agua Blanca de Corumbá and about Descalvados it was very abundant. The middle of December seemed to be the height of the breeding season about the latter place.

(508) **Dendrocygna bicolor bicolor** (Vieillot)

Anas bicolor VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., V, 1816, p. 136 (based on Azara, No. 436, Paraguay).

Agua Blanca de Corumbá, 1 ♀ ad.

RANGE.—Brazil: Matto Grosso (Agua Blanca de Corumbá); Rio Grande do Sul; Bahia. Paraguay (Villa Pilar); Argentina (La Plata); Chile; Colombia; Venezuela.

Countless thousands of this species and the white-faced tree duck are found almost everywhere throughout the pantanal region.

(509) **Dendrocygna autumnalis discolor** Sclater and Salvin

Dendrocygna discolor SCLATER AND SALVIN, 'Nomencl. Av. Neotr.,' 1873, pp. 129, 161 (Rio Maroni, Surinam); SALVADORI, Boll. Mus. Torino, XV, 1900, No. 378, p. 16 (Carandasinho); IHERING, 'Cat. F. Braz.,' I, 1907, p. 73 (Matto Grosso).

¹Various localities (Reiser).

Dendrocygna autumnalis PELZELN (not of Linnæus), 'Orn. Bras.,' III, 1870, p. 320 (Caiçara).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Carandasinho, Caiçara); São Paulo (Porto do Rio Paraná; Minas Geraes; Amazonas; Rio Negro; Forte do Rio Branco; Marajó; Pará. Colombia; Venezuela; Trinidad; Ecuador; Guiana; east Peru.

(510) *Alopochen jubata* (Spix)

Anser jubatus SPIX, 'Av. Bras.,' II, 1825, p. 84, Tab. CVIII ("ad ripam fl. Solimões in insula "Praya das Onças").

Chenalopez jubatus PELZELN, 'Orn. Bras.,' III, 1870, p. 319 (Caiçara, on the Lagoon of Chacururé, Matogrosso, Rio Guaporé at Tres Barras, Sta. Roza, Barra do Rio Guaporé).

Alopochen jubata IHERING, 'Cat. F. Braz.,' I, 1907, p. 73 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Caiçara, Rio Guaporé); Amazonas; Rio Negro. Bolivia; Peru; Guiana; Venezuela.

(519) *Nettion brasiliense* (Gmelin)

Anas brasiliensis GMELIN, 'Syst. Nat.,' I, part 2, 1789, p. 517 (based on "Mareca alia species" Marcgrave, northeast Brazil).

Querquedula brasiliensis PELZELN, 'Orn. Bras.,' III, 1870, p. 320 (Matogrosso).

Nettion brasiliense SALVADORI, Boll. Mus. Torino, XV, 1900, No. 378, p. 16 (Carandasinho).

Nettium brasiliense IHERING, 'Cat. F. Braz.,' I, 1907, p. 74 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Carandasinho); Rio de Janeiro (Sapitiba); São Paulo (Ypanema, Ypiranga); Rio Grande do Sul (Nova Hamburgo); Minas Geraes; Bahia; Pará; Rio Branco (Forte do Rio Branco). Bolivia (Chaco, Caiza, San Francisco); Uruguay; Paraguay (Mendano); Argentina; Venezuela; Guiana; Colombia; to the Straits of Magellan.

(535) *Nomonyx dominicus* (Linnæus)

Anas dominica LINNÆUS, 'Syst. Nat.,' I, 12th Ed., 1766, p. 201 (based on "La Sarcelle, de Sainte-Domingue" Brisson, Santo Domingo).

Erismatura dominica PELZELN, 'Orn. Bras.,' III, 1870, p. 320 (Caiçara on the Lagoon of Barreirinhos).

Nomonyx dominicus IHERING, 'Cat. F. Braz.,' I, 1907, p. 77 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Caiçara); São Paulo (Ypanema, Mattodentro); Espirito Santo (Rio Doce); Bahia; Pará; Rio Negro; Rio Acará. Bolivia; Paraguay; Argentina; Guiana; Colombia; South America generally.

(549) *Phalacrocorax olivaceus olivaceus* (Humboldt)

Figure 11

Pelecanus olivaceus HUMBOLDT, 'Rec. Obs. Zool. et Anat. Comp.,' I, 1805, p. 47 (near Banco, Rio Magdalena, Colombia).¹

Phalacrocorax brasiliensis SALVADORI, Boll. Mus. Torino, X, No. 208, 1895, p. 21 (Corumbá).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Corumbá, Descalvados); São Paulo (Iguapé); Rio Grande do Sul (Nova Hamburgo); Rio de Janeiro; Bahia; Pará; Marajó (Pacoval). Paraguay (Tebicuari, Monte Alto); Argentina; Chile; Guiana; coasts, lakes and rivers of South America.

"Many thousands of this cormorant were observed on our journeys up the Rio Paraguay. The species was particularly abundant in the vast pantanal region of Matto Grosso. Throughout that region the common name is Vigua; but the same name is also applied to the Anhinga.

"About Descalvados the Vigua were common, swimming and diving in the neighborhood of the little steamboat landing; they showed little fear, frequently venturing within a few feet of the shore. Frequently they were seen to bring to the surface a kind of catfish about six inches long with long, strong, sharp pectoral and dorsal spines. The bird never attempted to swallow its victim until it was held so as to go down head foremost."

(554) *Anhinga anhinga* (Linnæus)

Plotus anhinga LINNÆUS, 'Syst. Nat.,' I, 12th Ed., 1766, p. 218; based on '*Anhinga*' of Margrave (N. E. Brazil) and Brisson (Cayenne); PELZELN, 'Orn. Bras.,' III, 1870, p. 325 (Cuyabá, Engenho do Pari, Caiçara, Matogrosso); OGILVIE-GRANT, 'Cat. B. Brit. Mus.,' XXVI, 1898, p. 419 (Caiçara); IHERING, 'Cat. F. Braz.,' I, 1907, p. 79 (Matto Grosso).

Palmiras, 1 ♂.

RANGE.—Brazil: Piauí; Maranhão; Amazonia; Borba; Rio Negro (Marabitanas, Barra do Rio Negro); Marajó; Matto Grosso (Cuyabá, Engenho do Pari, Caiçara, Matto Grosso, Palmiras); Goyaz (Porto do Rio Araguaya); Minas Geraes; São Paulo. Guiana; Colombia; Ecuador; Paraguay (Tebicuari, Mortero); Argentina.

(566) *Sarcoramphus papa* (Linnæus)

Vultur papa LINNÆUS, 'Syst. Nat.,' I, 10th Ed., 1758, p. 86 (ex Edwards and Albin; in India occidentali = Surinam, auct. Berlepsch, 1908).

Sarcoramphus papa PELZELN, 'Orn. Bras.,' I, 1867, p. 1 (Caiçara, Engenho do Cap. Gama).

Gypagus papa ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 148 (Chapada); SALVADORI, Boll. Mus. Torino, XV, 1900, No. 378, p. 14 (Urucúm); MÉNÉGAUX,

¹See Richmond, Proc. Biol. Soc. Wash., XXXIX, 1926, p. 142.

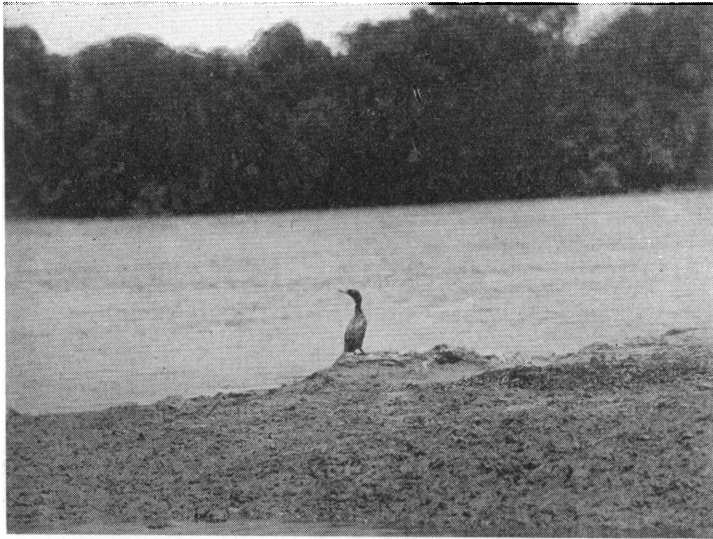


Fig. 11. *Phalacrocorax olivaceus olivaceus* (Humboldt), on river bank at Descalvados, Matto Grosso, Brazil.



Fig. 12. A number of vultures (*Coragyps atratus fætens* Wied), Matto Grosso, Brazil.

'Rev. Franç. d'Orn.,' IV, 1917, p. 26 (Poconé); IHERING, 'Cat. F. Braz.,' I, 1907, p. 81 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Caiçara, Engenho do Cap. Gama, Urucúm, Chapada, Poconé); São Paulo (Itararé, Murungaba); Goyaz (Rio Araguayá); Rio Grande do Sul; Amazonas; Borba; Rio Branco (Serra Caraumán); Rio Juruá, Maracá; Campo de Ariramba. Paraguay; Argentina (Tucumán, Salta); tropical and subtropical South America.

(567) *Coragyps atratus fœtens* (Lichtenstein)

Figure 12

Cathartes fœtens LICHTENSTEIN, 'Verz. Säug. und Vögel Zool. Mus. Berlin,' 1818, p. 30 (based on Azara's "Tribu," Paraguay).

No specimens collected.

RANGE.—Brazil: Matto Grosso; São Paulo (Ipiranga, Ypanema); Rio de Janeiro (Sapitiba); Rio Grande do Sul; Pará; Amazonas; Rio Juruá; Rio Branco. Paraguay; Chile; Argentina; South America generally.

"Very abundant at all points visited. We had scarcely stopped for camp when some of these scavengers began to appear."¹

(568) *Cathartes aura ruficollis* Spix

Cathartes ruficollis SPIX, 'Av. Bras.,' I, 1824, p. 2 (Bahia, Piauhy).

Cathartes aura ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 148 (Chapada).

Mutum Cavallo, 1 ♂ juv.; Utiarity, 1 ♂; (eye reddish yellow; feet grayish white; head reddish purple with a band of bluish white across the nape).

RANGE.—From Paraguay (and adjacent districts of Argentina?) north through Brazil to the Guianas and Venezeula.²

The status of the races of *C. aura* in eastern South America is involved in much confusion. (See, however, Wetmore's review in Bull. U. S. Nat. Mus., No. 133, 1926, pp. 88-91).

(572) *Polyborus plancus brasiliensis* (Gmelin)

Falco brasiliensis GMELIN, 'Syst. Nat.,' I, 1788, p. 262 (based on Brisson et Marcgrève "Caracara," N. E. Brazil=Pernambuco; auct. WETMORE, Bull. U. S. Nat. Mus., No. 133, 1926, Note 79, p. 97).

Polyborus tharus ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 148 (Chapada).

No specimens collected.

RANGE.—From northern Paraguay, northward through Brazil: Matto Grosso (Chapada); São Paulo (S. Sebastião, Ipiranga, Ypanema, Itararé); Rio de Janeiro (Sapitiba); Bahia; Minas Geraes; Piauhy; Goyaz; Amazonia; Pará; Rio Branco

¹No actual record of a specimen in collections found anywhere in literature.

²The bird found in the Andes from Colombia to Straits of Magellan is *C. a. jota* (Molina). Dr. Hellmayr is of the opinion that *C. occipitalis* Stolzmann (Huambo, Peru) and *C. orbigny* Stolzmann (Ann. Zool. Mus. Polonici Hist. Nat., IV, pp. 319, 322) are doubtful.

(Forte do Rio Branco); Marajó; Rio Arary (S. Natal, Pacoval); Mexiana. Paraguay (Fort Wheeler, Puerto Pinasco).¹

Very common about Puerto Pinasco and at Fort Wheeler.

(574) *Ibycter ater* (Vieillot)

Daptrius ater VIEILLOT, 'Analyss Nouv. Ornith. Élém.,' 1816, p. 68 ("Brésil").

Ibycter ater PELZELN, 'Orn. Bras.,' I, 1868, p. 2 (Engenho do Cap. Gama, Matogrosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 83 (Matto Grosso).

Rio Roosevelt, 1 ♀; bare skin about face and throat orange-red; eye dark; feet orange-yellow; claws blackish.

RANGE.—Brazil: Matto Grosso (Engenho do Cap. Gama, Matogrosso, Rio Roosevelt); Amazonia; Rio Negro; Rio Juruá; Cussary; Rio Jamauchim; Rio Purús (Bom Lugar, Monte Verde). Guiana; Ecuador; Colombia; Venezuela.²

Insects and hairy caterpillars were found in the stomach.

(575) *Ibycter americanus americanus* (Boddaert)³

Falco americanus BODDAERT, 'Tabl. Pl. Enl.,' 1783, p. 25 (based on "Le petit Aigle, d'Amérique," Daubenton, 'Pl. Enl.,' No. 417, Cayenne).

Ibycter americanus PELZELN, 'Orn. Bras.,' I, 1868, p. 2 (Engenho do Gama, Matogrosso); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 148 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 83 (Matto Grosso).

Rio Roosevelt, Camp 10, 1 ♂; feet, throat, and sides of face coral red; eye scarlet; claws black.

RANGE.—Brazil: Matto Grosso (Engenho do Gama, Matogrosso, Chapada, Rio Roosevelt, Camp 10); São Paulo (Ypanema, Goyabeira, Itapura, Rio Feio, Salto Grande do Paranapanema); Paraná; Piahy and Maranhão; Amazonia; Borba; Pará; Peixe-Boi; Rio Guamá (Ourém); Rio Capim; Rio Mojú; Rio Jamauchim (St. Helena); Rio Juruá. Eastern Peru; Ecuador; Colombia.

Seeds and other unidentifiable vegetable matter in the stomach.

(580) *Milvago chimachima chimachima* (Vieillot)

Polyborus chimachima, VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., V, 1816, p. 259 (based on Azara, No. 6, Paraguay).

Milvago chimachima ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 148 (Chapada); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 37 (Poconé, Caceres); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 14 (Urucúm).

¹The status of the bird from the coastal region of extreme southern Brazil (Santa Catharina and Rio Grande do Sul) is uncertain. For ranges of the two races, see Wetmore, Bull. U. S. Nat. Mus., No. 133, 1926, pp. 95-98.

²An Amazonian species reaching its southern limit in western Matto Grosso (Rio Guaporé).

³Swann ('Monogr. Bds. Prey,' Part 2, 1925, p. 78), following Pelzeln, proposes to separate on account of larger size a southeast Brazilian race but appears to be wrong in calling it *Ibycter americanus formosus*. *Falco formosus* Latham is merely a new name for *Falco aquilinus* Gmelin, based on Buffon and Daubenton's "Petit Aigle d'Amérique" from Cayenne, hence a pure synonym of *F. americanus*. If there are two races, as Swann claims, the southern form requires a new name. We have no material to decide the question. All I can say is that birds from Piahy and Maranhão are indistinguishable from those of Guiana.

Paraguay: Puerto Pinasco, 1 ♂. Matto Grosso: Urucúm, 1 ♀; Tapirapoan, 1 ♂ im.: Feet glaucous green; claws blackish; bill plumbeous gray; eye dark brown; cere and naked skin about the eye greenish yellow.

RANGE.—Brazil: Matto Grosso (Chapada, Poconé, Caceres, Urucúm, Tapirapoan); São Paulo (Ypiranga, Ypanema); Rio de Janeiro (Sapitiba); Bahia; Piauhy (Parnaguá, delta of the Rio Parnahyba); Paraná (Curytiba); Rio Grande do Sul. Uruguay; Paraguay (Puerto Pinasco); northern Argentina.

This caracara, or tick-eating hawk, was observed at many points on the journey from Paraguay northward. One of the specimens collected had the crop full of ticks—the sort that infest cattle. They also eat many kinds of insects and occasionally pick up small fish from the pools that are drying at close of the rainy season. The stomach of one was filled with locusts.

(584) *Circus buffoni*¹ (Gmelin)

Falco buffoni GMELIN, 'Syst. Nat.,' I, 1788, p. 277 (ex "Cayenne Ringtail"); LATHAM, 'Gen. Syn. Bds.,' I, (1), p. 91, No. 76A.

Circus macropterus PELZELN, 'Orn. Bras.,' I, 1868, p. 8 (Cuyabá).

Circus maculosus IHERING, 'Cat. F. Braz.,' I, 1907, p. 85 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Cuyabá); Rio Grande do Sul (São Lourenço); São Paulo (Irisanga, marshes of Tamandatahy); Santarém; Pará; Villa de Tapajóz; Marajó (S. Natal). Venezuela; Trinidad; British Guiana; Argentina² (Luiconia, Los Yngleses, Ajó, Buenos Aires); Bolivia (Alto Paraguay); Chile; Paraguay.

(585) *Micrastur semitorquatus semitorquatus* (Vieillot)

Sparvius semitorquatus VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., X, 1817, p. 322 (based on Azara, No. 29, Paraguay).³

Micrastur brachypterus PELZELN, 'Orn. Bras.,' I, 1868, p. 7 (Villa Maria).

Micrastur semitorquatus IHERING, 'Cat. F. Braz.,' I, 1907, p. 85 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Villa Maria, on the banks of the Paraguay); Rio de Janeiro (Corcovado); São Paulo; Paraná (Ourinho); Rio Grande do Sul; Espirito Santo; Maranhão (Miritiba); also Amazonas (Rio Negro, Rio Madeira). Paraguay.

I follow the current treatment of this species, which restricts *M. semitorquatus* Vieillot to the southern part of its range.

(587) *Micrastur ruficollis ruficollis* (Vieillot)

Sparvius ruficollis VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., X, 1817, p. 322 ("l'Amérique méridionale; rapporte de Lisbonne par M. Geoffroy Saint-Hilaire

¹ = *maculosus* Vieillot.

² Many other localities are recorded by Wetmore (Bull. U. S. Nat. Mus., No. 133, 1926, pp. 108-109).

³ Wetmore (Bull. U. S. Nat. Mus., No. 133, 1926, p. 99) advances proof that the above is the earliest name for this hawk.

père en 1808"); Hellmayr¹ substitutes Brazil for type-locality, suggest Rio de Janeiro.

Micrastur ruficollis ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 147 (Chapada); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 14 (Urucúm).

No specimens collected.

RANGE.—Central and eastern Brazil: Matto Grosso (Chapada, Urucúm); São Paulo (Piquete, Iguapé); Paraná (Ourinho, Vera Guarany); Rio Grande do Sul (São Lourenço); Minas Geraes (Marianna, Lagôa Santa, Lapa do Bahú); Espirito Santo (Rio Doce); Rio de Janeiro; Bahia; Piauhy (Parnaguá). Paraguay; northern Argentina.

(588) *Micrastur ruficollis gilvicollis*² (Vieillot)

Sparvius gilvicollis VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., X, 1817, p. 322 (no locality given; the type is from Cayenne, coll. Poiteau).

Micrastur gilvicollis PELZELN, 'Orn. Bras.,' I, 1868, p. 7 (Matogrosso,³ on the banks of the Guaporé); IHERING, 'Cat. F. Braz.,' I, 1907, p. 86 (Matto Grosso).

No specimens collected.

RANGE.—Northern Brazil: Matto Grosso (banks of the Rio Guaporé); Rio Xingú (Victoria); Rio Curuá (Mal. de Manoelzinho); Rio Jary (St. Antonio da Cachoeira); Amazonas (Rio Juruá); Borba; Rio Negro; Pará; Rio Javari. Guiana to eastern Ecuador; eastern Peru; N. E. Bolivia.

(592) *Geranospiza caerulescens gracilis* (Temminck)

Falco gracilis TEMMINCK, 'Pl. Col.,' livr. 16, 1821, Pl. 91 ("Habite les contrées boisées des parties orientales du Brésil").

Geranospizias caerulescens ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 147 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 86 (Matto Grosso).

Geranopus gracilis PELZELN, 'Orn. Bras.,' I, 1868, p. 7 (Cuyabá, Barra do Rio Jaurú, Pansecco⁴).

Paraguay: Puerto Pinasco, 1 ♂; stomach contained parts of a good-sized leopard frog. Not uncommon about Puerto Pinasco and about Fort Wheeler.

RANGE.—Brazil: Matto Grosso (Chapada, Cuyabá, Barra do Rio Jaurú, Pansecco); Bahia; Piauhy; Maranhão; Goyaz (Rio Araguayá); Minas Geraes; Espirito Santo; São Paulo; Rio Grande do Sul. Paraguay (Puerto Pinasco, Fort Wheeler); Bolivia (Chaco, Caiza, Santa Cruz); N. Argentina (Riacho Ancho, Chaco, Suncho Corral, Santiago del Estero).

Measurements

	SEX	WING	TAIL ⁵	CULMEN	MUSEUM
Paraguay, Puerto Pinasco	♂	332	229	25	A M. N. H.
Argentina, Suncho Corral, Santiago del Estero	♀	356	274	30	"
Brazil, Matto Grosso, Chapada,	♀	310	234	27	"

¹Abhandl. 2, Kl. Bayr. Ak. Wiss., XXII, 1906, No. 3, p. 573.

²Apparently replaces *M. r. ruficollis* in western (Amazonian) Matto Grosso.

³The bird secured by Natterer at Villa Bella de Matto Grosso on Sept. 20, 1828, an adult male in perfect plumage, differs from all other specimens of *gilvicollis*, seen by Dr. Hellmayr, by paler gray upperparts, sides of head and throat, and by having the narrower, less blackish cross-band beneath carried down to the under tail-coverts. According to Dr. Hellmayr's note to the writer, additional material is needed to make out whether the variation is individual or geographical.

⁴Five miles from Caçara, one mile from the Rio Jaurú.

⁵Tail moulting.

(593) *Parabuteo unicinctus unicinctus* (Temminck)

Falco unicinctus TEMMINCK, 'Pl. Col.,' livr. 53, 1824, Pl. cccxiii ("Brésil"; type from Bôa Vista, western Minas Geraes, in Paris Museum).

Urubitinga unicinctus PELZELN, 'Orn. Bras.,' I, 1868, p. 3 (Matogrosso).

Parabuteo unicinctus ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 146 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 87 (Matto Grosso).

No specimens collected.

RANGE.—South America generally: south to Chile on west coast and Buenos Aires on east coast; Matto Grosso (Chapada, Villa Bella), Brazil.

(605) *Accipiter pileatus* (Temminck)

Falco pileatus TEMMINCK, 'Pl. Col.,' livr. 35, 1823, Pl. ccv ("Brésil" = Rio Belmonte, Bahia; Coll. Wied).

Accipiter pileatus PELZELN, 'Orn. Bras.,' I, 1868, p. 8 (Barra do Rio Jaurú); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 147 (Chapada).

Nisus pileatus IHERING, 'Cat. F. Braz.,' I, 1907, p. 88 (Matto Grosso).

No specimens collected.

RANGE.—Eastern and southern Brazil: Matto Grosso (Chapada, Barra do Rio Jaurú); from the interior of Maranhão and Piauí south to Rio Grande do Sul. Paraguay; Argentina (Corrientes).

(609) *Heterospizias meridionalis meridionalis* (Latham)

Falco meridionalis LATHAM, Ind. Orn., I, 1790, p. 36 ("Habitat in Cayana").

Urubitinga meridionalis PELZELN, 'Orn. Bras.,' I, 1868, p. 2 (Cuyabá).

Heterospizias meridionalis ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 145 (Chapada); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 13 (Urucúm); IHERING, 'Cat. F. Braz.,' I, 1907, p. 88 (Matto Grosso, Fazenda da Faya).

No specimens collected.

RANGE.—South America (Panama to Colombia). S. E. Brazil: Rio Grande do Sul; São Paulo (Ypiranga); Rio de Janeiro; Minas Geraes; Bahia; Matto Grosso (Fazenda da Faya, Urucúm, Chapada, Cuyabá); Rio Xingú; Rio Branco; Mexiana; Marajó. Paraguay (?); Bolivia.

(610) *Buteo albicaudatus albicaudatus* Vieillot

Buteo albicaudatus VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., IV, 1816, p. 477 ("l'Amérique méridionale"). Type-locality suggested, Paraguay¹; ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 142 (Chapada).

Buteo pterocles PELZELN, 'Orn. Bras.,' I, 1868, p. 3 (Rio das Flechae, Matogrosso).

Tachytriorchis albicaudatus IHERING, 'Cat. F. Braz.,' I, 1907, p. 89 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Chapada, Rio das Flechas, Matogrosso); Bahia; Goyaz; Minas Geraes; São Paulo (Avanhandava, Goyaba, Ypanema, Itararé, Delgado, Murungaba, Irisanga, Paraná); Rio Grande do Sul. Paraguay; Bolivia; Uruguay; Argentina.

¹H. Kirke Swann, 'Synop. Accipitres,' 1922, p. 86.

(620) *Buteo platypterus platypterus*¹ (Vieillot)

Spizaetus platypterus VIEILLOT, 'Tabl. Enc. Méth., Orn.,' III, 1823, p. 1273 (near Philadelphia, ex Wilson, Pl. LIV, fig. 1).

Urucúm, 1 ♂ im.

RANGE.—Brazil: Matto Grosso (Urucúm); upper Amazonia; Rio Javari. Venezuela (Mérida); northern South America.

Winter visitor in South America.

(621) *Buteola brachyura* (Vieillot)

Buteo brachyurus VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., IV, 1816, p. 477 (no locality given; the type is from Cayenne²); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 142 (Chapada).

Buteo minutus PELZELN, 'Orn. Bras.,' I, 1868, p. 3 (Matogrosso).

Buteola brachyura IHERING, 'Cat. F. Braz.,' I, 1907, p. 90 (Matto Grosso).

No specimens collected.

RANGE.—Guiana; Venezuela (Mérida); Colombia; Peru. Brazil: Pará; Matto Grosso (Chapada); Bahia; São Paulo (Piracicaba); Rio Grande do Sul. Bolivia; South America generally.

(623) *Asturina nitida* (subspecies?)

Falco nitidus LATHAM, Ind. Orn., I, 1790, p. 41 ("Cayana").

Asturina nitida PELZELN, 'Orn. Bras.,' I, 1868, p. 3 (Cuyabá, Caiçara); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 142 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 90 (Matto Grosso).

No specimens collected.

RANGE.—*Asturina nitida nitida* Latham: S. E. Brazil; Amazonas; Ecuador; Guiana; Colombia; Panama. *Asturina nitida pallida* Todd: east Bolivia.

In the absence of Bolivian material I am unable to say whether the Matto Grosso race is referable to *nitida* Latham, or *pallida* Todd, described from the Rio Surutú, Bolivia.

(624) *Rupornis magnirostris superciliaris*³ (Vieillot)

Sparvius superciliaris VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., X, 1817, p. 328 (ex Azara, No. 25, Paraguay; descr. ♂ juv.).

Rupornis nattereri SALVADORI, Boll. Mus. Torino, XV, 1900, No. 378, p. 12 (Urucúm).

Rupornis magnirostris nattereri MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 24 (Poconé).

Paraguay: Trinidad, 1 ♂; Puerto Pinasco, 1 ♀. Matto Grosso: Urucúm, 1 ♂, 1 ? juv.

RANGE.—Southwestern Brazil: Matto Grosso (Urucúm). Paraguay (Trinidad, Puerto Pinasco); northern Argentina (Chaco).

¹ = *latissimus* Wilson.

² See Pucheran Mag. Zool., (2) II, 1856, p. 867.

³ Nov. Zoöl., XX, Rev. VIII, 1921, p. 183.

The male from Urucúm has the rufous tail of *Rupornis magnirostris superciliaris*, but in other respects, including size, resembles *R. magnirostris nattereri*. In other words, it is an intermediate between true *nattereri* and *superciliaris*. *R. m. nattereri* is restricted to northeastern Brazil (Bahia to Maranhão) and consequently does not anywhere approach Matto Grosso, so that intergradation is utterly impossible.¹ Its small size indicates that it does not belong to the type on which Bertoni based *Rupornis magnirostris magniplumis*.²

Eye, pale yellow; feet chrome-yellow; claws black. The stomachs of two of the specimens contained spiders, that of the other, locusts and other insects.

Measurements

	SEX	WING	TAIL	EXPOSED CULMEN
<i>Rupornis magnirostris superciliaris</i>				
Paraguay, Trinidad	1 ♂	260	179	28
Paraguay, Puerto Pinasco ³	1 ♀	258	182.5	27
<i>Rupornis magnirostris</i> (intermediate)				
Brazil, Urucúm near Corumbá	1 ♂	234	157	26.5
Brazil, Urucúm near Corumbá	1 ♂ juv.	230	140	27

(625) *Rupornis magnirostris magnirostris* (Gmelin)

Falco magnirostris GMELIN, 'Syst. Nat.,' I, 1788, p. 282 (ex DAUBENTON, 'Pl. Enl.,' No. 464, Cayenne).

Solimões, 1 ♀.

RANGE.—Brazil: Pará; Marajó (Pindobal, Pacoval, Dunas, Magoarf, Chaves, S. Natal); Mexiana; Monte Alegre; Rio Solimões; Rio Negro. Guiana; E. Venezuela; Peru⁴; Ecuador.

¹Dr. Hellmayr (*in lit.*) states that he is unable to distinguish Natterer's birds from Engenho do Pari, Cuyabá, and Caicara, Matto Grosso (*Astur magnirostris* Pelzeln, 'Orn. Bras.,' I, 1868, p. 6) from a large series from southeastern Brazil (Espírito Santo to Rio Grande do Sul) and Misiones and calls them *R. m. magniplumis*. He believes it quite possible, however, that those from southwestern Matto Grosso (Urucúm) are nearer *R. m. superciliaris*.

²Aves Nuevas del Paraguay, Anal. Cient. Parag., I, 1901, p. 159.

³According to Wetmore (Bull. U. S. Nat. Mus., No. 133, 1926, p. 113), birds from N. W. Argentina are referable to *R. m. saturata*.

⁴*R. m. occidua*, in part.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Colombia, Santa Elena	1 ♂	224	145	25	A. M. N. H.
Ecuador, Esmeraldas, 1 ♂; Santa Rosa, 1 ♂; Alamor,					
1 ♂	3 ♂	213	148	26.1	"
Brazil, near Pará	1 ♂	216	147	22	Munich
" Island of Marajó (Pacoval)	1 ♂	215.5	148	26.5	"
" Island of Marajó (Pacoval)	?	215.5	150.5	26.5	"
Venezuela, La Union, Caura,	1 ♀	224.5	156.5	27	A. M. N. H.
" Maripa	1 ♀?	219	159	27	"
Ecuador, Esmeraldas	1 ♀	223	154.5	28	"

(627) *Rupornis magnirostris magniplumis* (Bertoni)

Potamolegus superciliosus magniplumis BERTONI, Anal. Cient. Parag., I, 1901, p. 159 (Mondaih, S. E. Paraguay).

Astur magnirostris PELZELN, 'Orn. Bras.,' I, 1868, p. 6 (Cuyabá, Engenho do Pari, Caiçara).

Rupornis magnirostris nattereri ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 142 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 91 (Matto Grosso).

Primavera, 1 ♀; Tapirapoan, 1 ♀.

RANGE.—Southeastern and central Brazil: Matto Grosso (Cuyabá, Engenho do Pari, Caiçara, Chapada, Poconé, Primavera, Tapirapoan); Rio Grande do Sul; Paraná (Ourinho, Castro); São Paulo (Piracicaba, Jaboticabal, Rincão, Matto-dentro, Ypanema, Itararé, Irisanga); Espírito Santo (Victoria). Argentina (Misiones):

A large series of twenty-six specimens from Chapada, Matto Grosso, in the American Museum was collected by H. H. Smith.

(629) *Busarellus nigricollis nigricollis* (Latham)

Falco nigricollis LATHAM, Ind. Orn., I, 1790, p. 35 ("Cayana").

Ichthyoborus nigricollis PELZELN, 'Orn. Bras.,' I, 1868, p. 3 (Cuyabá, Rio de Cabaçal, Caiçara).

Busarellus nigricollis IHERING, 'Cat. F. Braz.,' I, 1907, p. 91 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Cuyabá, Rio de Cabaçal, Caiçara); São Paulo (Piracicaba); Goyaz (Porto do Rio Araguayá); Rio de Janeiro; Amazonas; Rio Branco (Forte do Rio Branco); Pará; Marajó (S. Natal); Mexiana; Cussary. Guiana; Peru; Venezuela, and north to Central America.

(631) *Morphnus urubitinga urubitinga* (Gmelin)

Falco urubitinga GMELIN, 'Syst. Nat.,' I, 1788, p. 265 ("Habitat in Brasilia").

Urubitinga brasiliensis, PELZELN, 'Orn. Bras.,' I, 1868, p. 2 (Engenho do Pari, Rio Cuyabá, Villa Maria, Matogrosso, Rio Guaporé).

Urubitinga zonura SALVADORI, Boll. Mus. Torino, XV, 1900, No. 378, p. 13 (Urucúm).

No specimens collected.

RANGE.—Guiana; Venezuela; eastern Peru. Brazil: Maranhão; Rio Capim; Cussary; Rio Purús (Cachoeira); Borba; Rio Negro (Barra do Rio Negro); Forte do Rio Branco; Serra Arimani; Rio Branco; Bahia; Minas Geraes; São Paulo (Iguapé and Itapura); Rio Grande do Sul; Matto Grosso (Engenho do Pari, Rio Cuyabá, Villa Maria; Rio Guaporé; Urucúm). Paraguay (Tayru, Villa Pilar).

(636) *Leucopternis albicollis albicollis* (Latham)

Falco albicollis LATHAM, Ind. Orn., I, 1790, p. 36 ("Cayana").

Leucopternis albicollis PELZELN, 'Orn. Bras.,' I, 1868, p. 3 (Cachoeira da Bananeira)¹; ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 146 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 92 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Chapada, Cachoeira da Bananeira); Rio Capim; Rio Tocantins; Pará; Borba; Rio Branco (Forte do Rio Branco, at the Ribeirão do Gentio); Maranhão. Guianas; Venezuela; Trinidad; Ecuador; and Peru.

(644) *Harpyhalietus coronatus* (Vieillot)

Harpyia coronata VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XIV, 1817, p. 237 (based on Azara, No. 7, "Paraguay").

Harpyhalietus coronatus ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 146 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 93 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Chapada); São Paulo (Itararé); Paraná; Goyaz (Araguayá); Rio Grande do Sul. Bolivia; Paraguay; Patagonia; Argentina to Central America.

(650) *Spizastur melanoleucus* (Vieillot)

Buteo melanoleucus VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., IV, 1816, p. 482 ("Cette espèce se trouve à la Guyane").

Spizætus atricapillus PELZELN, 'Orn. Bras.,' I, 1868, p. 4 (Villa Maria).

Spizastur melanoleucus ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 147 (Chapada).

Spizastur melanoleucus IHERING, 'Cat. F. Braz.,' I, 1907, p. 94 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Villa Maria, Chapada); Rio Grande do Sul; São Paulo (Ypanema); Santa Catharina (Colonia Hansa); Goyaz (Porto do Rio Araguayá); Rio Branco. British Guiana; South America generally to southeastern Brazil; and Central America.

(651) *Spizaëtus ornatus* (Daudin)

Falco ornatus DAUDIN, 'Traité d'Orn.,' II, 1800, p. 77 (Cayenne).

Spizaëtus mauduyti ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 147 (Chapada).

¹Matto Grosso politically.

Spizaëtus ornatus IHERING, 'Cat. F. Braz.,' I, 1907, p.95 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Chapada); Rio Grande do Sul; São Paulo (Iguapé, Ypanema); Santa Catharina (Colonia Hansa); Minas Geraes; Pernambuco; Bahia; Pará; Rio Branco (Forte do Rio Branco); Rio Solimões (Lago Manaqueri); Santarém. Guiana; Paraguay; Central and South America generally to Paraguay.

(654a) *Herpetotheres cachinnans queribundus* Bangs and Penard

Herpetotheres cachinnans queribundus BANGS AND PENARD, Bull. Mus. Comp. Zoöl., LXIII, 1919, p. 23 (Pernambuco, Brazil).

Herpetotheres cachinnans PELZELN, 'Orn. Bras.,' I, 1868, p. 7 (Caiçara); SALVADORI, Boll. Mus. Torino, XV, 1900, No. 378, p. 13 (Urucúm); IHERING, 'Cat. F. Braz.,' I, 1907, p. 95 (Matto Grosso, Fazenda da Faya).

RANGE.—Brazil: Pernambuco; Bahia; Minas Geraes; Goyaz; Matto Grosso (Caiçara, Urucúm, Fazenda da Faya). Paraguay and (?) Bolivia.

(655) *Elanoides forficatus yetapa* Vieillot

Elanoides yetapa VIEILLOT, 'Tabl. Enc. Méth., Orn.,' III, 1823, p. 1205 (based on Azara, No. 38, Paraguay).

Elanoides forficatus ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 148 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 96 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Chapada, Camp 5) and from Paraguay north to Costa Rica.

"At Camp 5 on the 4th of March, 1914, in a descent of the Rio Roosevelt, many fork-tailed kites were observed."

(656) *Rostrhamus sociabilis sociabilis* (Vieillot)

Herpetotheres sociabilis VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XVIII, 1817, p. 318 (based on Azara, No. 16, Corrientes and Rio de la Plata).

Rostrhamus hamatus PELZELN, 'Orn. Bras.,' I, 1868, p. 6 (Cuyabá, Villa Maria).

Rostrhamus hamatus IHERING, 'Cat. F. Braz.,' I, 1907, p. 96 (Matto Grosso).

Descalvados, 2 ♂, 1 ♀. An adult male had the bill black, lores and base of mandible orange-yellow; eye scarlet; feet orange-yellow; claws black.

RANGE.—Brazil, Matto Grosso (Cuyabá, Villa Maria, Descalvados); South America generally, south to Uruguay and Argentina.

"The stomach of a Descalvados adult male was filled with bodies of snails. In getting the snails out of their shells a hole is pierced about the middle of the last whorl.

"The everglade kite was abundant along the Paraguay. In the neighborhood of Descalvados, during November and December, they were seen to gather together in flocks toward evening; from fifty to a hundred or more would roost on some tree growing close to the river's edge."

(658) *Chondrohierax uncinatus* (Temminck)

Falco uncinatus TEMMINCK, 'Pl. Col.,' livr. 18, 1822, Pls. CIII-CIV, CXV ("depuis les environs de Rio Janeiro jusque vers le nord du Brésil et dans toute la Guiane").

Cymindis uncinatus PELZELN, 'Orn. Bras.,' I, 1868, p. 5 (Cuyabá, Sangrador).

Cymindis vitticaudus PELZELN, 'Orn. Bras.,' I, 1868, p. 6 (Cuyabá).

Leptodon uncinatus ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 148 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 97 (Matto Grosso).

Paraguay, Fort Wheeler, 1 ♂: eye blue-gray; feet chrome-yellow. **Matto Grosso**, Urucúm, 1 ♀: eye blue-gray.

RANGE.—Brazil: Matto Grosso (Chapada, Cuyabá, Sangrador, Urucúm); Goyaz (Guardamor); São Paulo (Goyabeira, Piquete, Iguapé); Rio de Janeiro (Sapitiba); Espirito Santo; Bahia; Pará; Amazonas (Rio Juruá). Guiana; Venezuela; Trinidad; Ecuador; Bolivia and Central America north to Mexico.

The stomach of the Fort Wheeler immature male was filled with the larvæ of some butterfly or moth.

(660) *Odontriorchis palliatus palliatus* (Temminck)

Falco palliatus (Wied MS.) TEMMINCK, 'Pl. Col.,' livr. 23, 1823, Pl. CCIV (Rio Peruhype, near Villa Viçosa, S. Bahia; Wied Coll.).¹

Leptodon cayennensis ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 148 (Chapada).

Urucúm, 1 ♂, 1 ♀.

RANGE.—Brazil: Matto Grosso (Chapada, Urucúm); greater part of eastern South America, from southern Brazil north to Trinidad, Venezuela, and northern Colombia.

(662) *Gampsonyx swainsonii swainsonii* Vigors

* *Gampsonyx swainsonii* VIGORS, Zool. Journ., II 1825, p. 69 (near Bahia); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 148 (Chapada); PELZELN, 'Orn. Bras.,' I, 1868, p. 6 (Cuyabá, Pari, Barra do Rio Jaurú, Caiçara, Estiva, three and a half miles from Areias); SALVADORI, Boll. Mus. Torino, XV. No. 378, 1900, p. 14 (Urucúm); IHERING, 'Cat. F. Braz.,' I, 1907, p. 97 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Chapada, Engenho do Pari, Barra do Rio Jaurú, Caiçara, Estiva, Urucúm); Bahia; Amazonia; Forte do Rio Branco; Bragança; Monte Alegre; Cussarý, Rio Purús (Cachoeira, Bom Luzar); Maranhão. east Peru; east Ecuador; Paraguay; Argentina (Luiconia, Ajó, Yngleses).

(664) *Harpagus bidentatus bidentatus* (Latham)

Falco bidentatus LATHAM, Ind. Orn., I, 1790, p. 38 ("Cayana").

Harpagus bidentatus PELZELN, 'Orn. Bras.,' I, 1868, p. 5 (No Dourado, Salto do Girão); IHERING, 'Cat. F. Braz.,' I, 1907, p. 98 (Matto Grosso).

¹Dr. Hellmayr informs me that Swann's suggestion ('A Synopsis of the Accipitres,' Pt. III, 1922, p. 158), "Matto Grosso," is untenable. It is known from Wied's own statement (Beitr. Naturg. Bras., III, (I), 1830, p. 152) that the only specimen secured during his travels was sent to Temminck for description and illustration in the 'Pl. Col.' Type-locality, therefore, Rio Peruhype, near Villa Viçosa, southern Bahia.

No specimens collected.

RANGE.—Brazil: Matto Grosso (No Dourado, Salto do Girão); Rio Negro (Marabitanas, Barra do Rio Negro); Borba; Rio Amazon; Pará; S. Sebastião; Marajó; Cunany; Rio Tocantins (Cameté); Rio Tapajóz (Itaituba, Pimental); Rio Purús (Bom Lugar). Guiana; Trinidad; Venezuela; Colombia; Peru; E. Bolivia.

(665) *Ictinia plumbea* (Gmelin)

Falco plumbeus GMELIN, 'Syst. Nat.,' I, 1788, p. 283 (based on Latham, Cayenne)

Ictinia plumbea PELZELN, 'Orn. Bras.,' I, 1868, p. 6 (São Vicente, Caiçara); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 148 (Chapada); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 37 (Poconé); IHERING, 'Cat. F. Braz.,' I, 1907, p. 98 (Matto Grosso).

Urucúm, 1 ♂, 1 ♀; eye red; bill and claws black; feet dusky chrome yellowish.

RANGE.—Brazil: Matto Grosso (São Vicente, Caiçara, Poconé, Chapada, Urucúm); Bahia; Piauí; Pará; Rio Tocantins (Arumatheua); Rio Purús (Bom Lugar); Cunany; Goyaz (Araguayá); Minas Geraes; São Paulo (Itapura); Ypanema; Mattodentro); Rio Grande do Sul. Colombia; Paraguay; Bolivia; South America generally and Central America.

One specimen had the stomach full of beetles.

(667) *Falco peregrinus anatum* Bonaparte

Falco anatum BONAPARTE, 'Geogr. and Comp. List B. Eur. and N. Amer.,' 1838, p. 4 (Egg Harbor, New Jersey).

Falco peregrinus (= *Falco communis* of authors) MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 37 (Caceres).

No specimens collected.

RANGE.—North America (except northwest), wintering in southern United States and south to Ecuador, also West Indies.

This species ranges throughout North and South America, but I have found only one record from Matto Grosso, a young bird taken at Caceres in March, 1909, provided Ménégau identified his bird correctly.

(669) *Falco fusco-cærulescens fusco-cærulescens* Vieillot

Falco fusco-cærulescens VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XI, 1817, p. 90 (based on Azara, No. 40, Paraguay); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 147 (Chapada).

Hypotriorchis femoralis PELZELN, 'Orn. Bras.,' I, 1868, p. 5 (Registo Velho, Caiçara, Matogrosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 98 (Matto Grosso).

Rio Nicola Buena, 1 ♀ ad.; maxilla pale horny white with blackish tip; mandible black; eye golden-brown; naked skin about the face flesh-white; feet slate-gray.

RANGE.—Brazil: Matto Grosso (Caiçara, Registo Velho, Matogrosso, Rio Nicola Buena); Rio de Janeiro (Sapitiba); São Paulo (Mattodentro, on the campo of Tatutuba, Ypanema, Itararé, Ypiranga, Avandava); Minas Geraes (Marianna, Rio Grande); Rio Grande do Sul (Nova Hamburgo); Pará; Marajó; Mexiana; Rio

Branco (Forte do Rio Branco). Venezuela; north to Central America, south to Matto Grosso and Bolivia (Piedra Blanca).

I have seen no specimen from the type-locality. The stomach of the bird secured was filled with grasshoppers.

(671) *Falco ruficularis ruficularis* Daudin

Falco ruficularis DAUDIN, 'Traité d'Orn.,' II, 1800, p. 131 (based on Latham, Cayenne).

Falco albicularis IHERING, 'Cat. F. Braz.,' I, 1907, p. 99 (Matto Grosso).

Hypotriorchis ruficularis PELZELN, 'Orn. Bras.,' I, 1868, p. 5 (Caiçara, Matto-grosso, Rio Guaporé).

Falco ruficularis ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 147 (Chapada; Piedra Blanca, Bolivia); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 37 (Poconé).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Chapada, Caiçara, Matto Grosso, Rio Guaporé); São Paulo (Franca, Avanhadava, Iguapé, Porto do Rio Paraná); Goyaz (Guardamor); Rio de Janeiro (Sapitiba); Minas Geraes; Bahia; Maranhão; Rio Juruá; Pará; Peixe-Boi; Cunany; Rio Negro; Rio Jamauchim (Maria Vilhas); Rio Purús (Bom Lugar). Argentina (Ajó); Colombia; South America generally, and Central America north to Mexico.

(675) *Cerchneis sparveria australis* (Ridgway)

Tinnunculus sparverius australis RIDGWAY, Proc. Acad. Nat. Sci., Phila., for Dec., 1870 (1871), p. 149, new name for *Falco gracilis* (not of Lesson); SWAINSON, 'Anim. Menag.,' 1837, p. 281 (Bahia); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 38 (Poconé).

Tinnunculus sparverius PELZELN, 'Orn. Bras.,' I, 1868, p. 5 (Cuyabá).

Falco sparverius australis ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 147 (Chapada).

RANGE.—Greater part of the Brazilian tableland, north to Maranhão and Ceará and adjoining districts of Argentina and Paraguay; Matto Grosso (Cuyabá, Chapada, Poconé).

(679) *Pandion haliaetus carolinensis*¹ (Gmelin)

Falco carolinensis GMELIN, 'Syst. Nat.,' I, 1788, p. 263 (Carolina, ex Catesby).

Pandion haliaetus PELZELN, 'Orn. Bras.,' I, 1868, p. 4 (Caiçara).

Pandion haliaetus carolinensis IHERING, 'Cat. F. Braz.,' I, 1907, p. 100 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Caiçara); Rio Negro; Bahia. Paraguay.

(683) *Asio stygius* (Wagler)

Nyctalops stygius WAGLER, Isis, 1832, p. 1221 ("Habitat in Brasilia").

Asio stygius SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 12 (Urucúm).

No specimens collected.

¹Breeds in the western hemisphere from Mexico northwards. Winters south to Chile.

RANGE.—Brazil: Matto Grosso (Urucúm); Rio Grande do Sul (Nova Hamburgo, Taquara); Paraná; São Paulo (Itararé); Minas Geraes; Borba; Rio Negro (above Lamalonga, Barra do Rio Negro); Rio Solimões (Manaqueri). Colombia; Argentina (Tucumán).

(684) *Bubo virginianus nacurutu* (Vieillot)

Strix nacurutu VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., VII, 1817, p. 44 (based on Daubenton, 'Pl. Enl.,' 385, Magellan Territory, and Azara, Paraguay).

Bubo magellanicus PELZELN, 'Orn. Bras.,' I, 1868, p. 9 (Matogrosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 102 (Matto Grosso).

Paraguay: Fort Wheeler, 1 ♀. Matto Grosso: Agua Blanca de Corumbá, 1 ♂.

RANGE.—Brazil: Matto Grosso (Matto Grosso, Agua Blanca de Corumbá). Paraguay (Fort Wheeler); Argentina; Chile.

The stomach of the Fort Wheeler specimen was filled with locusts while that of the Agua Blanca bird contained feathers.

(688) *Pulsatrix perspicillata perspicillata* (Latham)

Strix perspicillata LATHAM, Ind. Orn., I, 1790, p. 58 (Cayenne); based on Spectacled Owl LATHAM, 'Gen. Synopsis Birds, Suppl.,' p. 50, Pl. CVII.

Syrnium perspicillata ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 142 (Chapada).

RANGE.—Brazil: Matto Grosso (Chapada); Borba; Rio Negro; Pará; Marajó (Rio Arary); Monte Alegre; Rio Tocantins (Cametá); Rio Tapajóz (Boim); Rio Purús (Monte Verde); Maranhão; lower Amazonia to Rio Grande do Sul.

I refer two specimens from Chapada, Matto Grosso, collected by H. H. Smith, to *Pulsatrix perspicillata perspicillata*, though I see certain differences on comparing our one adult specimen with a series from Surinam, which Mr. Bangs was kind enough to send me.

I have seen no specimens from Cayenne, the type-locality, though I consider the material from the vicinity of Paramaribo, Surinam, essentially topotypical. My one specimen from Chapada is somewhat lighter brown on the upperparts of the body, including the head and upper side of wings and tail. The brown color of the throat and breast is also somewhat lighter. The specimens from Surinam have the head and the upperparts of the back much blacker than the remaining portions. The abdomen of the Chapada and Surinam birds is pale ochraceous-buff. The tail feathers show the same whitish and blackish bands, and they agree approximately in size. I regard the differences shown between the Chapada and Surinam birds due to individual variation, though with a larger series from Chapada, the Matto Grosso bird might prove separable. I have seen the type of *Pulsatrix pulsatrix* (Wied) in The American Museum of Natural History from "Brasilia."¹ This is a larger bird with

¹See Berlepsch, Bull. Brit. Orn. Club, XII, 1901, p. 4 (Santa Catharina, Brazil).

an entirely different coloration. The entire upperparts are much lighter brown and quite uniform in tone, as are also the color of the throat and breast. Wied's type, now in the study collection (an old mounted bird with glass eyes), has the white throat-patch much more restricted than in the Chapada and Surinam birds. The superciliary stripe is not extended beyond the eyes in Wied's type, differing also in being fulvous white, while in *Pulsatrix perspicillata perspicillata* this is almost pure white. The tail of *Pulsatrix pulsatrix* is also much more uniform in coloration, the bands only slightly indicated, not conspicuously whitish or blackish.

Average Measurements

	SEX	WING	TAIL	CULMEN	MIDDLE CLAW	MUSEUM
<i>P. perspicillata</i>						
<i>perspicillata</i>						
Brazil, Matto						
Grosso, Chapada	1 ♂	325	186	40	23.5	A. M. N. H.
Brazil, Surinam	4 ♂	314.3	176.3	41.6	24.1	M. C. Z.
<i>P. perspicillata</i>						
<i>pulsatrix</i>						
Brasilia (type,						
No. 6335)	?	350	209	44.5	27.5	A. M. N. H.

Pulsatrix perspicillata perspicillata.—Brazil: Surinam, vicinity of Paramaribo, 4 ♂, 6 ♀; Matto Grosso; Chapada, 1 ♂ ad., 1 ♂ juv.; A. M. N. H.

Pulsatrix perspicillata saturata.—Eastern Panama: Chepigana, Tapalisa, 1 ♂. Nicaragua: Rio Tuma, ? 1 ♀; Los Sábalo, Rio San Juan, 1 ♂; A. M. N. H.

Pulsatrix perspicillata pulsatrix.—Brasilia, Amer. Mus. Nat. Hist., No. 6335 (the type).

(692) *Otus choliba crucigerus* (Spix)

Strix crucigera SPIX, 'Av. Bras.,' I, 1824, p. 22, Tab. IX ("juxta flumen Amazonum").

Ephialtes choliba PELZELN, 'Orn. Bras.,' I, 1868, p. 9 (Engenho do Gama and Matogrosso).

No specimens collected.

RANGE.—Venezuela (Quiribana de Caicara on the upper Orinoco, Angostura). Brazil. Rio Amazon; Rio Tocantins (Cameté); Marajó (Pacoval, Pindobal, Maguary); Mexiana; Manáos; Pará; Matto Grosso (Engenho do Gama and City of Matto Grosso).¹

(693) *Otus choliba decussatus* (Lichtenstein)

Strix decussata LICHTENSTEIN, 'Verz. Doubl. Berl. Mus.,' 1823, p. 59 (Bahia).

Megascops brasilianus ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 141 (Chapada).

¹Western Matto Grosso is essentially Amazonian.

No specimens collected.

RANGE.—Eastern Brazil: Piauhy and Bahia, westward to Matto Grosso.

Two of the three specimens recorded by Dr. Allen agree closely with specimens of *decussata* from Bahia. The third is in an unusual fulvescent phase of plumage.

Megascops sanctæ-catarinæ Salvin appears to be the same or closely related to *Strix atricapilla* Temminck.

(697a) *Otus usta* subspecies ?

Scops usta SCLATER, Trans. Zoöl. Soc. London, IV, 1862, p. 265, Tab. LXI ("Ega on the upper Amazon").

Ephialtes atricapillus PELZELN, 'Orn. Bras.,' I, 1868, p. 9 (Engenho do Gama and Matogrosso).

No specimens collected.

RANGE.—Amazonia: Borba and Humaythá, Rio Madeira; Rio Tapajóz (Pinhel); Matto Grosso (Engenho do Gama and Matto Grosso).

Dr. Hellmayr (*in lit.*) states that he has not been able to find the Matto Grosso examples at Vienna, but four others included by Pelzeln under the same name (three from Borba, one from Rio Negro) proved on inspection to be *O. usta usta* (Borba) and *O. usta watsoni* (Cassin) (Rio Negro).

I have, therefore, little doubt that those from Matto Grosso are likewise referable to *usta*.

(705) *Ciccaba superciliaris superciliaris* (Pelzeln)

Syrnium superciliare PELZELN, Verh. Zool.-Bot. Ges. Wien, 1863, p. 1125 ("Brasilia"); 'Orn. Bras.,' I, 1868, p. 10 (Ponte do Guaporé).¹

Ciccaba superciliaris IHERING, 'Cat. F. Braz.,' I, 1907, p. 104 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Ponto do Guaporé); Pará; Rio Curuá (Maloca de Manoelsinho).

(708) *Ciccaba*² *huhula* (Daudin)

Strix huhula DAUDIN, 'Traité d'Orn.,' II, 1800, p. 190 (ex Levaillant, 'Ois d'Afr.,' I, Tab. xli, Cayenne).

Athene huhula PELZELN, 'Orn. Bras.,' I, 1868, p. 8 (Ponte do Guaporé, one mile from Engenho do Gama and fourteen miles east of the city of Matogrosso).

Syrnium huhulum ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 142 (Chapada).

Ciccaba huhula IHERING, 'Cat. F. Braz.,' I, 1907, p. 105 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Engenho do Gama, Matogrosso, Chapada); Rio de Janeiro (Corcovado); Minas Geraes (Vargem Alegre); São Paulo (Piracicaba); Borba, Rio Madeira; Obidos (Col. do Veado). Guiana.

¹Matto Grosso politically.

²*Ciccaba* Wagler, Isis, 1832, p. 1222; type, Levaillant's "Huhule."

(719) *Glaucidium minutissimum minutissimum* (Wied)

Strix minutissima WIED, Beitr. Naturg. Bras., III, (1), 1830, p. 242 (Bahia).¹

Athene minutissima PELZELN, 'Orn. Bras.,' I, 1868, p. 9 (Caiçara).

Glaucidium pumilum IHERING, 'Cat. F. Braz.,' I, 1907, p. 107 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Caiçara); São Paulo; Bahia; Amazonia (Rio Negro, Cajutuba). British Guiana (Camacusa).

(720) *Glaucidium brasilianum brasilianum* (Gmelin)

Strix brasiliiana GMELIN, 'Syst. Nat.,' I, 1788, p. 289, based on (Brisson ex) Marcgrave, N. E. Brazil.

Athene ferruginea PELZELN, 'Orn. Bras.,' I, 1868, p. 9 (Cuyabá).

Glaucidium phalænoides ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 141 (Chapada).

Glaucidium ferox SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 12 (Carandasinho).

Glaucidium brasilianum IHERING, 'Cat. F. Braz.,' I, 1907, p. 106 (Matto Grosso).

Descalvados, 1 ♂; Urucúm, 1 ♂, 2 ♀.

RANGE.—Brazil: Matto Grosso (Chapada, Cuyabá, Carandasinho, Descalvados, Urucúm); Rio de Janeiro (Sapitiba); São Paulo (Mattodentro, Cinzas, Ypanema, Irisanga, Rio das Pedras, Porto do Rio Paraná, Iguapé, Avanhandava, Rio Feio, Jaboticabal, Barretos, Bebedouro); Minas Geraes (Rio Grande); Goyaz; Bahia; Espirito Santo; Rio Grande do Sul. Paraguay (Tebicari); Bolivia (Chaco).

(724) *Tyto alba tuidara* (Gray)²

Strix tuidara GRAY, in Griffith and Pidgeon, 'The Animal Kingdom,' by Cuvier, VI, 1829, p. 75 (based on "Tuidara" Marcgrave, and "Efrage" Azara—"Brazil").

Strix flammea PELZELN, 'Orn. Bras.,' I, 1868, p. 10 (Cuyabá).

Strix flammea perlata IHERING, 'Cat. F. Braz.,' I, 1907, p. 107 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Cuyabá); Rio de Janeiro; São Paulo (Ypiranga, Ypanema, Ubatuba); Pernambuco; Bahia. Paraguay; Argentina (Patagonia); Colombia; east Peru.

(728) *Anodorhynchus hyacinthinus* (Latham)

Psittacus hyacinthinus LATHAM, Ind. Orn., I, 1790, p. 84 (Brazil).

Sittace hyacinthina PELZELN, 'Orn. Bras.,' III, 1870, p. 254 (Fazenda de Cima, Rio das Flechas, Ribeirão das Flechas).

Anodorhynchus hyacinthinus IHERING, 'Cat. F. Braz.,' I, 1907, p. 108 (Matto Grosso); RIBEIRO, Rev. Mus. Paul., XII, (2), 1920, p. 15 (Matto Grosso).

Bocaina de Descalvados, 1 ♂, 1 ♀; Palmiras, 3 ♂, 4 ♀.

RANGE.—Brazil: Matto Grosso (Fazenda de Cima, Rio das Flechas, Ribeirão das Flechas, Bocaina de Descalvados, Palmiras); Goyaz (Rio Araguayá); São Paulo; Minas Geraes; Piahy; Par; Alto Rio Capim; "Monte Alegre."

¹*S. pumilum* Temminck, 1821, is invalidated by *S. pumilum* Lichtenstein. ('Verz. Säugth. und Vög Univ. Berlin,' 1818, p. 28; based on Azara's Caburé and Levaillant's Chouette).—Note given to the writer by Dr. C. E. Hellmayr.

²*Strix perlata* Lichtenstein, 'Verz. Doubl. Berl. Mus.,' 1823, p. 59, is preoccupied by Vieillot, 1816.

"At many points on the journey through Matto Grosso this superbly colored macaw was abundant. They were invariably seen in pairs."

(732) *Ara ararauna* (Linnæus)

Psittacus ararauna LINNÆUS, 'Syst. Nat.,' I, 10th Ed., 1758, p. 96 ("Habitat in America meridionali").¹

Sittace ararauna PELZELN, 'Orn. Bras.,' III, 1870, p. 255 (Matogrosso, Forte do Principe de Beira).

Ara ararauna ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 140 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 109 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Piauhy; Amazonas (Borba, Forte do Rio Branco; Barra do Rio Negro); Matto Grosso (Chapada, Forte do Principe de Beira); Goyaz (Porto do Rio Araguayí, Taquaral near Insua); Rio de Janeiro. Colombia; Peru; Ecuador; Paraguay; Bolivia.

(735) *Ara chloroptera* Gray

Figure 13

Ara chloroptera GRAY, 'List of Specimens of Birds in Brit. Mus., Psitt.,' 1859, Part III, Section 2, p. 26 (British Guiana); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 140 (Chapada); MÉNÉGAUX, 'Rev. France., d'Orn.,' V, 1917, p. 38 (Matto Grosso).



Fig. 13. *Ara chloroptera* Gray, Descalvados, Matto Grosso, Brazil.

Sittace chloroptera PELZELN, 'Orn. Bras.,' III, 1870, p. 255 (Lavrinhas, Rio das Flechas, Caiçara, Flussreise von Matogrosso).

¹Hellmayr (Abhandl. 2. Kl. Bayr. Ak. Wiss., XXII, No. 3, 1906, p. 577) suggests Pernambuco (ex Marcgrave) as type-locality.

No specimens collected. Observed at various points.

RANGE.—Brazil: Matto Grosso (Lavrinhas, Rio das Flechas, Caiçara, Chapada); São Paulo (Murungaba, Serra do Cubatão); Paraná (Ourinho); Piahy; Pará; Diamantina, on the lower Amazon; Santarém; Rio Jurua; Rio Maracá; Rio Tocantins (Arumatheua); Rio Jamauchim (Sta. Helena). Bolivia (Rio Yapacani, Santa Cruz de la Sierra); Paraguay (Guacamayo, Alto Paraná); northern Argentina (southern Chaco, Misiones); Guiana; Ecuador; Colombia.

(739) *Ara severa severa* (Linnæus)

Psittacus severus LINNÆUS, 'Syst. Nat.,' I, 10th Ed., 1758, p. 97 ("Habitat in Indiis"). Hellmayr names Amazon River.¹

Sittace severa PELZELN, 'Orn. Bras.,' III, 1870, p. 255 (Matogrosso, No Panças, Engenho do Cap. Gama).

Ara severa IHERING, 'Cat. F. Braz.,' I, 1907, p. 110 (Matto Grosso).

São João, 1 ♂; bare skin about face white; bill black; eye yellow; feet slate color.

RANGE.—Brazil: Matto Grosso (Matogrosso, No Panças, São João, Engenho do Cap. Gama); Pará; Rio Negro (Barra do Rio Negro); Amazonas (Rio Jurua); Rio Javary; Teffé; Mexiana Island. Bolivia (lower Rio Beni, Buena Vista, Province del Sara, Santa Cruz de la Sierra); Guiana; Colombia; Peru; Ecuador.

(740) *Ara maracana* (Vieillot)

Macrocerus maracana VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., II, 1816, p. 260 (based on Azara, No. 274, "Paraguay jusqu'à la rivière de la Plata").

Rio Roosevelt, Camp 18, 1 ♀; eye orange-yellow; bill black; bare skin immediately about the eye very pale yellow, the color deepening to lemon-yellow at base of mandible; feet chrome-yellow.

RANGE.—Brazil: Matto Grosso (Rio Roosevelt, Camp 18); Bahia; Piahy; Pará; Minas Gera's (Vargem Alegre); Rio de Janeiro (Nova Friburgo); São Paulo (Mattodentro, Campo de Tatutubá, Ypanema, Itararé, Murungaba, Baurú, Avanhanda); Rio Grande do Sul. Paraguay.

(742) *Ara auricollis* Cassin

Ara auricollis CASSIN, Proc. Acad. Nat. Sci. Phila., 1853, p. 372 (Bolivia); SALVADORI, 'Cat. B. Brit. Mus.,' XX, 1891, p. 165 (Villa Maria, Estiva); Boll. Mus. Torino, XV, No. 378, 1900, p. 11 (Urucúm); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 140 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 110 (Matto Grosso).

Sittace auricollis PELZELN, 'Orn. Bras.,' III, 1870, p. 255 (Cuyabá, Pedra Branca, Villa Maria, Estiva, Engenho do Gama).

Primolius auricollis RIBEIRO, Rev. Mus. Paul., XII, (2), 1920, p. 19 (Matto Grosso, Rio Jaurú).

Descalvados, 1 ♂, 1 ♀; fresh birds, bare skin about the face and feet pale yellowish-white; bill black basally and with the distal third horny white.

RANGE.—Brazil: Matto Grosso (Villa Maria, Estiva, Urucúm, Chapada, Cuyabá, Pedra Branca, Engenho do Gama, Descalvados). Bolivia (Chaco); Paraguay; Argentina (Prov. de Jujuy, San Lorenzo).

¹Abh. 2. Kl. Bayr. Akad. Wiss., XXII, No. 3, 1906, p. 578.

(743) *Orthopsittaca manilata* (Boddaert)

Psittacus manilatus BODDAERT, 'Tabl. Pl. Enl.,' 1783, p. 52 (ex Daubenton, 'Pl Enl.,' 864, Cayenne).

Sittace macavuanna PELZELN, 'Orn. Bras.,' III, 1870, p. 255 (Engenho do Cap. Gama).

Ara manilata IHERING, 'Cat. F. Braz.,' I, 1907, p. 110 (Matto Grosso).

No specimens collected.

RANGE.—Over northern South America from Guiana, south to Peru, Matto Grosso (Engenho do Cap. Gama), and Bahia.

(744) *Diopsittaca nobilis cumanensis* (Lichtenstein)¹

Psittacus cumanensis LICHTENSTEIN, 'Verz. Doubl. Berl. Mus.,' 1823, p. 6 (Cuman, Maranhão).

Ara nobilis SALVADORI, 'Cat. B. Brit. Mus.,' XX, 1891, p. 167 (Chapada); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 140 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 111 (Matto Grosso).

Diopsittaca nobilis RIDGWAY, Proc. Biol. Soc. Wash., XXV, 1912, p. 99.

Tapirapoan, 1 ♂, 1 ♀; Tres Buritys, 1 ♀; eye golden-brown; maxilla pale horn-color with blackish tip; mandible black; bare skin of face flesh-white; feet slate-black.

RANGE.—Brazil: Bahia; Piahy; Maranhão; Pará; Matto Grosso (Chapada, Tapirapoan, Tres Buritys, Porto da Faya); Goyaz (Porto do Rio Araguayá); São Paulo (Itapura, Rio Paraná, Porto do Rio Paraná, Rio das Pedras); Espirito Santo (Rio Doce); Rio de Janeiro.

(747) *Thectocercus acuti audatus acuticaudatus* (Vieillot)

Psittacus acuticaudatus VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXV, 1817, p. 369 (based on Azara, No. 278, Paraguay, under 24° south lat.).

Conurus hæmorrhous PELZELN, 'Orn. Bras.,' III, 1870, p. 256 (Cuyabá, Rio das Frechas); IHERING, 'Cat. F. Braz.,' I, 1907, p. 111 (Matto Grosso); RIBEIRO, Rev. Mus. Paul., XII, (2), 1920, p. 23 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Cuyabá, Rio das Frechas). Eastern Bolivia; Paraguay; Argentina.

Birds from Matto Grosso (Field Museum has a series from Uru-cúm de Corumbá), while intermediate in coloration between this form and *T. a. hæmorrhous*, agree with the western form in blackish lower mandible, and may well be referred to typical *acuticaudatus*.

(754) *Nandayus nenday* (Vieillot)

Figure 14

Psittacus nenday VIEILLOT, 'Tabl. Enc. Méth., Orn.,' III, 1823, p. 1400 (based on Azara, No. 270, Paraguay).

Conurus nenday SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 11 (Carandasinho).

¹See Hellmayr, Field Mus. Nat. Hist., Zoöl. Ser., XII, 1929, p. 439.

Conurus nanday IHERING, 'Cat. F. Braz.,' I, 1907, p. 112 (Matto Grosso).

Conurus nenday RIBEIRO, Rev. Mus. Paul., XII, (2), 1920, p. 24 (Matto Grosso).

Paraguay: Fort Wheeler, 1 ♂. Matto Grosso: Descalvados, 2 ♂. Eye red-brown; bill and bare skin about eye black; feet flesh color.

RANGE.—Paraguay (Ytañu, Concepción, Fort Wheeler, Fortin Page, lower Pilcomayo, Caraya Vuelta, Riacho Verde); Argentina (Rio de Oro, Chaco Austral); southeastern Bolivia (Bahia Blanca).

"This species was observed at many other points. At Fedegoso (a day's ride eastward from Descalvados) it was nesting and very common



Fig. 14. *Nandayus nenday* (Vieillot), Fedegoso, Brazil.

during the last half of November. Small parties of from four to a dozen individuals were often seen in search of nesting sites; a favorite place for investigations being the posts of one of the cattle corrals, nearly every one of which was hollow. Four or five of the party would frequently perch themselves on the edge of the cavity, gravely inspect the interior and, after discussing the advantages or disadvantages of the site, one more venturesome than its fellows was likely to enter the cavity to explore the interior. Contrary to what one might expect, the entrance was usually made tail first. After more discussion the party would fly noisily away, only to return later to continue their house-hunting. No nesting material of any sort was taken into the nest-cavity, the eggs

being deposited on the bits of rotten wood at the bottom. A set of four fresh eggs, collected November 25, 1916, at Fedegoso (taken from the cavity in the top of a fence post) are dull white in color, short ovate in form, and three measure 23.5×29.5 , 23×29 , and 23×28.5 mm."

(755) *Aratinga weddellii* (Deville)

Conurus weddellii DEVILLE, Rev. Mag. Zool., 1851, p. 209 (Pebas, Haut-Amazone).

Conurus weddelli PELZELN, 'Orn. Bras.,' III, 1870, p. 258 (Engenho do Cap. Gama); SALVADORI, 'Cat. B. Brit. Mus.,' XX, 1891, p. 180 (Engenho do Gama); IHERING, 'Cat. F. Braz.,' I, 1907, p. 112 (Matto Grosso).

Gymnopsittacus weddelli RIBEIRO, Rev. Mus. Paul., XII, (2), 1920, p. 28 (Matto Grosso).

Tapirapoan, 1 ♂; Calama, 1 ♀.

RANGE.—Brazil: Matto Grosso (Engenho do Cap. Gama, Tapirapoan); Amazonas (Calama, Humaythá, Manicoré, Rio Madeira; Rio Purús, Bom Lugar, Monte Verde, Ponto Alegre). Bolivia; Ecuador; Peru.

(760) *Aratinga leucophthalma leucophthalma* (Müller)

Psittacus leucophthalmus P. L. S. MÜLLER, 'Naturesyst., Suppl.,' 1776, p. 75 (based on Daubenton, 'Pl. Enl.,' 407, Cayenne).

Conurus pavua PELZELN, 'Orn. Bras.,' III, 1870, p. 256 (Cuyabá).

Conurus leucophthalmus SALVADORI, 'Cat. B. Brit. Mus.,' XX, 1891, p. 187 (Chapada, Matto Grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 140 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 112 (Matto Grosso).

Paraguay: Trinidad, 1 ♂; Rio Negro, 1 ♂. Matto Grosso: Urucúm, 2 ♂, 1 ♀; Descalvados, 2 ♀; Vilhena, 1 ♀ juv.

RANGE.—From the Guianas through the greater part of Amazonia south to northern Argentina, Paraguay and southern Brazil [Matto Grosso (Cuyabá, Chapada, Urucúm, Descalvados, Vilhena)].

I have seen no birds from the type-locality, i. e., from any of the Guianas; only birds from Matto Grosso, Bolivia and Argentina. On the Roosevelt-Cherrie expedition the white-eyed parrot was found abundant in the region about Descalvados. At that time, during November and December, they were associating in large flocks. This species was one of the most widely distributed and abundant of those observed during the expedition.

Stolzmann, in a recent paper (Ann. Zool. Mus. Pol. Nat. Hist., V, 1926, p. 127), holds that the south Brazilian form, *Aratinga l. propinqua* Sclater, is separable. I have not been able to obtain any topotypical material, so I am not able to make out two races.

(766) *Aratinga aurea aurea* (Gmelin)

Psittacus aurea GMELIN, 'Syst. Nat.,' I, part 2, 1788, p. 329 (Bahia¹; based on *Psittacus brasiliensis* BRISSON, 'Orn.,' IV, p. 337, which in its turn is based on Edwards, 'Glean. N. H.,' V, Pl. CCXXXV, supposed to be a native of Brazil).

Conurus aureus PELZELN, 'Orn. Bras.,' III, 1870, p. 258 (Cuyabá, Matogrosso); SALVADORI, 'Cat. B. Brit. Mus.,' XX, 1891, p. 199 (Chapada); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 141 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 113 (Matto Grosso).

Eupsittacula aurea RIBEIRO, Rev. Mus. Paul., XII, (2), 1920, p. 29 (Matto Grosso).

Palmiras, 1 ♂, 1 ♀; Tapirapoan, 1 ♂; José Bonifacio, 1 ♂. Colors from the fresh birds were: eye pale yellowish-brown; bill, feet, and bare skin about the eye slate-black.

RANGE.—Brazil: Matto Grosso (Cuyabá, Matto Grosso, Chapada, Palmiras, Tapirapoan, José Bonifacio); Bahia; Maranhão; Santarém; Marajó (Pindobal, Pacoval); Mexiana; Rio Jamundá (Faró); Monte Alegre; Ereré; Igarapé de Paituna; Minas Geraes (Agua Suja, near Bagagem); Rio de Janeiro; São Paulo (Irisanga, near Rio Mogy-Guassú; Rio Paraná; Franca, Avanhandava, Baurú); Rio Grande do Sul.

At Tapirapoan, in January, the flocks had broken up into pairs that were busy examining termite nests in search of home sites.

(782) *Pyrhura picta amazonum* Hellmayr

Pyrhura picta amazonum HELLMAYR, Bull. Brit. Orn. Club, XIX, 1906, p. 8 (Obidos, lower Amazon, Brazil).

Rio Roosevelt, Camp 18, 1 ♂; Camp 8, 2 ♀.

RANGE.—Brazil: Matto Grosso (Rio Roosevelt, Camps 8 and 18, S. Vicente); Obidos, lower Amazon; Rio Tocantins (Arumatheua); Cussary; Rio Tapajóz (Villa Braga); Monte Alegre; Rio Madeira (Porto Velho, Calama, Allianca, Humaythá); Rio Machados (Maroins).

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Pyrhura picta picta</i>					
Venezuela, La Union, Caura	1 ♂	116	119.5	19.5	Munich
“ “ “	1 ♂	113.5	127.5	15	“
British Guiana (7 specimens) ²	?	?	?	?	“
<i>Pyrhura picta amazonum</i>					
Brazil, Maroins, Rio Machados	1 ♂	122.5	110	17	“
Brazil, Maroins, Rio Machados	1 ♂	120	3	17	“

¹Amer. Mus. Novitates, No. 58, 1923, p. 3.

²Specimens not sexed.

³Tail moulting.

Average Measurements (*Continued*)

	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Matto Grosso, Rio Roosevelt	1 ♂	1	120.5	16	A. M. N. H.
Brazil, Maroins, Rio Machados	1 ♀	125	108	18	Munich
Brazil, Maroins, Rio Machados	1 ♀	120.5	106	18	"
Brazil, Matto Grosso, S. Vicente	1 ♀	118	115	17	"
Brazil, Calama, Rio Madeira	1 ♀	122.5	114	17	"
" " "	1 ♀	121.5	113	16	"
" Porto Velho	—	126.5	119.5	17.5	A. M. N. H.
" Matto Grosso, Rio Roosevelt	1 ♀	126	127.5	17.5	"
Brazil, Matto Grosso, Rio Roosevelt	1 ♀	127	119	17	"
<i>Pyrrhura picta luciani</i>					
S. E. Peru, La Pampa	1 ♂	124.5	112.5	17	Munich
" " Yahuar Mayo	1 ♀	118.5	115.	18	"

(790) *Pyrrhura molinæ molinæ* (Massena and Souancé)

Conurus molinæ MASSENA ET SOUANCÉ, Rev. Mag. Zool., 1854, p. 73 ("Chil: et la Bolivie"); PELZELN, 'Orn. Bras.,' III, 1870, p. 259 (Matogrosso, Cuyabá, Nas Areias, six miles from Registo do Jaurú on the way to Matogrosso).

Pyrrhura molinæ ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 141 (Chapada); SALVADORI, 'Cat. B. Brit. Mus.,' XX, 1891, p. 225 (Matto Grosso); idem, Boll. Mus. Torino, XV, No. 378, 1900, p. 12 (Urucúm); IHERING, 'Cat. F. Braz.,' I, 1907, p. 115 (Matto Grosso); RIBEIRO, Rev. Mus. Paul., XII, (2), 1920, p. 38 (Matto Grosso).² No specimens collected.

RANGE.—Brazil: Matto Grosso (Chapada, Cuyabá, Nas Areias, six miles from Registo do Jaurú). Bolivia (Quebrada Onda).

(791) *Pyrrhura hypoxantha* Salvadori

Pyrrhura hypoxantha SALVADORI, Boll. Mus. Torino, XIV, No. 363, p. 1 ("Hab. Matto Grosso in sylvis prope Urucúm"); XV, p. 378, 1900, p. 12 (Urucúm); IHERING, 'Cat. F. Braz.,' I, 1907, p. 115 (Matto Grosso); RIBEIRO, Rev. Mus. Paul., XII, (2), 1920, p. 40 (Urucúm, Matto Grosso); LIMA, 'Rev. Mus. Paul., XII, (2), 1920, p. 93 (Corumbá, Matto Grosso).³

RANGE.—Central Brazil, Matto Grosso (Urucúm, Corumbá).

I have seen the female type of *hypoxantha* from Urucúm at the Zoölogical Museum, Tring, Herts. It has been suggested that this might be an abnormal variety of *P. molinæ* which occurs in the same district of Matto Grosso. This seems unlikely, however, in

¹Wing moulting.

²Ribeiro (*op. cit.*, p. 80) noticed differences between specimens from northern and southern (Corumbá) Matto Grosso.

³Recently, an additional specimen was secured by the late E. Garbe, as recorded by Lima.

view of the fact that Borelli obtained two specimens and afterwards a third was secured through one of his correspondents and acquired by the Tring Museum. Despite its peculiar coloration I think we cannot well avoid regarding *P. hypoxantha* as a distinct endemic species until proofs to the contrary are forthcoming.

(794) *Pyrrhura rhodogaster* (Sclater)

Conurus rhodogaster SCLATER, P. Z. S., 1864, p. 298 ("In vicin. urbis Borba in imp. Brasiliensi").

Pyrrhura rhodogaster RIBEIRO, Rev. Mus. Paul., XII, (2), 1920, p. 34 (Matto Grosso, Rio Jaurú).

Rio Roosevelt, Camp 17, 1 ♀; feet slate-black; bill black; eye dark; bare skin immediately about the eye black, the remainder of the bare skin surrounding the eye white.

RANGE.—Brazil: Matto Grosso (Rio Jaurú, Rio Roosevelt, Camp 17); Borba; Maroins on the Rio Madeira; Rio Tapajóz; Rio Jamauchim.

"Great flocks of these birds were seen at several points along the Rio Roosevelt. If undisturbed they kept up an incessant noisy chatter in the tree-tops, but at the same time they were very watchful and wary. Let one approach ever so cautiously and the chattering would abruptly cease. Not only did the chattering cease but every bird stood rigidly still. One can hardly say that these brightly colored parrots, with their green backs, blue wings, and brilliant scarlet breasts, are protectively colored, but it is a very sharp eye that will detect a single silent, motionless bird even where there are dozens congregated in a tree-top."

(797) *Myiopsitta monachus cotorra*¹ (Vieillot)

Figures 15 and 16

Psittacus cotorra VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXV, 1817, p. 362 (Paraguay).

Conurus griseicollis DES MURS, in Castelnau, 'Expéd. Amérique Sud, Oiseaux,' 1855, p. 16 (Villa Maria).

Myiopsittacus monachus SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 12 (Carandasinho); IHERING, 'Cat. F. Braz.,' I, 1907, p. 115 (Matto Grosso); GRANT, Ibis, 1911, p. 326 (Puga); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 38 (Corumbá); RIBEIRO, Rev. Mus. Paul., XII, 2, 1920, p. 30 (Matto Grosso).

Paraguay: Puerto Pinasco, 1 ♂. Matto Grosso: Palmiras, 5 ♂, 1 ♀.

RANGE.—Brazil, Matto Grosso (Villa Maria, Carandasinho, Corumbá, Palmiras, Rio São Lourenço, Fedegoso, Puga). Paraguay (Puerto Pinasco, Villa Pilar) and Terr. Formosa.

"Abundant at many points visited on the journey up the Rio Paraguay, particularly so from near the mouth of the Rio São Lourenço

¹Wetmore (Bull. U. S. Nat. Mus., No. 133, 1926, p. 194) distinguishes three races. The Matto Grosso race according to him is *M. m. cotorra*, to which specimens from Descalvados in Field Museum evidently belong.



Fig. 15. Nest of *Myiopsitta monachus cotorra* (Vieillot) and *Jabiru mycteria* (Lichtenstein) in same tree, Fedegoso, Brazil.

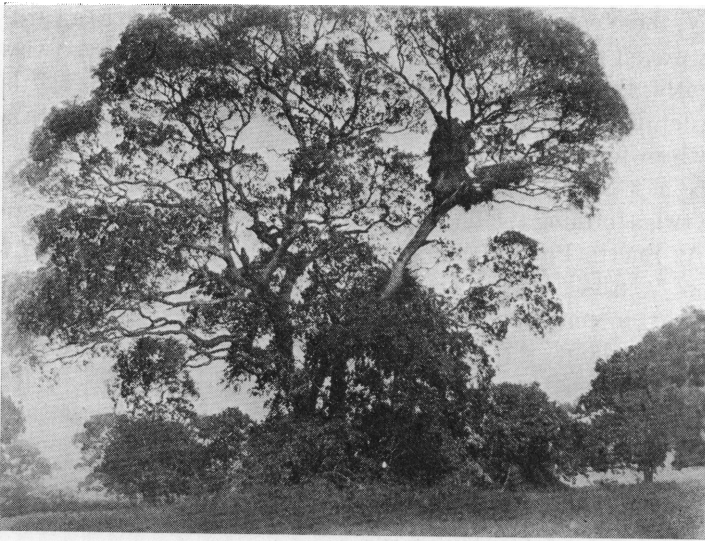


Fig. 16. Nest of *Myiopsitta monachus cotorra* (Vieillot) and *Jabiru mycteria* (Lichtenstein) in same tree, Fedegoso, Brazil.

northward. In this region the main course of the river is often marked for miles by a narrow forested strip of high land separating the river channel from the vast areas of marshlands extending for miles on either side. This narrow strip of forest, and an occasional island of trees in the midst of the swamp, furnishes the only available nesting site for arboreal birds, within a vast area of country. Consequently, it teems with life, the common green parakeet being one of the species most common there, and their nests—sometimes of tremendous size—are prominent objects of the landscape. So far as known, this species and probably its relative, is the only parrot that constructs a nest.

“The nests are community dwellings and most interesting structures, whether inhabited by one or two, or from fifty to one hundred pairs. They are made entirely of slender, thorny twigs, so cunningly and tightly interwoven as to make them strong and firm. Sometimes the nests (usually small ones with only three or four compartments) are placed out well toward the tips of large overhanging branches; but the larger nests seem always to be nearer the center of the tree where there is abundant support for the bulky and doubtless very heavy structure, from six to ten feet or more in diameter. The entrances to nesting chambers are either from below or on the side; never, we believe, from above. Occasionally, these entrances are in the form of long (as much as a yard), cunningly woven tubes constructed of the same slender, thorny twigs. Infrequently, the construction of new brood-chambers begins at the top, the structure being built downward, from the bottom of a jabiru stork’s nest, which forms a roof over all. No soft nesting materials are taken into the nest-cavity. The five to eight white eggs are deposited directly on the twigs forming the floor of the nest.

“At Puerto Pinasco (Paraguayan Chaco) it was surprising to find flocks of ‘Catita’ feeding on the ground, in the open fields about the settlement, in company with the cowbirds. They seem to associate in flocks throughout the entire year. Observations did not extend over the year, but from a paper published in *Ibis* (Gibson, 1880, p. 3) I learn that the nests are occupied continuously by at least a part of the colony, and kept in repair, but that additions are made only at the approach of the breeding season, about November 1. When taken young they are easily tamed. They are often seen about native houses and occasionally articulate a few words.

“At Fedegoso, November 28, a set of five eggs was collected from one of the small nests—a single compartment—of this species. The eggs are dull white in color and ovate in form. Four of the eggs measure 19×27 ,

19.5×27, 20×26.5, and 20×27 mm., respectively. One of the set was just at the point of hatching, one was fresh, and the three others in various stages of incubation."

Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Argentina, Mendoza	1 ♂	143	142	16.5	A. M. N. H.
" Lavalle	3 ♂	135.3	132.1	17.3	"
" Suncho Corral	1 ♂	137.5	140	18	"
" Lavalle	1 ♀	136.5	141.5	17	"
" "	1 ♀	136	132.5	16.5	"
" Suncho Corral	1 ♀	133	133	16.5	"
" Buenos Aires	1 ♀	144	152.5	20	"
Brazil, Matto Grosso, Palmiras	5 ♂	137.1	149.4	18.1	"
Brazil, Matto Grosso, Palmiras	1 ♀	140	134.5	18	"
Paraguay, Puerto Pinasco, 1 ♂, Concepción, 2 ♂	3 ♂	136.5	140	18	Munich

The quills and primary coverts of Argentine birds are bluer than those in the series from Palmiras and the males from Paraguay. In default of comparable material (birds from Palmiras are much worn, while those from Argentina are fresh), I cannot decide this question. If the Argentine bird is separable the name *Psittacus calita* Jardine and Selby,¹ based on a bird from Las Calitas, Prov. Mendoza, must stand.

(810) *Forpus*² *modestus* (Cabanis)

Psittacula modesta CABANIS, Schomb., 'Reis. Guiana,' III, 1848, p. 727 (British Guiana); IHERING, 'Cat. F. Braz.,' I, 1907, p. 116 (Matto Grosso).

Psittacula sclateri PELZELN, 'Orn. Bras.,' III, 1870, p. 268 (Cachoeira das Pederneiras).³

No specimens collected.

RANGE.—Brazil: Matto Grosso (Cachoeira das Pederneiras); Amazonas (Rio Javary); Pará; Rio Jamauchim (Recreio, Porto Seguro); Rio Purús (Bom Lugar); Rio Negro (Marabitanas); Rio Juruá. Peru; Ecuador; Guiana.

(821) *Brotogeris chiriri* (Vieillot)

Psittacus chiriri VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXV, 1817, p. 359 (based on Azara, No. 283, Paraguay).

Brotogerys xanthoptera PELZELN, 'Orn. Bras.,' III, 1870, p. 260 (Cuyabá); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 141 (Chapada); SALVADORI, 'Cat. B. Brit. Mus.,' XX, 1891, p. 256 (Cuyabá, Corumbá, Chapada, Cachoeira); Boll. Mus.

¹Illustrations of Ornithology,' II, Pt. 6, 1830, Pl. LXXXII.

²According to Mathews, *Forpus* should replace *Psittacula* ('Bds. of Australia,' VI, 1917, p. 169).

³Matto Grosso politically.

Torino, XV, No. 378, 1900, p. 12 (Urucúm); IHERING, 'Cat. F. Braz.,' I, 1907, p. 118 (Miranda, Matto Grosso).

Brotogeris versicolorus = (*B. virescens* auct.) MÉNÉGAUX, 'Rev. Franc. d'Orn.,' V, 1917, p. 38 (Caceres).

Agua Blanca de Corumbá, 3 ♀; Urucúm, 1 ♂, 2 ♀, 1 ?; Palmiras, 2 ♀; Tapirapoan, 3 ♂.

RANGE.—Brazil: Matto Grosso (Cuyabá, Chapada, Corumbá, Cachoeira, Urucúm, Miranda, Agua Blanca de Corumbá, Palmiras, Tapirapoan); São Paulo (Jaboticabal, S. Carlos do Pinhal, Avanhandava, Porto do Rio Paraná); Minas Geraes; Bahia; Piahy. Bolivia; Paraguay; north Argentina.

Common at almost every point where the expedition stopped in Matto Grosso. In November they were associated in large flocks. Later, in January, three specimens were collected at Tapirapoan where, also, the species was abundant, but the flocks had broken up into pairs that were going about examining termite nests that were common in the trees in the semi-open country, probably with an eye to future housekeeping.

(830) *Brotogeris chrysosema* Sclater

Brotogerys chrysosema SCLATER, P. Z. S., 1864, p. 298 ("Hab. in Brasilia" = Rio Madeira); PELZELN, 'Orn. Bras.,' III, 1870, p. 261 (Cachoeira das Pederneiras); SALVADORI, 'Cat. B. Brit. Mus.,' XX, 1891, p. 265 (Cachoeira das Pederneiras).

Brotogeris chrysosema IHERING, 'Cat. F. Braz.,' I, 1907, p. 119 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Cachoeira das Pederneiras, Rio Madeira, Maroins and São Vicente, Rio Machados); valley of the Amazon (São João do Aripuanan).

(833) *Amazona farinosa farinosa* (Boddaert)

Psittacus farinosus BODDAERT, 'Tabl. Pl. Enl.,' 1783, p. 52 (based on Daubenton, 'Pl. Enl.,' No. 861, Cayenne).

Amazona farinosa RIBEIRO, Rev. Mus. Paul., XII, (2), 1920, p. 57 (Matto Grosso).

No specimens collected.

RANGE.—Amazonia to Espirito Santo (Rio Doce); Matto Grosso (Gy-Paraná); Rio Purús (Bom Lugar); Rio Jurúa; Rio Madeira (Borba, Calama); Rio Negro (Marabitanas); Rio Jmauchim; Pará (Peixe-Boi). Guiana.

Ribeiro includes Matto Grosso in the range of this species, as he appears to have seen specimens from Gy-Paraná and São João da Serra do Norte, at the head of the Jmary. The species was also secured by Hoffmanns at Calama, Rio Madeira.

(836) *Amazona amazonica amazonica* (Linnæus)

Psittacus amazonicus LINNÆUS, 'Syst. Nat.,' I, 12th Ed., 1766, p. 147 (ex Brisson, Frisch, etc.—"Surinam" error; Dr. Hellmayr substitutes "le pays des Amazones," ex Brisson).

Chrysotis amazonica PELZELN, 'Orn. Bras.,' III, 1870, p. 266 (Cuyabá, Villa Maria, Cachoeira da Bananeira).

Amazona amazonica MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 38 (Caceres); IHERING, 'Cat. F. Braz.,' I, 1907, p. 120 (Porto Faya, Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Cuyabá, Villa Maria, Cachoeira da Bananeira, Porto da Faya); Goyaz (Estrella, Catalão; Araguayá); São Paulo (Itapura); Rio de Janeiro (Sepotuba); Piauí (Santa Philomena, Rio Parnahyba); Valle do Amazonas; Rio Negro; Borba; Pará; Ilha das Onças; Marajó (Pindobal, Pacoval); Mexiana; Amapá; Rio Jamauchim. Peru; Venezuela; Guiana; Colombia.

(837) *Amazona aestiva xanthopteryx* (Berlepsch)

Chrysotis aestiva xanthopteryx BERLEPSCH, 'Orn. Monatsber.,' IV, 1896, p. 173 (Bueyes, Bolivia).

Amazona aestiva ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 141 (Chapada); GRANT, Ibis, 1911, p. 321 (Pan de Azucar).

Descalvados,¹ 2 ♂, 1 ♀; Palmiras, 1 ♂.

RANGE.—Brazil: Matto Grosso (Chapada, Descalvados, Palmiras, Pan de Azucar). Bolivia; northern Argentina; Paraguay (Chaco, Fort Wheeler).

On the supplementary expedition Mr. Cherrie found the blue-fronted Amazon common at Fort Wheeler (Paraguayan Chaco) in September. They were nesting at that time. Later, in November and December, they were abundant about Descalvados. This is the species most commonly seen in a state of semi-domestication about the native houses. It is good-tempered and learns to speak a few words. Like most, if not all the members of this group of parrots, the blue-fronted Amazons nest in natural cavities in trees. No nesting material is carried into the cavity, and the two or three white eggs are deposited on the bits of decaying wood at the bottom of the hole.

(843) *Amazona ochrocephala nattereri* (Finsch)

Psittacus (Chrysotis) nattereri FINSCH, Journ. f. Ornith., 1864, p. 411 ("in Brasilia bei Mamoré, Cachoeira da Bananeira").²

Chrysotis nattereri PELZELN, 'Orn. Bras.,' III, 1870, p. 266 (Rio Mamoré, Cachoeira da Bananeira).

Amazona nattereri IHERING, 'Cat. F. Braz.,' I, 1907, p. 121 (Matto Grosso).

Amazona ochrocephala (not of Gmelin) RIBEIRO,³ Rev. Mus. Paul., XII, (2), 1920, p. 54 (Lambary, Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Cachoeira da Bananeira, Rio Mamoré; Lambary). Peru (Samiria Rio Marañón); eastern Ecuador, (Sarayacu).⁴

¹Dr. Hellmayr (*in lit.*) states that birds from Descalvados, Matto Grosso, appear to him inseparable from Tucumán specimens (*xanthopteryx*), although one has a little more red on the bend of the wing than usual. Unfortunately, no typical *aestiva* is available at present for comparison.

Dr. Hellmayr agrees with the writer that *Amazona aestiva aestiva* is confined to eastern Brazil (Piauí to Rio Grande do Sul). It does not occur anywhere on the Amazon.

²Matto Grosso politically.

³Ribeiro's description (forehead and orbital region bluish green) leaves no doubt that his birds were *nattereri* and not *ochrocephala*. *Amazona ochrocephala ochrocephala* is confined to the extreme north of Brazil (Rio Branco), Venezuela, eastern Colombia, etc. It is found only north of the Amazon.

⁴See Berlepsch, 'Orn. Monatsber.,' XXI, 1913, p. 148.

(849) *Amazona xanthops* (Spix)

Psittacus xanthops SPIX, 'Av. Bras.,' I, 1824, p. 39, Pl. xxvi ("in interiore Minas Geraes").

Chrysotis xanthops PELZELN, 'Orn. Bras.,' III, 1870, p. 267 (Engenho do Pari, Sangrador, Cuyabá, Pouzo das Lages, Fazenda do Coronel João Pereira).

Amazona xanthops IHERING, 'Cat. F. Braz.,' I, 1907, p. 122 (Matto Grosso, Porto Faya).

Salvatoria xanthops RIBEIRO, Rev. Mus. Paul., XII, (2), 1920, p. 69 (Cabeceira do Arinos and Estivados, Matto Grosso).

No specimens collected.

RANGE.—Eastern and central Brazil: Matto Grosso (Engenho do Pari, Sangrador, Cuyabá, Pouzo das Lages, Fazenda do Coronel João Pereira, Porto Faya, Cabeceira do Arinos and Estivados); São Paulo (Itapura); Goyaz (Rio Araguayá); Minas Geraes; Piauhy (Parnaguá); Bahia (São Marcello, Rio Preto).

(856) *Graydidascalus brachyurus* (Kuhl)

Psittacus brachyurus KÜHL, 'Consp. Psitt.,' 1820, p. 72 ("Cajana").

Calama, 1 ♀ (coll. by Leo E. Miller).¹

RANGE.—Upper Amazon Valley (Rio Juruá); Calama, Borba and Sitio do S. Collares on the right bank of the Rio Madeira; Rio Negro (Barra do Rio Negro); Joanacan; Amapá; Monte Alegre; Rio Jamundá (Faro). Ecuador; eastern Peru.

(857) *Pionus menstruus menstruus* (Linnæus)

Psittacus menstruus LINNÆUS, 'Syst. Nat.,' I, 12th Ed., 1766, p. 148 ("Habitat in Surinamo").

Pionias menstruus PELZELN, 'Orn. Bras.,' III, 1870, p. 264 (Villa Maria, Engenho do Gama, Matogrosso).

Pionus menstruus ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 141 (Chapada); SALVADORI, 'Cat. B. Brit. Mus.,' XX, 1891, p. 322 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 123 (Matto Grosso).

RANGE.—Brazil: Matto Grosso (Chapada, Villa Maria, Engenho do Gama, Matogrosso); Amazonas (Rio Juruá); Ilha das Onças; Benevides; St. Antonio do Prata; Peixe-Boi; Rio Acará (Igarapé-Assú); Rio Tocantins (Arumatheua); Rio Purús (Cachoeira, Bom Lugar, Ponte Alegre); Maracá; Obidos; Rio Jamundá (Faro); Campos de Ariramba; Rio Negro. Peru; Bolivia; Colombia; Guiana.

(864) *Pionus maximiliani bridgesi* Boucard²

Pionus bridgesi BOUCARD, 'The Humming Bird,' I, 1891, No. 4, p. 27 (Bolivia); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 38 (Corumbá).

Pionus maximiliani PELZELN, 'Orn. Bras.,' III, 1870, p. 264 (Fazenda do Sangrador); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 12 (Urucúm).

Paraguay: Fort Wheeler, 1 ♀. Matto Grosso: Urucúm, 1 ♂. Colors taken from the fresh birds: eye dark; bare skin about eye yellowish white; feet blackish slate; distal half of maxilla and mandible yellowish; maxilla blackish at base.

¹No record for Matto Grosso.

²According to Wetmore (Bull. U. S. Nat. Mus., 133, 1926, p. 192), this form should be called *P. m. siy* (Souancé).

RANGE.—Brazil: Matto Grosso (Corumbá, Urucúm, Fazenda do Sangrador). Bolivia (Chaco Boliviano, Caiza, San Francisco); Argentina (Salta, Tala, Jujuy); Paraguay (Fort Wheeler, Puerto Pinasco, Tebicuari, Santa Rosa, Siete Puntas).

An egg taken from the oviduct of a laying bird, at Fort Wheeler, October 4, was pure white in color, short ovate in form, and measured 27×34 mm. The species was frequently seen at Puerto Pinasco and about Fort Wheeler. The nest from which the bird flew was a natural cavity in the trunk of a large tree about thirty feet from the ground. Not enough was seen of this species to learn much of its habits.

(878) *Eucinetus barrabandi* (Kuhl)

Psittacus barrabandi KUHLE, 'Consp. Psitt.', 1820, p. 61 ("Brasilia").

Pionias barrabandi PELZELN, 'Orn. Bras.', III, 1870, p. 262 (Salto do Girão).¹

Pionopsitta barrabandi IHERING, 'Cat. F. Braz.', I, 1907, p. 125 (Matto Grosso); HELLMAYER, Nov. Zoöl., XVII, 1910, p. 408 (São Vicente, Rio Machados).

Chapmania barrabandi RIBEIRO, Rev. Mus. Paul., XII, (2), 1920, p. 65 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (São Vicente, Rio Machados); Alto Amazonas; Rio Purús (Bom Lugar); Rio Negro; Ega; Rio Juruá. Peru; Ecuador.

Ribeiro and von Ihering include Matto Grosso in the habitat of this species though their information is not based on specimens collected.

(899) *Chloroceryle americana americana* (Gmelin)

Alcedo americana GMELIN, 'Syst. Nat.', I, 1788, p. 45 ("Habitat in Cayenna").

Ceryle americana PELZELN, 'Orn. Bras.', I, 1868, p. 23 (Cuyabá, Rio Guaporé, Matogrosso); SHARPE, 'Cat. B. Brit. Mus.', XVII, 1892, p. 131 (Chapada); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 125 (Chapada); IHERING, 'Cat. F. Braz.', I, 1907, p. 128 (Matto Grosso).

Fazenda do São João, Cuyabá, 1 ♂; Agua Blanca de Corumbá, 1 ♂.

RANGE.—Brazil: Matto Grosso (Fazenda do São João, Cuyabá, Agua Blanca de Corumbá); Goyaz; Bahia; Minas Geraes (Marianna); Espirito Santo (Rio Doce); Rio de Janeiro (Sepotuba, Registo do Sai, Taixera); São Paulo (Barretos, Iguapé, Ubatuba, Ypiranga Itatiba, Ypanema, Irisanga); Paraná (Ourinho); Rio Grande do Sul (Novo Hamburgo); Pará (Rio Guamá, Rio Acará; Marajó; Monte Alegre; Rio Jamauchin); Rio Madeira (Borba, etc.); northern South America.

"Observed everywhere from our first camps in Paraguay to the last along the Rio Roosevelt. Not only are these small kingfishers seen along the watercourses, but every pool in the forest often many miles away from any stream is pretty sure to be visited by them."

Mr. Ridgway² draws attention to the fact that there is a large form in southern Brazil and Paraguay which may be called *Chloroceryle*

¹Matto Grosso politically (Rio Madeira).

²Birds of North and Middle America, VI, p. 423.

americana viridis (*Alcedo viridis* Vieillot, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XIX, 1818, p. 413, based on *Martin pescador verde oscuro* Azara, Apunt. Parag., III, p. 389). Specimens examined lead me to believe that south Brazilian and Paraguayan birds are inseparable from the typical race, *C. americana americana*, though Argentine specimens average a trifle larger.¹

	Measurements				MUSEUM
	SEX	WING	TAIL	CULMEN	
Argentina, Prov. Tucumán, Sarmiento	♂	78.5	62	41	Munich
Argentina, Prov. Tucumán, Sarmiento	♂	82	62.5	41	"
Argentina, Buenos Aires, La Plata	♂	78.5	62	39.5	"
Brazil, Matto Grosso, Agua Blanca de Corumbá, 1 ♂; Rio Cuyabá, 1 ♂; Chapada, 2 ♂	4 ♂	77.3	58.3	41	A. M. N. H.
Paraguay, ² Rio Negro	♂	77.5	61	40	"
Venezuela, Sucre, Cumaná	♂	75	52	43.5	"
Venezuela, Rio Mato	♂	75	53.5	40.5	"
British Guiana, Potaro Landing	♂	74	52	42	"

The specimens from Matto Grosso are intermediate in size.

(901) *Chloroceryle inda* (Linnæus)

Alcedo inda LINNÆUS, 'Syst. Nat.,' I, 12th Ed., 1766, p. 179 (Habitat "in India occidentali"); based on Edwards, 'Glean. Nat. Hist.,' III, p. 262, Pl. cccxxxv, Cayenne.

Ceryle bicolor PELZELN, 'Orn. Bras.,' I, 1868, p. 23 (Cuyabá).

Ceryle inda IHERING, 'Cat. F. Braz.,' I, 1907, p. 128 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Cuyabá); São Paulo (Iguapé, Rio Feio, Mamonreira, Guardamor, Matrincham); Santa Catharina (Col. Hansa); Rio de Janeiro (Cantagallo); Bahia; Ilha das Onças; Apehú; Capanema; Rio Guamá (Sta. Maria de S. Miguel); Mexiana; Rio Mojú; Rio Tocantins (Arumatheua); Rio Purús (Bom Lugar). British Guiana (Demerara, Bartica Grove, Rio Mazaruni); Surinam; Cayenne; Ecuador (Sarayacu); eastern Peru (Santa Cruz, Rio Huallaga).

(902) *Chloroceryle ænea ænea* (Pallas)

Alcedo ænea PALLAS, in Vroeg's 'Cat. Rais. d'Ois., Adumbrat.,' 1764, p. 1, No. 54 (Surinam).

Ceryle superciliosa PELZELN, 'Orn. Bras.,' I, 1868, p. 24 (Caicara, Engenho do Gama, Matogrosso); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 125 (Chapada).

¹Laubmann (Anzeiger Orn. Ges. Bay., No. 7, 1922, p. 53) refers birds from western (Amazonian) Matto Grosso (Villa Bella and Rio Guaporé) to *C. a. americana*, those from Cuyabá to *C. a. viridis*. The two races appear hardly distinguishable.

²Birds from Tobago and Trinidad are subspecifically separable (*croteta* Wetmore, Journ. Wash. Acad. Sci., XII, 1922, No. 14, p. 325).

Ceryle zenea IHERING, 'Cat. F. Braz.,' I, 1907, p. 128 (Matto Grosso).

Descalvados, 1 ♂.

RANGE.—Brazil: Matto Grosso (Cuyabá, Engenho do Gama, Corumbá, Chapada, Rio Roosevelt, Matogrosso); São Paulo (Iguapé); Bahia; Pernambuco; Pará; Marajó (Arary, Tuyuyú); Mexiana; Rio Jary; Monte Alegre; Cussary; Amazon Valley; Rio Negro (Marabitanas); Borba; Cocuy; Rio Amajaú.

Not observed south of Corumbá but noted at many localities from that point onward, including the Rio Roosevelt.

(908b) *Momotus momota simplex* Chapman

Momotus momota simplex CHAPMAN, Bull. Amer. Mus. Nat. Hist., 1923, XLVIII, Art. 2, p. 44 (Santarém, Brazil).

Momotus nattereri PELZELN, 'Orn. Bras.,' I, 1868, p. 19 (Cuyabá, Villa Maria, Matogrosso); SHARPE, 'Cat. B. Brit. Mus.,' XX, 1892, p. 322 (Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 129 (Matto Grosso).

Momotus momota subrufescens ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 125 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 129 (part; Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Cuyabá, Villa Maria, Chapada, Matto Grosso); Goyaz and Amazonia, south of the Amazon, from the Tapajóz to near the Peruvian boundary line.

A series from Chapada, in the American Museum, shows much individual variation in coloration but no obvious sexual difference. Below, many of the specimens are deep rufescent, others paler with a strong tinge of green. The late Dr. Allen, as far back as 1893, showed in his very excellent description how many features vary through wide limits in specimens taken at the same locality and practically at the same date. Our series from Chapada are nearer *simplex* than true *nattereri*, on comparison with Bolivian specimens.

Measurements

	SEX	WING	TAIL	CULMEN
Brazil, Chapada	♂	127.5	22.4	36
" "	♂	131	22.2	34
" "	♂	136	22.8	41

(913) *Momotus momota pilcomajensis* Reichenow

Momotus pilcomajensis REICHENOW, Journ. f. Orn., 1919, p. 334 (Villa Montes, Rio Pilcomayo, S. Bolivia).

Momotus subrufescens SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 10 (Urucúm).

Urucúm, near Corumbá, 1 ♂.

RANGE.—Northern Argentina (Prov. of Jujuy and Salta) and southern Bolivia (Villa Montes, Rio Pilcomayo; Vermejo, Santa Cruz), east to southwestern Matto Grosso (Urucúm).

In 1919, Reichenow described *Momotus momotus pilcomajensis*. I

have seen no specimen from the type-locality, but his description and a bird from Vermejo, Santa Cruz, the nearest I have seen of topotypical material, agree with our bird from Urucúm, the most southern of the genus.

Specimens from the more northern parts of Matto Grosso, as well as all Brazilian specimens from south of the Amazon, have hitherto been referred to as *Momotus momota nattereri* Sclater, but it is evident now that the specimens are nearer to the Santarém form, *Momotus momota simplex*, than to *Momotus momota nattereri*, type-locality Yungas, Bolivia. However, I believe that in view of the inadequate material and the great individual variation in this group these conclusions may only be temporary.

	Measurements				
	SEX	WING	TAIL	EXPOSED CŪLMEN	MUSEUM
Bolivia, Prov. Santa Cruz, Vermejo,	♂	128.5	233	35	A. M. N. H.
Brazil, Matto Grosso, Urucúm	♂	136	246	41.5	"
<i>Momotus momota nattereri</i>					
Bolivia, Reyes	?	129.5	220	40	A. M. N. H.
" Mission San Antonio, Rio Chimoré	♂	135.5	..	38.5	"
Bolivia, Todos Santos	?	136	..	35	"
" Lower Rio Beni	?	135.5	..	39	"

(922b) *Nyctibius griseus cornutus* (Vieillot)

Caprimulgus cornutus VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., X, 1817, p. 254 (Paraguay).

Nyctibius cornutus PELZELN, 'Orn. Bras.,' I, 1868, p. 10 (Matogrosso).

Nyctibius jamaicensis ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 125 (Chapada).

Nyctibius griseus IHERING, 'Cat. F. Braz.,' I, 1907, p. 130 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Chapada); São Paulo (Ypanema); Bahia; Rio Grande do Sul. Paraguay (near Puerto Braga); northern Argentina (Santa Ana, Misiones); Ecuador; Peru.

A bird collected by H. H. Smith at Chapada, Matto Grosso, has been doubtfully referred by Mr. Ridgway to *Nyctibius griseus cornutus*. I have seen no material from the type-locality, but one specimen from Santa Ana, Misiones, I believe to be essentially topotypical.

There are considerable differences in size between the Argentina and Matto Grosso specimens. The Matto Grosso specimen is also darker grayish or brownish, having the wing-coverts less washed with rufous. Without a larger series from different localities I am unable to separate the small form subspecifically.

Measurements

	SEX	WING	TAIL	EXPOSED CULMEN
Santa Ana, Missiones	♂	276	199.5	18
Chapada, Matto Grosso	♂	262	183	17.5

(925) *Nyctibius grandis* (Gmelin)

Caprimulgus grandis GMELIN, 'Syst. Nat., I, (2), 1789, p. 1029 (Habitat in Cayenna).

Nyctibius grandis PELZELN, 'Orn. Bras.,' I, 1868, p. 10 (Caiçara, Engenho do Gama, Matogrosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 131 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Caiçara, Engenho do Gama); São Paulo (Matto-dentro); Rio de Janeiro; Minas Geraes; Bahia; Pará; Rio Mojú; Marajó (Chaves); Rio Negro; Manaqueri (Rio Solimões). Peru; Ecuador; Colombia; Venezuela; Guiana.

(926) *Chordeiles minor*¹ *chapmani* Coues

Chordeiles popetue chapmani COUES, Auk, V, 1888, p. 37 (Gainesville, Florida; ex Sennett, manuscript).

Chordeiles virginianus ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 125 (Chapada).

No specimens collected.

RANGE.—This species winters in South America from Colombia southward to Entrerios, northern Argentina and west central Brazil.

Specimen examined, No. 34039, ♀, Chapada, Matto Grosso, Brazil.

(928) *Chordeiles acutipennis acutipennis* (Hermann)

Caprimulgus acutipennis HERMANN, 'Tab. Affin. Anim.,' 1783, p. 230 (based on "l'Engoulevent acutipenne, de la Guyane," of Montbeillard in Buffon, VI, p. 547) antedates *Caprimulgus acutipennis* Boddaert, 1783).²

Chordeiles acutipennis IHERING, 'Cat. F. Braz.,' I, 1907, p. 131 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso; Goyaz; Rio de Janeiro (Sepotuba); Bahia; Pará; Rio Tocantins (Alobaça); Rio Xingú (Victoria); Marajó (Bôa Vista, Livramento); Monte Alegre; Rio Jamundá (Faro); Rio Branco (Forte do Rio Branco); Villa dos Manãos (Barra do Rio Negro); Cajutuba. Colombia; Ecuador; Venezuela; Guiana.

(931) *Nannochordeiles pusillus pusillus* (Gould)

Chordeiles? pusillus GOULD, P. Z. S., 1861, p. 182 (Bahia); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 125 (Chapada); HARTERT, 'Cat. B. Brit. Mus.,' XVI, 1892, p. 618 (Corcundo, Chapada).

Chordeiles brasilianus PELZELN, 'Orn. Bras.,' I, 1868, p. 14 (Sangrador,³ Corcundo).

¹*Caprimulgus minor* Forster, 1771, antedates *C. virginianus* Gmelin, 1789 (see Richmond, Auk, 1917, XXXIV, p. 88).

²Nov. Zoöl., XXVII, 1920, p. 330.

³Matto Grosso politically.

Nannochordeiles pusillus IHERING, 'Cat. F. Braz.,' I, 1907, p. 132 (Matto Grosso).

RANGE.—Brazil: Matto Grosso (Chapada, Sangrador, Corcundo); Goyaz (Rio Thesouras, Nos Puritis); Minas Geraes (Curvelho); Bahia (Alagoinhas, Joazeiro); Piauhy (Nazara, Rio Parnahyba); Ceará.

(933) *Nyctiprogne leucopyga* (Spix)

Caprimulgus leucopygus SPIX, 'Av. Bras.,' II, 1825, p. 3, Pl. III, fig. 2 ("ad litora sylvestria fl. Amazonum").

Lurocalis leucopyga PELZELN, 'Orn. Bras.,' I, 1868, p. 14 (Cidade de Matogrosso).

Nyctiprogne leucopyga HARTERT, 'Cat. B. Brit. Mus.,' XVI, 1892, p. 619 (Matto Grosso); SALVADORI, Boll. Mus. Torino, X, No. 208, 1895, p. 14 (Corumbá); IHERING, 'Cat. F. Braz.,' I, 1907, p. 132 (Matto Grosso); GRANT, Ibis, 1911, p. 320 (Porto Esperança).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Villa Bella de Matto Grosso, Corumbá; Porto Esperança); Calama, Rio Madeira; Rio Amazonas; Rio Negro (near Barcellos); Monte Alegre; Rio Jamundá (Faro); Pará; Piauhy (Nazara, Rio Parnahyba). British and French Guiana; Venezuela (banks of the Orinoco).

In western Matto Grosso the species reaches the southern limit of its range, which extends from the Guianas and banks of the Orinoco over the Amazonian lowlands east to the Rio Parnahyba, Piauhy. The only specimen obtained by Natterer at Villa Bella de Matto Grosso is remarkably large but not otherwise different.

(934) *Podager nacunda nacunda* (Vieillot)

Caprimulgus nacunda VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., X, 1817, p. 240 (based on Azara, No. 312, Paraguay).

Podager nacunda PELZELN, 'Orn. Bras.,' I, 1868, p. 15 (Matogrosso, Forte do Principe de Beira); HARTERT, 'Cat. B. Brit. Mus.,' XVI, 1892, p. 618 (Corcundo, Chapada); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 125 (Chapada); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 10 (Carandasinho); IHERING, 'Cat. F. Braz.,' I, 1907, p. 132 (Matto Grosso); GRANT, Ibis, 1911, p. 320 (Albuquerque); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 38 (Poconé).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Forte do Principe de Beira, Corcundo, Chapada, Carandasinho, Poconé, Albuquerque); São Paulo (Ypanema, Porto do Jaguaraiaba, Murungaba, Ypiranga, Itapura, Borda do Matto); Minas Geraes; Paraná; Rio Grande do Sul; Pará; Borba, Rio Madeira; Rio Tocantins (Alcobaça). Paraguay; Argentina, south to Patagonia.

No records were made of this species on the original expedition. It was, however, found in 1916 at Puerto Pinasco (Paraguayan Chaco), near Corumbá, and in the pantanales opposite Descalvados. At the latter point it was very abundant. Flocks of from twenty-five to fifty would often get up almost from under the heels of the horses.

So far as my observations go this night-hawk is found only in the open.

(936) **Lurocalis semitorquatus nattereri** (Temminck)

Caprimulgus nattereri TEMMINCK, 'Pl. Col.,' livr. 18, Jan., 1822, Pl. CVII ("Brésil").

Lurocalis nattereri ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 125 (Chapada).

Lurocalis semitorquatus nattereri IHERING, 'Cat. F. Braz.,' I, 1907, p. 133 (Piquete and Rio Feio, São Paulo).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Chapada); Rio de Janeiro; São Paulo (Ypanema, Itararé, Irisanga, Piquete, Rio Feio); Paraná (Curytiba); Rio Grande do Sul; Calama, Rio Madeira; Ilha das Onças; Pará.

(943) **Hydropsalis torquata** (Gmelin)

Caprimulgus torquatus GMELIN, 'Syst. Nat.,' I, (2), 1789, p. 1032 (based on Brisson, ex Marcgrave, N. E. Brazil).

Hydropsalis torquata PELZELN, 'Orn. Bras.,' I, 1868, p. 11¹ (Cuyabá (?), São Vicente (?), Matogrosso (?)); HARTERT, 'Cat. B. Brit. Mus.,' XVI, 1892, p. 598 (Chapada); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 125 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 133 (Matto Grosso); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 38 (Poconé).

Hydropsalis furcifera ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 125 (Chapada).

No specimens collected.

RANGE.—Cuyabá (?), Vicente (?), Matto Grosso (?), Chapada (Poconé); Rio de Janeiro (Sepotuba); São Paulo (S. Sebastião, Itatiba, Ypanema, Itararé); Minas Geraes; Bahia; Maranhão; Santarém; Rio Xingú (Forte Ambé); Humaythá, Rio Madeira.

Two specimens in the H. H. Smith collection, identified as *Hydropsalis furcifera*, by the late Dr. J. A. Allen, are referable to *Hydropsalis torquata*, having a dark rufous collar on the hind neck.

(944) **Hydropsalis furcifera** (Vieillot)²

Caprimulgus furcifer VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., X, 1817, p. 242 (based on Azara, No. 309, Paraguay).

Hydropsalis pallescens PELZELN, 'Orn. Bras.,' I, 1868, p. 11 (Forte do Principe de Beira, Matogrosso).

Hydropsalis furcifera HARTERT, 'Cat. B. Brit. Mus.,' XVI, 1892, p. 599 (Forte do Principe); IHERING, 'Cat. F. Braz.,' I, 1907, p. 134 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Forte do Principe de Beira)³; Rio Grande do Sul. Paraguay (Paraguari); Uruguay; Bolivia (eastern, section); Argentina (Colonia Mihanovitch, and many other localities).

¹Pelzel's localities are doubtful. According to Dr. Hellmayr (*in lit.*) there are no specimens in the Vienna Museum from those places, and they may refer to No. 944.

²The relationship between *H. furcifera* and *H. torquata* requires thorough investigation. They are probably geographic representatives.

³Dr. Hellmayr has seen specimens from São Luiz de Cáceres (Villa Maria), collected by Castelnau, in the Paris Museum and a female from Descalvados in Field Museum, Chicagc.

(945) *Hydropsalis climacocerca* (Tschudi)

Caprimulgus climacocercus TSCHUDI, Archiv für Naturg., X, (1), 1844, p. 269 (Peru).

Hydropsalis trifurcata PELZELN, 'Orn. Bras.,' I, 1868, p. 11 (Braço do Jaracateá and Santa Rosa, Rio Guaporé and Forte do Principe de Beira).

Hydropsalis climacocerca HARTERT, 'Cat. B. Brit. Mus.,' XVI, 1892, p. 600 (Forte do Principe, Rio Guaporé); IHERING, 'Cat. F. Braz.,' I, 1907 p. 134 (Matto Grosso).

Rio Solimões, 1 ♂.

RANGE.—Brazil: Matto Grosso (Braço do Jaracateá and Santa Roza, Rio Guaporé and Forte do Principe de Beira); Bananeira and Borba, Rio Madeira; Rio Tocantins; Rio Solimões; Rio Juruá; Rio Purús (Monte Verde). East Peru; east Ecuador; Bolivia; Colombia.

A male from southeastern Peru, Astillero, shows more buff on the wing-coverts, secondaries, and nape when compared to our bird from the Solimões. The Peruvian bird may be in its rufous phase, and is in fresh, unworn plumage. *Hydropsalis climacocerca* ranges from eastern Peru, east to the Rio Tocantins, north to the Amazon and Rio Solimões.

Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
S. E. Peru, Astillero	♂	166	156	13	A. M. N. H.
" " Carabaya, Yahuar-mayo	♂	151	122.5	12	Munich
Brazil, Solimões, Upper Amazon	♂	156.5	147	11	A. M. N. H.

(949) *Nyctidromus albicollis derbyanus* Gould

Nyctidromus derbyanus GOULD, 'Icones Avium,' II, 1838, Pl. II (southern Brazil).

Nyctidromus albicollis derbyanus ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 124 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 135 (Matto Grosso).

Nyctidromus guianensis PELZELN, 'Orn. Bras.,' I, 1868, p. 13 (Caiçara, Engenho do Cap. Gama, Matogrosso, Forte do Principe de Beira).

Nyctidromus albicollis HARTERT, 'Cat. B. Brit. Mus.,' XVI, 1892, p. 587 (Chapada).

Nyctidromus derbyanus GRANT, Ibis, 1911, p. 319 (Albuquerque and Riacho Paraguay Mirim).

Paraguay: Trinidad, near Asunción, 1 ♂ ad. Matto Grosso: Descalvados, 1 ♂ ad.

RANGE.—Brazil: Matto Grosso (Chapada, Caiçara, Engenho do Cap. Gama, Matogrosso, Forte do Principe de Beira, Descalvados, Albuquerque, Riacho Paraguay Mirim); Goyaz (Goyaz City; Fazenda Esperança; Rio Araguayá); Rio de Janeiro (Sepotuba); São Paulo (Ypanema, Irisanga, Taquaral, near Meia Ponte, Avanhandava, Barretos, Baurú, Rio Feio, Rincão, Tieté, Itatiba, São Sebastião); Paraná (Ourinho); Rio Grande do Sul. Paraguay (Trinidad, near Asunción; Colonia Risso); Bolivia.

(957) *Thermochalcis candicans* (Pelzeln)

Caprimulgus candicans PELZELN, P. Z. S., 1866, p. 588 (Irisanga, São Paulo).

Stenopsis langsdorffi PELZELN, P. Z. S., 1866, p. 589 (Cuyabá; = ♀).

Stenopsis langsdorffi PELZELN, 'Orn. Bras.,' I, 1868, p. 12 (Cuyabá).

Stenopsis candicans IHERING, 'Cat. F. Braz.,' I, 1907, p. 135 (Matto Grosso).

No specimens collected.

RANGE.—Central Brazil: Matto Grosso (Cuyabá); São Paulo. Paraguay.

(961) *Setopagis parvula parvula* (Gould)

Caprimulgus parvulus GOULD, P. Z. S., V, 1837, p. 22 (Santa Fé, Rio Paraná); HARTERT, 'Cat. B. Brit. Mus.,' XVI, 1892, p. 574 (Chapada, Villa Maria); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 124 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 136 (Matto Grosso).

Stenopsis parvula PELZELN, 'Orn. Bras.,' I, 1868, p. 12 (Villa Maria, Engenho do Cap. Gama, Estiva Velha, Pitas, Matogrosso).

Agua Blanca de Corumbá, 1 ♂.

RANGE.—Brazil: Matto Grosso (Chapada, Villa Maria, Engenho do Cap. Gama, Estiva Velha, Pitas, Matogrosso, Agua Blanca de Corumbá); São Paulo (Ypiranga, Ypanema, Itararé, Irisanga); Paraná (Curytiba); Borba; Pará; Benevides; Rio Xingú (Victoria); Rio Purús. Paraguay (Luque); Bolivian Chaco (Caiza, San Francisco); Argentina; Colombia; eastern Ecuador; Peru.

During the daytime this species conceals itself in the thickets, perching transversely on some overhanging branch. Frequently several birds will be seen nesting close together, all facing in the same direction.

Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Matto Grosso, Agua Blanca de Corumbá	♂	139.5	103	9.5	A. M. N. H.
Argentina, Prov. Santa Fé	♂	134	97	11.5	Munich
Brazil, Cuyabá (Natterer Coll.)	♀	151.5	116	11.5	Vienna
Ecuador, Napo	[♀]	129	124.5	10	Munich
“ “	[♀]	154	121	11	“

(964) *Nyctipolus nigrescens* (Cabanis)

Caprimulgus nigrescens CABANIS, Schomburgk, 'Reisen Brit. Guiana,' III, 1848, p. 710 (Lower Essequibo).

Rio Roosevelt, Camp 4, 1 ♀, Camp 18, 1 ♀.

RANGE.—Brazil: Matto Grosso (Rio Roosevelt); Amazonia; Pará; Rio Acará; Rio Tocantins (Arumatheua); Rio Tapajóz (Boim, Villa Braga); Borba; Rio Jary; Rio Jamundá (Faro); Rio Negro (Manáos). Peru; Ecuador; Colombia; British and French Guiana.

Many of this species were seen. They frequented sandstone or granite flats about the rapids.

	Measurements				MUSEUM
	SEX	WING	TAIL	CULMEN	
Brit. Guiana, Essequeibo River, 1 ♀; Tumatumari, Potaro River, 1 ♀; Potaro Landing, 1 ♀	3 ♀	140.6	101	9.5	A. M. N. H.
Brazil, Matto Grosso, Rio Roosevelt, Camp 4	1 ♀	145	106.5	10.5	"
Brazil, Matto Grosso, Rio Roosevelt, Camp 18	1 ♀	144	106	11.5	"
Venezuela, Caura	1 ♀	137.5	98	11.5	"
" "	1 ♀	147.5	111	11	"
S. E. Peru, Carabaya, Yahuar- mayo, 2 ♀;					
S. E. Peru, Chaquimayo, 1 ♀	3 ♀	151.1	120.5	11.1	Munich

(965) *Setochalcis rufa rufa* (Boddaert)

Caprimulgus rufus BODDAERT, 'Tabl. Pl. Enl.,' 1783, p. 46 (based on Daubenton, 'Pl. Enl.,' Fig. 5; Cayenne); IHERING, 'Cat. F. Braz.,' I, 1907, p. 136 (Matto Grosso).

Antrostomus cortapau PELZELN, 'Orn. Bras.,' I, 1868, p. 13 (Engenho do Cap. Gama, Ponte do Guaporé).

No specimens collected.

RANGE.—Brazil: Rio Negro (Manáos); Para; Bahia; Rio de Janeiro; São Paulo (Itapura); Matto Grosso (Engenho do Cap. Gama, Ponte do Guaporé); Rio Grande do Sul. Argentina (Tucumán, etc.); Guiana; Venezuela.

(968) *Streptoprocne zonalis zonalis* (Shaw)

Hirundo zonalis SHAW, 'Cim. Phys.,' 1796, p. 100, Pl. LV (no type-locality given; by subsequent designation, Rio de Janeiro,¹ Reichenberger and Cherrie, 1923).

Chætura zonalis HARTERT, 'Cat. B. Brit. Mus.,' XVI, 1892, p. 476 (Chapada).

Hemiprocne zonalis ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 123 (Chapada).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Chapada); Minas Geraes (Vargem Alegre); São Paulo (Ypiranga, Alto da Serra, Itararé); Rio de Janeiro (Sepotuba); Rio Grande do Sul (Nova Hamburgo). Bolivia.

The series of three males and one female from Chapada, in The American Museum of Natural History, collected by H. H. Smith, is referable to the typical race. I have examined specimens from Ypanema, Chapada, Rio de Janeiro, and Sepotuba, near Rio, and give the following list of measurements.

¹Shaw gave no type-locality but, according to Mr. Ridgway ('Birds of N. and M. America,' V, 1911, p. 697), it is assumed to be Brazil. Brabourne and Chubb ('Bds. of S. A.,' I, 1912, p. 102) suggest Colombia as the type-locality of this form. Dr. Frank M. Chapman proposed Chapada, Matto Grosso, Brazil (Bull. A. M. N. H., XXXIII, 1914, p. 604) as the type-locality of *S. zonalis zonalis* (Shaw), giving as its range southern Brazil and northern Argentina. Dr. Hellmayr has suggested that the type of *S. zonalis* (Shaw) did not come from Chapada, Matto Grosso, as at Shaw's time the province of Matto Grosso was practically unknown. His specimen is much more likely to have been obtained somewhere in southeastern Brazil, for example, Rio de Janeiro.

	Measurements				
	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Streptoprocne zonalis zonalis</i>					
Brazil, São Paulo, Ypanema	1 ♂	208	76	8.5	Vienna
" " "	1 ♂	212	80	9	"
" " "	3 ♀	203	71.8	91	"
" Matto Grosso, Chapada	3 ♂	210.3	70.7	10	A. M. N. H.
Brazil, Matto Grosso Chapada	1 ♀	205	70	10	"
Brazil, La Raiz, Organ Mts.	1 ♂	208.5	70.5	10	"
" Rio de Janeiro, 2 ♀;					
Sapitiba, 2 ♀	4 ♀	204.7	72.3	9.3	Vienna

The average measurements of *Streptoprocne zonalis* and its allies are:

	WING
<i>S. zonalis zonalis</i>	210-212
<i>S. zonalis albicincta</i>	173-200
<i>S. zonalis altissima</i>	210-215

(969) *Streptoprocne zonalis albicincta* (Cabanis)

Hemiprocne albicincta CABANIS, Journ. f. Orn., 1862, p. 165 (part; sandhills of the Demerara River, near Georgetown, British Guiana); see Schomburgk, 'Reisen Brit. Guiana,' II, 1848, p. 491.

Utarity, 1 ♂.

RANGE.—Brazil: Matto Grosso (Utarity, Rio Papagaio; Salto Bello, Rio Sucre); Marabitanas (Rio Negro). British Guiana; Trinidad.

Only a single specimen secured, although there were great numbers during certain hours of the day, about the cataracts of Salto Bello, Rio Sucre, and Salto do Utarity, Rio Papagaio. They were said to nest on the rocks behind the falling water.

The bird from Utarity which, from the development of the white collar, appears to be fully adult, differs from the type of *Hemiprocne albicincta* in adult plumage (No. 8367, Berlin Museum) by its smaller size and much narrower white collar, especially on the hind neck where it is visible in the middle only when the feathers are raised. Lawrence's type¹ of *Hemiprocne minor* (No. 43612, Amer. Mus. Nat. Hist.) has the white collar on the fore neck much broken, the white apical margins of the feathers being much narrower and sometimes slightly dotted with blackish. Four similar specimens, all marked as females (in three cases as female adult), I have found among Natterer's series from the Vienna

¹This specimen, supposed by Lawrence to have come from Bogotá, on inspection proves to be a skin of the well-known Orinocoan or Trinidad make, as may easily be seen from its loose wings, spread tail and open bill. It is no doubt a young bird of *Hemiprocne albicincta*, described by Cabanis from a Guianan specimen.

Museum (Rio de Janeiro and Ypanema, São Paulo) of the allied *Streptoprocne zonaris zonaris*. So it appears certain that this stage represents some plumage of the female, although from Natterer's specimens¹ it might be inferred that occasionally the female has the white collar as fully developed as the adult male.

Upon further examination of material from British Guiana, in the Natural History Museum, South Kensington, England, I have concluded that our bird from Utiarity is referable to *S. zonaris albicincta*,² as it agrees with a series of the Guianan specimens in size, color and extent of white neck-band.

Measurements					
	SEX	WING	TAIL*	CULMEN	MUSEUM
Brit. Guiana, sandhills of the Demerara, near Georgetown ³ (type)	1?	194	80.5	9	Berlin
Brit. Guiana, Roraima	4♂	180.8	59.3	8.7	British
"Bogotá" (No. 43612, Lawrence's type of <i>Hemiprocne minor</i>)	?	176	69	8.5	A. M. N. H.
Brazil, Utiarity	1♂	174	67	7.5	"

(971) *Chætura brachyura brachyura* (Jardine)

Acanthylis brachyura JARDINE, Ann. and Mag. Nat. Hist., XVIII, 1846, p. 120 (Tobago).

Urucúm, near Corumbá, 1 ♀ ad.

Rio do Color, 1 ♀ ad.

RANGE.—Tobago; Trinidad; Venezuela (Caura Valley); British Guiana (Annai); French Guiana; Surinam (Paramaribo); north Brazil [Pará; Matto Grosso (Urucúm, near Corumbá; Rio do Color)]; eastern Peru (Xeberos, Chamicuros).

Matto Grosso is quite a new locality for this swift.

(972) *Chætura chapmani viridipennis*⁴ Cherrie

Chætura chapmani viridipennis CHERRIE, Bull. Amer. Mus. Nat. Hist., XXXV, 1916, p. 183 (Doze Octobre, Matto Grosso).

Matto Grosso, Doze Octobre, 1 ♂.

RANGE.—Brazil: Matto Grosso, Doze Octobre.

Represented by the type and only known specimen. Two subspecific characters distinguish *Chætura chapmani viridipennis* from *Chætura chapmani chapmani*. It differs in having a longer wing, and the pileum,

¹Sexing reliable.

²An immature specimen labeled, "Côte Ferme" ex Verreaux (Jardine Coll.), in the British Museum, has the uneven white fore neck band of Lawrence's type, and approximately the same size; sex, ?; wing, 173; tail, 61; exp. culmen, 8 mm. = *S. z. albicincta*.

³See Schomburgk, 'Reisen Brit. Guiana,' II, 1848, p. 491, where under *Hirundo collaris* it is expressly stated that only a single specimen was secured during his travels.

⁴This swift is quite distinct from *C. andrei meridionalis* Hellmayr, and is an endemic species.

mantle and wings glossed with greenish instead of steel-blue. *Chætura egregia* Todd, from the Rio Surutú, Bolivia, which I have seen, has a grayish-white rump and throat, and a glossy-black tail, while our bird has the rump, tail and underparts uniform grayish-brown.

	Measurements				
	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Chætura chapmani viridipennis</i> Brazil, Matto Grosso, Doze Octobre (type)	1 ♂	130	43	6.5	A. M. N. H.
<i>Chætura chapmani chapmani</i> Trinidad, Caparo (co-types)	4 ♂	117.8	41.3	5.2	"

(974) *Chætura andrei meridionalis* Hellmayr

Chætura andrei meridionalis HELLMAYR, Bull. Brit. Orn. Club, XIX, 1907, p. 63 (Ysca-Yacu, Santiago del Estero).

Chætura poliura PELZELN, 'Orn. Bras.,' I, 1868, p. 16 (Engenho do Gama).¹

No specimens collected.

RANGE.—Brazil: Matto Grosso (Engenho do Gama); São Paulo (Ypanema, Itararé, Resacco, Borda do Matto, Irisanga); Rio de Janeiro; Bahia; Piahy (Santa Philomena). Argentina.

(986) *Cypseloides senex* (Temminck)

Cypselus senex TEMMINCK, 'Pl. Col.,' livr. 67, 1826, p. 397 ("cette espèce habite au Brésil").

Cypseloides senex ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 123 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 138 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Chapada); São Paulo (Ypanema, Irisanga). Paraguay; Argentina (Misiones).

(1001) *Glaucis hirsutus* (Gmelin)²

Trochilus hirsutus GMELIN, 'Syst. Nat.,' I, (1), 1788, p. 490; based on (Brisson ex) Marcgrave, N. E. Brazil (Hellmayr³ accepts Bahia as type-locality).

Glaucis hirsuta PELZELN, 'Orn. Bras.,' I, 1868, p. 27 (Engenho do Cap. Gama); SALVIN, 'Cat. B. Brit. Mus.,' XVI, 1892, p. 41 (Engenho do Cap. Gama); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 122 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 139 (Matto Grosso).

Glaucis tomineo SIMON, 'Hist. Nat. des Troch.,' 1921, p. 248 (Matto Grosso).

Descalvados, 1 ♀ ad.; basal three-fourths of mandible bright yellow.

¹Natterer obtained an immature female at Engenho do Gama, Matto Grosso, on Sept. 12, 1826.

²I have decided to hold to *Trochilus hirsutus* instead of *Trochilus tomineo*. While admitting that the description of bill and tail fits *Glaucis hirsuta* remarkably well, I think that the passage "corpus fuscum," etc., cannot be reconciled with its characters.

³Nov. Zoöl., XIII, 1906, p. 374.

RANGE.—Brazil: Matto Grosso (Engenho do Cap. Gama, Chapada, Descalvados); São Paulo (S. Sebastião); Rio de Janeiro (Sepotuba); Espirito Santo; Goyaz; Bahia; Pernambuco; Maranhão; Pará; Marajó; Rio Negro (Barra do Rio Negro); Rio Madeira.

(1017) *Phaethornis hispidus hispidus* (Gould)

Trochilus hispidus GOULD, P. Z. S., XIV, 1846, p. 90 (Bolivia).

Phaethornis anthophilus PELZELN, 'Orn. Bras.,' I, 1868, p. 27 (Engenho do Cap. Gama).

Phaethornis hispida SIMON, 'Hist. Nat. des Troch.,' 1921, p. 254 (Matto Grosso).

Phaethornis hispidus IHERING, 'Cat. F. Braz.,' I, 1907, p. 140 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Engenho do Cap. Gama); Rio Madeira. Peru (eastern part, Pebas, Iquitos on the Amazon); Bolivia (Yungas, Rio Beni).

(1024) *Anopetia gounellei* (Boucard)

Phaethornis gounellei BOUCARD, 'The Humming Bird,' I, 1891, p. 17 (Environs de la Villa de Condeuba, South Bahia¹; alt. about 600 m.).

Fazenda do São João, 1 ♀; Descalvados, 1 ♀.

RANGE.—Brazil: Matto Grosso (São João; Descalvados); Santo Antonio da Barra, near the border of Bahia and of Minas Geraes (E. Gounelle); Piahy (Lagôa Missão, near Parnaguá; O. Reiser); Ceará (Júá, near Iguatú).

This is an important record as the species is new to Matto Grosso.

(1026) *Anisoterus*² *pretrei* (Delattre and Lesson)

Trochilus pretrei DELATTRE AND LESSON, 'Rev. Zool.,' II, 1839, p. 20 (Minas Geraes, Brazil).

Phaethornis pretrei PELZELN, 'Orn. Bras.,' I, 1868, p. 27 (Cuyabá); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 9 (Urucúm).

Phaethornis pretrei SALVIN, 'Cat. B. Brit. Mus.,' XVI, 1892, p. 277 (Chapada).

Phaethornis pretrei ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 122 (Chapada).

Phaethornis pretrei IHERING, 'Cat. F. Braz.,' I, 1907, p. 141 (Matto Grosso); SIMON, Bull. Mus. Paris, XVIII, 1912, p. 500 (Poconé).

Anisoterus pretrei SIMON, 'Hist. Nat. des Troch.,' 1921, p. 256 (Matto Grosso).

Campos Novos, Cerro do Norte, 1 ♀.

RANGE.—Brazil: Matto Grosso (Cuyabá, Urucúm, Chapada); São Paulo (Ypiranga, Piquete, Irisanga); Minas Geraes (Vargem Alegre, Marianna); Goyaz; Bahia; Piahy (Parnaguá, near Santa Philomena); Maranhão; Ceará. Eastern Bolivia.

This species is found in the catinga forests at an altitude of 600–1250 meters.³

(1035) *Pygmornis nattereri* (Berlepsch)

Phaethornis nattereri BERLEPSCH, Ibis, (5), V, 1887, p. 289 (Caiçara, Engenho do Gama); IHERING, 'Cat. F. Braz.,' I, 1907, p. 141 (Matto Grosso, Chapada).

¹As stated by E. Gounelle, Orn. XIII, p. 178.

²This genus possesses excellent generic characters.

³Ornis, XIII, p. 179.

Phæthornis longuemareus PELZELN, 'Orn. Bras.,' I, 1868, p. 27 (Caiçara, Engenho do Gama).

Phæthornis nattereri SALVIN, 'Cat. B. Brit. Mus.,' XVI, 1892, p. 278 (Brazil, Matto Grosso = type, Mus. Berlepsch); HARTERT, 'Das Tierreich,' 1900, Lief. 9, Trochilidæ, p. 26 ("Provinz Matto Grosso in Brasilien").

Pygmornis chapadensis ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 122 (Chapada).

Tapirapoan, 1 ♀.

RANGE.—Brazil: Matto Grosso (Chapada, Caiçara, Engenho do Gama, Tapirapoan); Piauíhy (Barra do Cocal, Rio Parnahyba); Maranhão (Barra do Corda).

(1038) *Pygmornis ruber ruber* (Linnæus)

Trochilus ruber LINNÆUS, 'Syst. Nat.,' I, 10th Ed., 1758, p. 121 (Surinam).

Trochilus pygmæus SPIX, 'Av. Bras.,' I, 1824, p. 78, Pl. LXXX, fig. 5 (Minas Geraes).

Phæthornis rufigaster and *P. pygmæus* auct.

Phæthornis eremita PELZELN, 'Orn. Bras.,' I, 1868, p. 27 (Engenho do Cap. Gama).

Phæthornis davidianus PELZELN, 'Orn. Bras.,' I, 1868, p. 27 (Engenho do Cap. Gama).

Pygmornis pygmæus SALVIN, 'Cat. B. Brit. Mus.,' XVI, 1892, p. 285 (Engenho do Gama).

Phæthornis ruber IHERING, 'Cat. F. Braz.,' I, 1907, p. 142 (Matto Grosso).

Pygmornis pygmæa SIMON,¹ 'Hist. Nat. des Troch.,' 1921, p. 261 (Matto Grosso). Rio Roosevelt, 1 ♀.

RANGE.—Brazil: Matto Grosso (Engenho do Cap. Gama); Rio de Janeiro (Registo do Sai); São Paulo (Iguapé, Ubatuba); Minas Geraes; Goyaz; basin of the Amazon to the foot of the Andes; Pará; Providencia; Ananindeua; Maguary; Sta. Isabel; Quatipurú; St. Antonio do Prata; Rio Tocantins (Cametá, Baião, Arumatheua); Rio Tapajóz (Villa Braga). Dutch and French Guiana (Cayenne).

(1050) *Campylopterus obscurus æquatorialis* Gould

Campylopterus æquatorialis GOULD, 'Introd. Trochil.,' 1861, p. 54 ("neighborhood of Quito" = Rio Napo).

Barão Melgaço, 1 ♂.

RANGE.—The whole of the Upper Amazonian region from eastern Colombia (La Morelia) south to northern Bolivia (Mapiri), east to the Rio Maderia (Calama, Allianca, Marmellos, Santa Isabel, Maroins, Rio Machados) and extending to northern Matto Grosso (Barão Melgaço).

This specimen from Barão Melgaço is a male in first annual plumage, having the tail-feathers more pointed and the shaft of the outer primary less thickened than in the adult bird. The tail-feathers are graduated in length and differ in this character from a series of adult Ecuadorian birds which have the tail-feathers equal.

¹As stated by Simon, *Trochilus ruber* is based on a crude sketch of Edwards' ('Nat. Hist. Uncom. Birds,' Pl. 32, fig. sup., Surinam), but I believe him to be mistaken in identifying it with *P. longuemareus*.

Dr. Hellmayr maintains that the "little brown hummingbird" cannot refer to any other species than *P. pygmæus*. The shape, as well as the markings of the tail and the presence of a dusky band across the chest, clearly points to *P. pygmæus* and excludes *P. longuemareus*. There is no resemblance to *Threnetes niger*.

(1056) *Eupetomena macroura macroura* (Gmelin)

Trochilus macrourus GMELIN, 'Syst. Nat.,' I, (1), 1788, p. 487 (in Jamaica, ex Sloane—error). I accept, with Dr. Hellmayr, Cayenne as typical habitat, ex Brisson, 'Orn.,' III, p. 726, Tab. 36, fig. 9, where the species is well described and figured.

Eupetomena macroura PELZELN, I, 1868, p. 28 (Cuyabá, Engenho do Gama); SALVIN, 'Cat. B. Brit. Mus.,' XVI, 1892, p. 295 (Chapada); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 122 (Chapada).

Eupetomena macroura prasina SIMON, 'Cat. Troch.,' 1897, p. 9 (Matto Grosso); HARTERT, 'Das Tierreich,' 1900, Lief. 9, Trochilidæ p. 34 (Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 143 (Matto Grosso); SIMON, Bull. Mus. Hist. Nat. Paris, XVIII, 1912, p. 500 (Poconé); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 38 (Poconé).

Eupetomena macroura var. *prasina* SIMON, 'Hist. Nat. des Troch.,' 1921, p. 268 (Matto Grosso).

Rio São Lourenço, 1 ♂.

RANGE.—Brazil: Matto Grosso (Cuyabá, Engenho do Gama, Chapada, Poconé, Rio São Lourenço); São Paulo (Jundiáhy, Ypiranga, Piracicaba, Mogy-Guassú, Batataes, Avanhanda, Barretos, Itapura, Vendinha, Irisanga); Minas Geraes (Vargem Alegre, Marianna, Caxambú); Goyaz; Piauhý; Ceará; Maranhão; Pará; Ilha das Onças; Marajó (Pindobal, S. Natal; Tuyuyú); Mexiana; Monte Alegre.

Simon states¹ that certain specimens he has seen from Matto Grosso between Cuyabá and the Bolivian frontier, on the Rio Paraguay, so closely resemble *Eupetomena hirundo*, especially on comparing them with specimens from the Rio Beni (which are less distinct in their characters than the Peruvian), that they are almost indistinguishable. I agree with Simon in the belief that more material from intermediate localities may prove the existence of three distinct forms; although, according to Dr. Hellmayr,² large series from Cayenne, Pará, Goyaz, Minas Geraes, and São Paulo are identical.

	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Matto Grosso, Rio São Lourenço	1 ♂	74.5	80.5	19.5	A. M. N. H.
Brazil, Isl. of Marajó, Cachoeira	3 ♂	73.3	93	25.3	Munich
Brazil, Isl. of Marajó, Cachoeira	1 ♀	70	74	23.5	"
Brazil, Isl. of Marajó, Cachoeira	1 ♀	67.5	75.5	23	"

I have compared our specimen with material in the Munich Museum and refer it to *Eupetomena macroura macroura*, though I have seen no topotypical material.

¹'Hist. Nat. des Troch.,' 1921, p. 33.

²Nov. Zool., XIV, 1907, p. 395.

(1058) *Florisuga mellivora mellivora* (Linnæus)

Trochilus mellivorus LINNÆUS, 'Syst. Nat.,' (I), 10th Ed., 1758, p. 121 (based on Edwards, Pl. xxxv, fig. 1, Surinam)

Florisuga mellivora PELZELN, 'Orn. Bras.,' I, 1868, p. 30 (Alcerim); IHERING, 'Cat. F. Braz.,' I, 1907, p. 144 (Matto Grosso); SIMON, 'Hist. Nat. des Troch.,' 1921, p. 268 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Alcerim, Destacamento do Ribeirão¹); Borba; Rio Negro (Marabitanas, Barcellos, Barra do Rio Negro); Pará; Benevides; Sta. Isabel; St. Antonio do Prata; Rio Guama (Ourém); Rio Tocantins (Cametá, Arumatheua); Marajó (Pindobal); Pernambuco; Rio de Janeiro. Peru; British Guiana; Cayenne; Venezuela; Ecuador; Colombia. From the southern part of Mexico to the basin of the Amazon and Matto Grosso, and in the Andes of Colombia, Ecuador, and Peru.

(1060) *Aphantochroa cirrochloris* (Vieillot)²

Trochilus cirrochloris VIEILLOT, 'Nouv. Dict. d'Hist.,' nouv. éd., XXIII, 1818, p. 430 ("Brésil" = Rio de Janeiro, Coll. Delalande).

Aphantochroa cirrochloris PELZELN, 'Orn. Bras.,' I, 1868, p. 28 (Engenho do Gama); IHERING, 'Cat. F. Braz.,' I, 1907, p. 144 (Matto Grosso); SIMON, 'Hist. Nat. des Trochil.,' 1921, p. 342 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Engenho do Gama); São Paulo (Ypanema, Ypiranga, Jundiáhy, Piracicaba, Itararé, Bebedouro, Rincão); Santa Catharina; Rio de Janeiro (Registo do Sai, Cachoeira do Monteiro); Minas Géraes (Vargem Alegre, Diamantina); Bahia.

A single male secured by Natterer at Engenho do Gama on Sept. 9, 1826, is the only record for Matto Grosso.

(1066) *Leucippus chionogaster chionogaster* (Tschudi)

Trochilus leucogaster (not of Gmelin, 1788) TSCHUDI, Arch. für Naturg., X, (1)¹ 1844, p. 297 (Peru).

Trochilus chionogaster TSCHUDI, 'Untersuch. Fauna Peru., Aves,' 1846, p. 247 (new name).

Agyrtria (*leucogastra* juv. ?) PELZELN, 'Orn. Bras.,' I, 1868, p. 29 (Engenho do Cap. Gama, Matto Grosso).

RANGE.—The only record of this humming bird from Brazil, Matto Grosso, is based on specimens identified by Dr. Hellmayr. An adult male obtained by Natterer on June 29, 1827, near Villa Bella de Matto Grosso, and a young female secured in July at Engenho do Gama. Its range otherwise extends from northern Peru through Bolivia south to northern Argentina.

¹Matto Grosso politically.

²There are no subspecies, those proposed by Simon being invalid.

(1081) *Agyrtrina*¹ *versicolor versicolor* (Vieillot)

Trochilus versicolor VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXIII, 1818, p. 430 (Brésil; type in Musée d'Hist. Nat. de Paris).

Agyrtria affinis SALVIN, 'Cat. B. Brit. Mus.,' XVI, 1892, p. 185 (Chapada); HARTERT, 'Das Tierreich,' 1900, Lief. 9, p. 45 (Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 145 (Matto Grosso).

Agyrtria brevisrostris affinis ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 123 (Chapada).

Agyrtria versicolor SIMON, 'Hist. Nat. des Troch.,' 1921, p. 329 (Matto Grosso).

Rio São Lourenço, 1 ♀ (between its mouth and mouth of the Rio Cuyabá).

RANGE.—Brazil: Matto Grosso (Chapada, Rio São Lourenço); São Paulo (Pirahy, Ypanema, Jundiáhy, Bebedouro, Avanhandava, Rio Feio, Ubatuba, Itapura); Rio de Janeiro; Paraná (Curytiba, Ourinho, Rio Grande do Sul). Paraguay (Puerto Bertoni); Argentina (Misiones); eastern Bolivia (Yungas).

(1089) *Agyrtrina fimbriata nigricauda* (Elliot)

Thaumatias nigricauda ELLIOT, Ibis, (4), V, 1878, p. 47 (Bahia).

Agyrtria albiventris (not of Lesson) PELZELN, 'Orn. Bras.,' I, 1868, p. 28 (Cuyabá, Caiçara, Engenho do Gama).

Agyrtria maculata (not of Vieillot) PELZELN, 'Orn. Bras.,' I, 1868, p. 29 (part; Cuyabá, Sangrador).

Agyrtria nigricauda IHERING, 'Cat. F. Braz.,' I, 1907, p. 146 (Matto Grosso); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 39 (Poconé).

Agyrtria fimbriata nigricauda SIMON, Bull. Mus. Paris, XVIII, 1912, p. 500 (Poconé, São Luiz de Cáceres).

Chionomesa fimbriata nigricauda SIMON, 'Hist. Nat. des Troch.,' 1921, p. 322 (Matto Grosso).

Utilarity, near Salto Bello, Papagaio River, 1 ♀; Tapirapoan, 2 ♂.

RANGE.—Brazil: Matto Grosso (Utilarity, near Salto Bello, Rio Papagaio, Tapirapoan, Porto Faya, Cuyabá, Caiçara, Engenho do Gama, Sangrador); São Paulo (Barretos, Rio Grande); Bahia; Maranhão (Miritiba); Piahy (Parnaguá); Pernambuco (Pão d'Alho); Minas Geraes (Água Suja); Goyaz (Araguayá, Rio The-souras). Bolivia (Mojos).

The specimens from Matto Grosso have the two median rectrices with a green tinge, the remainder blue-black edged with white on their tips. However, in a series from Brazil (Bahia), in the Munich Museum, two specimens have the median rectrices bronze-colored, the remainder blue-black without white on their tips. I believe that this difference is due to individual variation; in three males from Bahia the color of the tail-feathers agrees with the Matto Grosso specimens.

¹*Agyrtrina* Chubb.—In spite of Simon's objections ('Hist. Nat. Troch.,' p. 327, Note 5), Reichenbach's note ('Aufz. Kolib.,' 1854, p. 6) leaves no doubt that *Agyrtria* Rehb. was merely proposed as a substitute for *Thaumatias* Bonaparte.

	Measurements				
	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Agrytrina fimbriata nigricauda</i> ¹					
“Cayenne” = Bahia (type, No. 38557)	?	54	31.5	20.5	A. M. N. H.
Brit. Guiana or Trinidad (a type, No. 38559) ²	?	51.5	17.5	“
Brit. Guiana or Trinidad (a type, No. 35560)	?	51.5	28	19	“
Brazil, Bahia (trade-skins)	7?	51.2	29.3	18	Munich ³
Brazil, Matto Grosso, Tapirapoan	♂	54.5	30	19	A. M. N. H.
Brazil, Matto Grosso, Tapirapoan	♂	52	30	20	“
Brazil, Matto Grosso, Utiarity	♀	50	29	19.5	“
Minas Geraes, Agua Suja, near Bagagem	♀	53.5	32	18	“

(1121) *Hylocharis chrysura chrysura*⁴ (Shaw)

Figures 17 to 19

Trochilus chrysurus SHAW, ‘General Zoöl.,’ VIII, part 1, 1811, p. 335 (based on Azara, No. 91, Paraguay).

Chrysuronia chrysura PELZELN, ‘Orn. Bras.,’ I, 1868, p. 33 (Cuyabá, Caité, Estiva, Engenho do Cap. Gama, Matogrosso).

Chrysuronia ruficollis SALVIN, ‘Cat. B. Brit. Mus.,’ XVI, 1892, p. 251 (Chapada); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 123 (Chapada); GRANT, Ibis, 1911, p. 317 (opposite Puerto Medanos).

Hylocharis ruficollis maxwelli IHERING, ‘Cat. F. Braz.,’ I, 1907, p. 146 (Matto Grosso); SIMON, Bull. Mus. Paris, XVIII, 1912, p. 501 (Cambará).

Hylocharis chrysura SIMON, ‘Hist. Nat. des Troch.,’ 1921, p. 312 (Matto Grosso).

Paraguay: Puerto Pinasco, 1 ♂; Fort Wheeler, 1 ♀. Matto Grosso: Urucúm, 2 ♂; Agua Blanca de Corumbá, 1 ♂; Descalvados, 4 ♀; Rio São Lourenço, 1 ♂, 1 ♀.

RANGE.—Brazil: Matto Grosso (Cuyabá, Caité, Estiva, Engenho do Cap. Gama, Matogrosso, Chapada, Corumbá, Cambará, Urucúm, Agua Blanca de Corumbá, Descalvados, Rio São Lourenço); São Paulo (Rincão, Avanhanda, Rio Feio, Itapura); Minas Geraes (S. Domingos). Eastern Bolivia (Santa Cruz, Chiquitos, Rio Beni, Aguarenda, San Francisco, Caiza, Bolivian Chaco); Argentina (Salta, Chaco).

Upon comparing three topotypical specimens from Paraguay with the series from Matto Grosso, I fail to see any difference either in size or in coloration. Two examples from the Rio Mamoré, northeastern Bolivia, which are no doubt referable to *Hylocharis ruficollis maxwelli* Hartert, have very slightly shorter bills and tails but the difference is trifling and not borne out by the typical series from the Rio Beni in the Tring Museum. It appears, therefore, impossible to maintain the Bolivian race. Accord-

¹Of the localities given in Ibis, 1878, p. 47 (Trinidad, Cayenne, Bahia), the only one retained for the type-locality is Bahia.

²“a type” = ootype.

³One specimen in A. M. N. H.

⁴This name having the same base as *Trochilus ruficollis* Vieillot, 1817, has priority by six years.

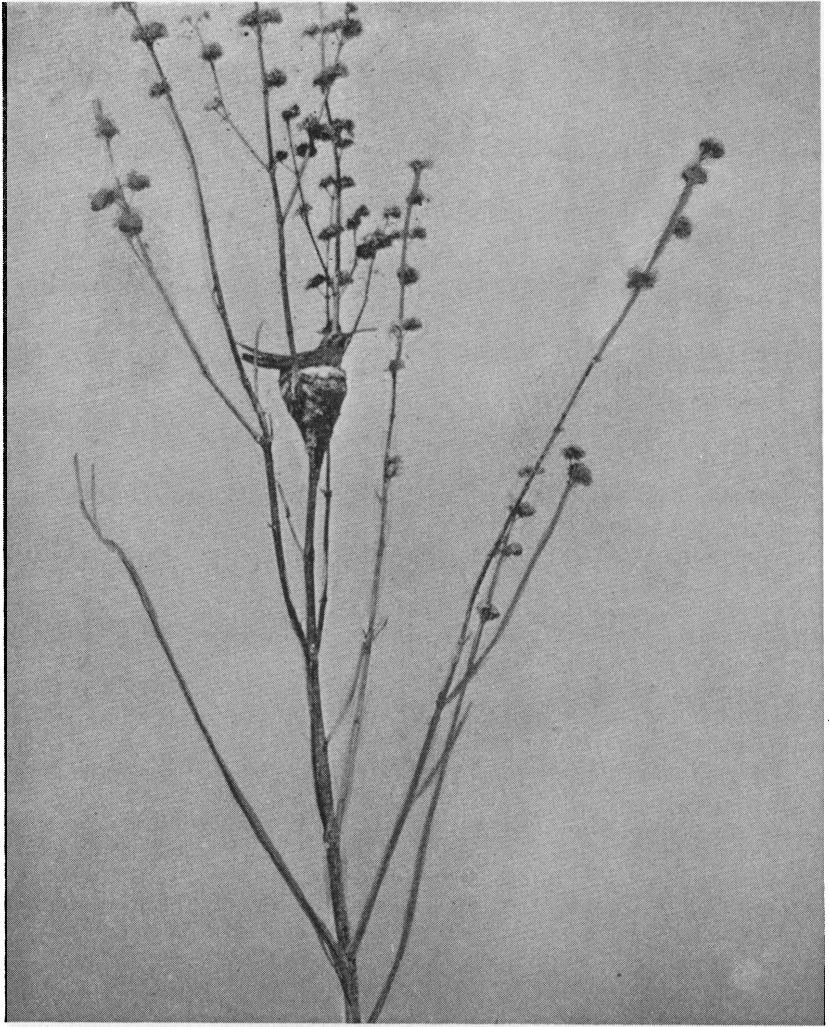


Fig. 17. Young humming birds, *Hylocharis chrysura chrysura* (Shaw), in nest, Descalvados, Matto Grosso, Brazil.

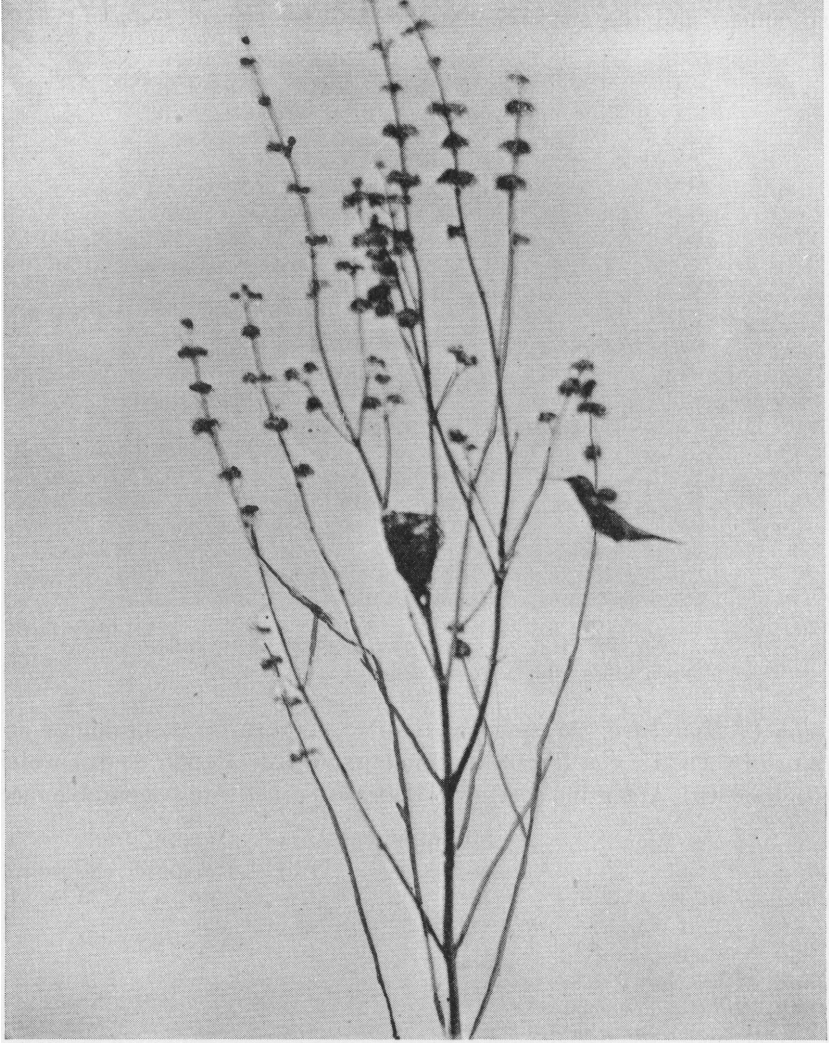


Fig. 18. *Hylocharis chrysura chrysura* (Shaw) and nest, Descalvados, Matto Grosso, Brazil.

ing to information received from Dr. Hellmayr (1922), Dr. Hartert, when writing his book on the humming birds, had no Paraguayan specimens and the measurements he gives for typical *Hylocharis rufi-*

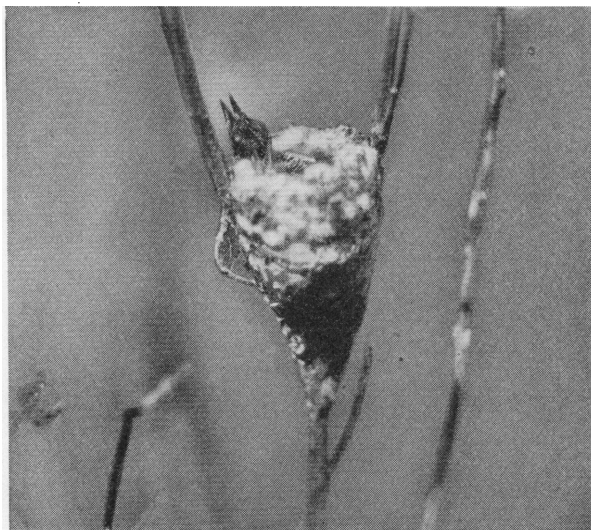


Fig. 19. *Hylocharis chrysura chrysura* (Shaw) and nest, Descalvados, Matto Grosso, Brazil.

collis (= *Hylocharis chrysura chrysura*) were taken from specimens obtained by Dr. H. von Ihering at Camaquã, Rio Grande do Sul, which together with Argentine specimens appear to constitute a separable race.

Measurements					
	SEX	WING	TAIL	CULMEN	MUSEUM
Paraguay, Puerto Pinasco	1 ♂	52	31	19	A. M. N. H.
“ Fort Wheeler	1 ♀	52.5	30	20	“
“ Concepción	1 ♀	52.5	28.5	21	“
Brazil, Matto Grosso, Urucúm, 2 ♂; Rio São Lourenço, 1 ♂; Matto Grosso, 3 ♂	6 ♂	52.3	30.7	19.8	“
Matto Grosso	1 ♀	51	28	19	“
Rio Grande do Sul, Camaquã	1 ♂	53.5	33.5	20	Munich
<i>Hylocharis ruficollis maxwelli</i>					
E. Bolivia, Rio Beni (1 type)	7 ♂	50.1	29.3	18.5	Tring
“ Rio Mamoré, Trinidad	1 ♂	48.5	27	19	A. M. N. H.
E. Bolivia, Rio Mamoré, Trinidad	1 ♀	52	29	17.5	“

(1124) *Hylocharis cyanus rostrata* Boucard*Hylocharis cyanea rostrata* BOUCARD, 'Gen. Humm. B.,' 1895, p. 400 (Rioja, Peru).*Hylocharis cyanea* PELZELN, 'Orn. Bras.,' I, 1868, p. 33 (Engenho do Cap. Gama and Matto Grosso).*Hylocharis cyanus rostratus* SIMON, Bull. Mus. Paris, XVIII, 1912, p. 501 (Cambará).*Hylocharis cyanus rostrata* MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 39 (presumably Matto Grosso).

No specimens collected.

RANGE.—Western Matto Grosso (Engenho do Cap. Gama, Cambará on the Rio Paraguay). Bolivia (Guarayos, Rio Beni); eastern Peru (Rioja).

(1138) *Chlorostilbon aureoventris tucumanus* Simon*Chlorostilbon aureoventris tucumanus* SIMON, 'Hist. Nat. des Troch.,' 1921, pp. 65, 293 (Tucumán, Argentina).*Hylocharis flavifrons* PELZELN, 'Orn. Bras.,' I, 1868, p. 33 (Cuyabá, Matto Grosso).*Chlorostilbon pucherani* SALVIN, 'Cat. B. Brit. Mus.,' XVI, 1892, p. 50 (Chapada); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 123 (Chapada); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 10 (Urucúm).*Chlorostilbon prasinus* IHERING, 'Cat. F. Braz.,' I, 1907, p. 148 (Matto Grosso).*Chlorostilbon aureoventris* SIMON, Bull. Mus. Paris, XVIII, 1912, p. 502 (Poconé, São Luiz de Caceres, Matto Grosso); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 39 (Poconé).

Paraguay: Fort Wheeler, 1 ♂, 2 ♀ (1 female taken September 20, brooding). Matto Grosso: Belvedere de Urucúm, 1 ♂, 1 ♀; Agua Blanca de Corumbá, 1 ? The bill in life is pale reddish with blackish tip.

RANGE.—Brazil: Matto Grosso (Cuyabá, Chapada, Urucúm, on the Rio Paraguay at Poconé and São Luiz de Caceres). Paraguay; Argentina (Prov. Salta, Tucumán, Catamarca, San Juan, Santa Fé, Cordoba, Mendoza).

I consider the race described by M. Eugène Simon separable from the typical form, *Chlorostilbon aureoventris aureoventris* from Bolivia, by its smaller size. I have seen no topotypical material from Bolivia, but I quote the measurements of wing and culmen of three specimens given by M. Simon ('Hist. Nat. des Troch.,' 1921, p. 65) which bear out the fact that the Bolivian bird is of larger size.

	Measurements				
	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Chlorostilbon a. aureoventris</i> Bolivia (no locality)	3?	52.4	1	15.1	Paris
<i>Chlorostilbon a. tucumanus</i> Paraguay, Fort Wheeler	1 ♂	48.5	30.5	16.5	A. M. N. H.
Brazil, Matto Grosso, Urucúm, 2 ♂; Chapada, 5 ♂	7 ♂	47.2	28.5	17.8	"
Argentina, Tafi Road, 1 ♂; Buenos Aires, 3 ♂; Mar del Plata, 1 ♂; Gen. Pineda, 1 ♂	6 ♂	49.5	29.9	18.3	"

¹Figures given by M. Simon lack tail measurements ('Hist. Nat. des Troch.,' p. 65).

(1150) *Chlorostilbon prasinus daphne* Gould

Chlorostilbon daphne GOULD, 'Introd. Troch.,' 1861, p. 177 (Pampas del Sacramento, Peru).

Agyrtria media PELZELN, 'Orn. Bras.,' I, 1868, p. 29 (Villa Bella de Matto Grosso).

Dr. Hellmayr (*in lit.*) states that the type of *Agyrtria media*, taken by Natterer on Nov. 7, 1826, at Villa Bella de Matto Grosso, on examination proves to be a young male of the above species. This is the only record from Brazil.

(1178) *Thalurania eriphile bæri* Hellmayr

Thalurania eriphile bæri HELLMAYR, Bull. Brit. Orn. Club, XXI, 1907, p. 27 (Goyaz and Matto Grosso); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 39 (Poconé).

Thalurania eriphile PELZELN, 'Orn. Bras.,' I, 1868, p. 30 (Engenho do Cap. Gama); SALVIN, 'Cat. B. Brit. Mus.,' XVI, 1892, p. 80 (part; Chapada); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 123 (Chapada); HARTERT, 'Das Tierreich,' 1900, Lief. 9, Trochilidæ, p. 86 (part; Matto Grosso); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 10 (Urucúm); IHERING, 'Cat. F. Braz.,' I, 1907, p. 149 (part; Matto Grosso).

Thalurania bæri SIMON, Bull. Mus. Paris, XVIII, 1912, p. 501 (Poconé and Cambará); 'Hist. Nat. des Troch.,' 1921, p. 305 (Matto Grosso).

Urucúm, 2 ♂, 1 ♂, 1 ♀; Belvedere de Urucúm, 7 ♂, 1 ♀; Campos Novos, Cerro do Norte, 1 ♂; Tapirapoan, 1 ♂; Utiarity, 1 ♂.

RANGE.—Central Brazil: Matto Grosso (Poconé, Engenho do Cap. Gama, Chapada, Urucúm, Belvedere de Urucúm, Campos Novos, Cerro do Norte, Tapirapoan, Utiarity); Bahia (Rio Preto); Piauhy (Alto Parnahyba); Goyaz (Araguayá). Eastern Bolivia (Chiquitos, Moxos).

I am following Dr. Hellmayr on this problem of geographic distribution as I have not seen *Thalurania balzani*. He says that *Thalurania eriphile bæri* is a distinct form intermediate between *T. e. eriphile* and *T. e. balzani*. The males of *T. e. bæri* have the sinciput of a brilliant golden green as in *T. e. eriphile*. The under tail-coverts are pure white, though the shortest have disk-like spots of blue-black or bronzy green. The females are smaller.

T. e. eriphile inhabits the south of Brazil, *T. e. bæri* the center of Brazil and eastern Bolivia, while *T. e. balzani* lives in the northern part of Bolivia and Brazil (east to the Tapajóz).

	Measurements				MUSEUM
	SEX	WING	TAIL	CULMEN	
Brazil, Matto Grosso, Urucúm	10 ♂	52.6	33.1	19.4	A. M. N. H.
" Matto Grosso, Chapada	10 ♂	54	34.3	19.2	"
" Matto Grosso, Tapirapoan	1 ♂	53	35	20	"
Brazil, Matto Grosso, Utiarity	1 ♂	53.5	35.5	18.5	"
" Matto Grosso, Campos Novos, Cerro do Norte	1 ♂	52.5	34.5	19.5	"

(1192) *Colibri serrirostris* (Vieillot)

Trochilus serrirostris VIEILLOT, 'Anal. Nouv. Orn. Élém.,' 1817, p. 69 (le Brésil).

Pelasophora serrirostris PELZELN, 'Orn. Bras.,' I, 1868, p. 28 (Cuyabá); SALVIN, 'Cat. B. Brit. Mus.,' XVI, 1892, p. 106 (Chapada); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 123 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 150 (Matto Grosso); SIMON, 'Hist. Nat. des Troch.,' 1921, p. 270 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Cuyabá, Chapada); Minas Geraes (Itatiaya, Marianna); São Paulo (Mattodentro, Ypanema, Ypiranga, Leme, Itararé, Avanhanda, Bebedouro, S. José do Rio Pardo, Cachoeira, Rio Mogy-Guassú); Goyaz; Rio de Janeiro; Bahia. Bolivia (Yungas, Valle Grande); Argentina (Prov. Tucumán, Santa Fé).

(1194) *Anthracothorax nigricollis nigricollis* (Vieillot)

Trochilus nigricollis VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., VII, 1817, p. 349 ("Brésil").

Lampornis mango (not of Linnæus) PELZELN, 'Orn. Bras.,' I, 1868, p. 28 (Engenho do Gama).

Lampornis violicauda ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 122 (Chapada).

Anthracothorax nigricollis IHERING, 'Cat. F. Braz.,' I, 1907, p. 150 (Matto Grosso).

Anthracothorax nigricollis nigricollis RIDGWAY, Bull. U. S. Nat. Mus., part 5, 1911, p. 459 (Matto Grosso).

Tamanduá de Descalvados. 1 ♂.

RANGE.—Brazil: Matto Grosso (Engenho do Gama, Chapada, Tamanduá de Descalvados); São Paulo (Ypanema, Goyaba, Irisanga, Nas Lages, Rio Virissimo, Piquete, Bebedouro, Baurú); Santa Catharina (S. Francisco); Rio Grande do Sul (Nova Hamburgo, Taquara); Minas Geraes (Marianna); Rio de Janeiro (Sepotuba, Araras, Porto do Jacarehy); Pará (Itacuan); Rio Tocantins (Cameté); Marajó; Mexiana. Paraguay; Peru; Bolivia; Argentina; Venezuela to the Island of Trinidad.

(1199) *Chrysolampis elatus*² (Linnæus)

Trochilus elatus LINNÆUS, 'Syst. Nat.,' I, 12th Ed., 1766, p. 192; ex Edwards, tab. 344, fig. sup., hab. in India orientali—errore (type ex Cayenne, Mus. Earl of Ferrers, fide Edwards).

Chrysolampis mosquitus auct. (not *Trochilus mosquitus* Linnæus).

Chrysolampis moschita PELZELN, 'Orn. Bras.,' I, 1868, p. 32 (Lavrinhas, Alcerim, Cuyabá).

Chrysolampis moschitus mosquitus ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 123 ("Chapada, Matto Grosso, August, 1882"); IHERING, 'Cat. F. Braz.,' I, 1907, p. 151 (Matto Grosso); SIMON, 'Hist. Nat. des Troch.,' 1921, p. 279 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Lavrinhas, Alcerim, Cuyabá, Chapada); Minas Geraes (Marianna); Rio de Janeiro; Goyaz; Pernambuco; Bahia; Parahyba; Maranhão. Argentina (Prov. Missiones); Tobago; Trinidad; Dutch and French Guiana, etc.

¹Cf. Simon, 'Hist. Nat. Troch.,' 1921, p. 275 = *Lampornis*.

²Nov. Zool., XV, 1908, p. 264.

(1204) *Polytmus guainumbi*¹ *thaumantias* (Linnæus)

Trochilus thaumantias LINNÆUS, 'Syst. Nat.,' I, 12th Ed., 1766, p. 190. Based on (Brisson ex) Maregrave, Brazil (Bahia suggested as type-locality, auct. Berlepsch, Nov. Zoöl., XV, 1908, p. 264).

Polytmus thaumantias PELZELN, 'Orn. Bras.,' I, 1868, p. 28 (Cuyabá, Caiçara, Engenho do Gama); SALVIN, 'Cat. B. Brit. Mus.,' XVI, 1892, p. 174 (part; Chapada); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 123 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 152 (Matto Grosso); GRANT, 1911, Ibis, p. 317 (opposite Rabicho and ten miles below Boca de Homiguera); SIMON, Bull. Mus. Paris, XVIII, 1912, p. 501 (São Luiz de Cáceres); 'Hist. Nat. des Troch.,' 1921, p. 315 (Matto Grosso occid., Cuyabá, Caiçara, Engenho do Gama, São Luiz de Cáceres).

Agua Blanca de Corumbá, 2 ♂, 1 ♀ (taken Nov. 10, laying); Fazenda do São João. In adult males in life the basal three-fourths of the maxilla and four-fifths of the mandible are reddish flesh-color. In the dried skin the bill is dusky with blackish tip and edges of maxilla.

RANGE.—Brazil: Matto Grosso (Cuyabá, Caiçara, Engenho do Gama, São Luiz de Cáceres, Chapada, Agua Blanca de Corumbá, Fazenda do São João); Goyaz (Goyaz City); São Paulo (Avanhandava, Bebedouro); Bahia; Maranhão (Rio Parnahyba). Bolivia (Mojos); Paraguay.

Easily distinguished from the Trinidad and Venezuelan bird *Polytmus guainumbi guainumbi*² Pallas by the clearer, less golden-green color of the throat and the less bronzy wash of both the upper and lowerparts. The specimens secured were all taken in the semi-open campo country.

In the Smithsonian 'Miscellaneous Collections,' XLVII, 1905, p. 342, Dr. Charles W. Richmond has published notes on the birds described by Pallas in the 'Adumbratiuncula' of Vroeg's 'Catalogue.' Of *Trochilus guainumbi* Pallas he says: "This is evidently a hummingbird and not a sunbird. The locality is wrong and should probably be Surinam. The description agrees very closely with the species now called *Polytmus thaumantias* (Linnæus, 1766)."

(1402) *Heliathrix auritus auriculatus* (Nordmann)

Trochilus auriculatus NORDMANN, in Erman's 'Reise, Naturhist. Atlas,' 1835, p. 5, Pl. II, fig. 1 (Rio de Janeiro).

Rio Roosevelt, 1 ♀ ?

RANGE.—All over eastern Brazil from Bahia south to Paraná and west across the republic to Matto Grosso (Rio Roosevelt), and the Rio Madeira (Calama), stretching into eastern Peru. In Pará and Maranhão it is replaced by *H. a. phainolæma*, while *H. a. auritus* is found only north of the Amazon.

(1406) *Heliactin bilophum* (Temminck)

Trochilus bilophus TEMMINCK, 'Pl. Col.,' livr. 3, 1820, Pl. XVIII, fig. 3 (Brésil = Fazenda Valo, Bahia).

¹*Trochilus guainumbi* Pallas in Vroeg., 'Cat. Rais. d'Ois., Adum.,' 1764, p. 2 (Surinam).

²*Trochilus guainumbi* Pallas, 1764, has priority over *Trochilus chrysobronchus* Shaw, 'Gen. Zoöl.,' VIII, (1), 1811, p. 287.

Heliactin cornuta PELZELN, 'Orn. Bras.,' I, 1868, p. 32 (Jatuba); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 123 (Chapada).

Heliactin bilophum HARTERT, 'Das Tierreich,' Lief. 9, Troch., 1900, p. 187 (Chapada).

Heliactinia bilopha IHERING, 'Cat. F. Braz.,' I, 1907, p. 154 (Matto Grosso).

Heliactin cornutus SIMON, 'Hist. Natur. des Troch.,' 1921, p. 390 (Matto Grosso).
Rio Tres Buritys, 1 ♀.

RANGE.—Brazil: Matto Grosso (Jatuba, Chapada, Rio Tres Buritys); São Paulo (Rio das Pedras, Pissarão, Santo Domingo, José Dias, Brejo, Corrego de Jaragua); Goyaz; Minas Geraes (Diamantina); Bahia (Morro de Condeuba); Piauihy (Santo Antonio de Gilboez, Corrientes).

(1410) *Heliomaster furcifer* (Shaw)

Trochilus furcifer SHAW, 'Gen. Zoöl.,' VIII, (1), 1811, p. 280 (Paraguay).

Heliomaster regis PELZELN, 'Orn. Bras.,' I, 1868, p. 30 (Cuyabá, Coutinho, Engenho do Gama, Matogrosso).

Heliomaster furcifer SALVIN, 'Cat. B. Brit. Mus.,' XVI, 1892, p. 119 (Chapada, Matto Grosso, Coutinho); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 123 (Chapada); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 9 (Urucúm); IHERING, 'Cat. F. Braz.,' I, 1907, p. 155 (Matto Grosso); SIMON, 'Hist. Natur. des Troch.,' 1921, p. 393 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Cuyabá, Coutinho, Engenho do Gama, Matto Grosso, Chapada, Urucúm); (São Paulo, Santo Domingo, Rio das Pedras, Verissimo, S. Antonio, Jaraguay); Goyaz; Rio Grande do Sul (Pelotas). Bolivia (Chaco, Caiza, San Lorenzo, Campo Santo); Paraguay; northern Argentina (Buenos Aires, etc.).

(1412) *Anthoscenus longirostris longirostris* (Audebert and Vieillot)

Trochilus longirostris AUDEBERT AND VIEILLOT, 'Ois. Dorés,' I, livr. 10, 1801, p. 107, Pl. LIX (Trinidad).¹

Heliomaster longirostris PELZELN, 'Orn. Bras.,' I, 1868, p. 31 (Engenho do Cap. Gama, S. Vicente).

Floricola longirostris SALVIN, 'Cat. B. Brit. Mus.,' XVI, 1892, p. 229 (Engenho do Gama).

Anthoscenus longirostris IHERING, 'Cat. F. Braz.,' I, 1907, p. 155 (Matto Grosso).
No specimens collected.

RANGE.—Brazil: Matto Grosso (Engenho do Cap. Gama, S. Vicente); Rio Tocantins (Cametá, Alcobaça); Rio Jamundá (Faro); Pará; Santarém. Guiana; Venezuela; Trinidad; Bolivia.

(1418) *Calliphlox amethystina* (Boddaert)

Trochilus amethystinus BODDAERT, 'Tab. Pl. Enl.,' 1783, p. 41 (ex Daubenton, 'Pl. Enl.,' 672, fig. 1. Habitat in Cayenne).

Calliphlox amethystina PELZELN, 'Orn. Bras.,' I, 1868, p. 32 (Cuyabá); SALVIN, 'Cat. B. Brit. Mus.,' XVI, 1892, p. 386 (Chapada); ALLEN, Bull. Amer. Mus. Nat.

¹Vieillot specifies Trinidad as type-locality in 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., VII, 1817, p. 366.

Hist., V, 1893, p. 123 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 155 (Matto Grosso); SIMON, 'Hist. Nat. des Troch.,' 1921, p. 400 (Matto Grosso).

Descalvados, 1 ♀; Belvedere de Urucúm, 1 ♂.

RANGE.—Brazil: Matto Grosso (Cuyabá, Chapada, Descalvados, Belvedere de Urucúm); Goyaz; São Paulo (Ilha de São Sebastião, Baurú, Rio Feio, Ypanema, S. Domingo); Paraná (Curytiba); Rio Grande do Sul; Minas Geraes; Rio de Janeiro; Pernambuco; Bahia; Pará; Rio Tocantins (Cameté). Paraguay (Puerto Bertoni); Venezuela; Guianas; Colombia; Peru; Argentina (Misiones).

One immature male with a few scattered metallic throat-feathers and an adult female, both collected in November. This species was observed in open country only.

(1433) *Lophornis gouldii* (Lesson)

Ornismya gouldii LESSON, 'Hist. Nat. des Troch.,' 1832, p. 103, Pl. xxxvi; descr. orig. ♂ ad. (Hab. ign; Brabourne and Chubb, 'S. A. Check-List,' substitute Pará).

Trochilus reginæ SCHREIBERS,¹ Isis, 1833, p. 534, descr. orig. ♂ ad. ("in provincia Matto Grosso").

Lophornis reginæ PELZELN, 'Orn. Bras.,' I, 1868, p. 32 (Provinz Matogrosso).

Lophornis gouldi IHERING, 'Cat. F. Braz.,' I, 1907, p. 156 (Matto Grosso); SIMON 'Hist. Nat. des Troch.,' 1921, p. 284 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso; lower Amazon; Providencia; Bragança; St. Antonio do Prata; Rio Guamá (Sta. Maria de S. Miguel); Rio Tocantins (Cameté and Arumatheua); Maranhão (Tury-assú).

(1434) *Lophornis magnificus* (Vieillot)

Trochilus magnificus VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., VII, 1817, p. 367 ("Soumidorio à quelques milles de la rivière Paraiba").²

Lophornis magnificus SALVIN, 'Cat. B. Brit. Mus.,' XVI, 1892, p. 422 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 156 (Matto Grosso).

Lophornis magnifica ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 123 (Chapada); SIMON, 'Hist. Nat. des Troch.,' 1921, p. 284 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Chapada); Rio de Janeiro; São Paulo (Pirahy, Oudaria, Ypanema, Piquete, Itararé, Rincão, Avanhanda, Jaboticabal, Barretos); Rio Grande do Sul; Minas Geraes (Rio Grande, Vargem Alegre); Paraná; Bahia.

(1445) *Gouldomyia langsdorffii melanosternon* (Gould)

Gouldia melanosternon GOULD, Ann. Nat. Hist., (4), I, 1868, p. 323 (Peru).

Gouldi langsdorffi PELZELN, 'Orn. Bras.,' I, 1868, p. 32 (Destacamento do Ribeirão).³

Popelairia langsdorffi IHERING, 'Cat. F. Braz.,' I, 1907, p. 157 (Matto Grosso).

No specimens collected.

¹Nov. Zoöl., XIII, 1806, p. 379.

²See 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXIII, 1818, p. 428.

³Rio Mamoré, Matto Grosso politically.

RANGE.—Brazil (Matto Grosso Destacamento do Ribeirão), west and north to eastern Ecuador (Rio Napo) and Peru (basin of the Marañón and its tributaries, Ucayali, etc.).

(1458) *Trogonurus collaris* (Vieillot)

Trogon collaris VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., VIII, 1817, p. 320 (Cayenne); PELZELN, 'Orn. Bras.,' I, 1868, p. 19 (Villa Maria, Engenho do Cap. Gama); OGILVIE-GRANT, 'Cat. B. Brit. Mus.,' XVII, 1892, p. 448 (Villa Maria).

Trogon curucui IHERING, 'Cat. F. Braz.,' I, 1907, p. 157 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Villa Maria, Engenho do Cap. Gama); Rio de Janeiro; Bahia; Rio Negro (Barra do Rio Negro); Rio Juruá; Rio Jamauchim (Sta. Helena); Rio Jary (Santo Antonio da Cachoeira). Ecuador; Colombia; Guiana; Venezuela; Trinidad; Tobago.

(1466a) *Trogonurus variegatus behni* (Gould)

Trogon behni GOULD, 'Monogr. Trogon,' 2d Ed., 1875, Pl. xx (on the plate spelled "*T. behmi*"; type "ex Bolivia—Bridges").

Trogon variegatus PELZELN, 'Orn. Bras.,' I, 1868, p. 19 (Villa Maria, Cuyabá, Matogrosso); OGILVIE-GRANT, 'Cat. B. Brit. Mus.,' XVII, 1892, p. 468 (Villa Maria, Chapada); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 129 (Chapada); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 10 (Urucúm); IHERING, 'Cat. F. Braz.,' I, 1907, p. 159 (Matto Grosso); GRANT, Ibis, 1911, p. 324 (Albuquerque).

Paraguay: Fort Wheeler, 1 ♂; Rio Negro, 1 ♂; Rio Hacha, 1 ♂. Matto Grosso: Urucúm, near Corumbá, 2 ♂, 1 ♀; Tapirapoan, 1 ?; Rio Roosevelt, Camp 4, 1 ♂.¹

RANGE.—Brazil: Matto Grosso (Villa Maria, Cuyabá, Matto Grosso, Chapada, Urucúm, near Corumbá, Tapirapoan, Rio Roosevelt (Camp 4)). Bolivia (Chaco, San Francisco); Paraguay (Rio Negro, Rio Hacha; Fort Wheeler); Argentina (Jujuy, San Lorenzo).

Dr. Hellmayr² recognizes the Bolivian form under the name *Trogon variegatus behni* on the basis of larger size and shorter white tips of the outer rectrices, and I believe that Matto Grosso specimens also belong to *T. v. behni*. There are three races:

(1) *T. variegatus variegatus*, eastern half of Brazil from Pará down to Rio de Janeiro, west at least to the Rio Araguayá.

(2) *T. variegatus behni*, northern Argentina; eastern Bolivia; Brazil, Matto Grosso.

(3) *T. v. bolivianus*, from northern Bolivia (sources of the Rio Beni) north to southeastern Colombia, east to the Tapajóz.

(1461) *Trogon strigilatus strigilatus*³ Linnæus

Trogon strigilatus LINNÆUS, 'Syst. Nat.,' 12th Ed. I, 1766, p. 167 ("Habitat in Cayania") = adult female; based on *Trogon cayanensis cinereus* Brisson, 'Orn.,' IV, p. 165, Pl. xvi, fig. 1.

¹Agrees in every way with specimens from Urucúm, near Corumbá.

²Nov. Zoöl., XV, 1908, p. 88.

³*Trogon viridis* auct., Bull. U. S. Nat. Mus., No. 50, part 5, 1911, p. 751.

Trogon viridis PELZELN, 'Orn. Bras.,' I, 1868, p. 20 (Rio do Sipotuba, Villa Maria, Engenho do Cap. Gama, Matogrosso); OGILVIE-GRANT, 'Cat. B. Brit. Mus.,' XVII, 1892, p. 458 (Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 158 (Matto Grosso).

Rio Roosevelt, Camp 5, 1 ♀ juv.

RANGE.—Brazil: Matto Grosso (Rio do Sepotuba, Villa Maria, Engenho do Cap. Gama, Matto Grosso); Rio de Janeiro (Registro do Sai); São Paulo (Monjolinha, Mattodentro, Iguapé, Alto da Serra); Espirito Santo (Rio Doce); Amazon Valley; Rio Purús; Rio Juruá; Rio Xié; Rio Içanna; Rio Negro (Barcellos, Marabitanas); Borba; Forte do Rio Branco; Manaqueri (Rio Solimões); Pará; Rio Capim; Rio Tocantins (Mazagão, Arumatheua); Rio Xingú (Victoria, Cussary); Rio Tapajóz (Villa Braga, Mararú); Marajó (Pindobal); Rio Jamundá (Faro); Maracá; Monte Alegre; Obidos, Maranhão. Colombia to Cayenne, upper Amazon and southeastern Brazil.

The specimen from the Rio Roosevelt is undoubtedly immature, as is shown by the brownish-gray color of the upperparts, of the breast and chest, and by the narrow, tapering tail-feathers edged with buff. Full-grown birds show a more extensive white area to the tail feathers and each rectrix is broader.

(1465a) *Chrysotrogon violaceus ramonianus*¹ (Deville and Des Murs)

Trogon ramoniana DEVILLE AND DES MURS, Rev. Mag. Zool., 1849, (2), I, p. 331 (Sarayacu, eastern Peru).

Trogon meridionalis PELZELN, 'Orn. Bras.,' I, 1868, p. 20 (Engenho do Cap. Gama).

Trogon ramonianus GOELDI, Bol. Mus. Goeldi, V, 1908, p. 92 (Pará, etc., lower Amazon).

Trogon violaceus violaceus (err.) HELLMAYR, Nov. Zoöl., XVII, 1910, p. 387 (Maroins, Rio Machados).

No specimens collected.

RANGE.—Brazil, from Pará along the south bank of the Amazon and its tributaries to Peru, and from the Marañón north to eastern Ecuador and southeastern Colombia (Caquetá).

(1470) *Curucujus melanurus melanurus* (Swainson)

Trogon melanurus SWAINSON, 'Anim. in Menag.,' part 3, Dec., 1837, p. 329 (Demerara); PELZELN, 'Orn. Bras.,' I, 1868, p. 19 (Villa Maria, Rio do Sipotuba).

Rio Roosevelt, Camp 10, 1 ♂; Monte Cristo, 1 ♀.

RANGE.—Brazil: Matto Grosso (Villa Maria, Rio do Sepotuba, Monte Cristo, Rio Roosevelt); Rio Purús (Cachoeira); Rio Juruá; Rio Negro (Barra do Rio Negro, Barcellos, Marabitanas); Pará; St. Antonio do Prata, Rio Iriri (Bocca do Curuá); Cussary; Marajó (Rio Macujubim); Monte Alegre; Obidos; Rio Jamundá (Faro); Maranhão. Guianas and Amazon Valley, west to the eastern base of the Andes in Colombia and Ecuador.

¹About this form, see Hellmayr, Abhandl. Math.-Phys. Kl. Bayr. Akad. Wiss., XXVI, No. 2, 1912, pp. 61, 62.

A male from the Rio Roosevelt is slightly larger than a male from British Guiana. It agrees in the color of the red below but the breast and chest, as well as the color above, are more brassy bronze. This, I believe, is due to individual variation.

	Measurements				MUSEUM
	SEX	WING	TAIL	CULMEN	
Brit. Guiana, Tumatumari, Potaro River	1 ♂	156	156	22.5	A. M. N. H.
Brit. Guiana, Demerara	1 ♂	149.5	156.5	20	Munich
“ “ Tumatumari, Potaro River, 2 ♀; Potaro Landing, 1 ♀	3 ♀	150.6	157.2	20.8	A. M. N. H.
Brazil, Matto Grosso, Rio Roosevelt	1 ♂	161.5	171.5	21.5	“
Brazil, Matto Grosso, Monte Cristo	1 ♀	152	155	21	“
Brazil, Peixe-Boi, near Pará	1 ♀	150.5	162.5	20.5	Munich
“ “ “ “	1 ♀	149.5	149	20.5	“

(1475) *Coccyzus melacoryphus* Vieillot

Coccyzus melacoryphus VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., VIII, 1817, p. 271 (Paraguay, based on Azara, No. 267).

Coccyzus melanocoryphus ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 135 (Chapada).

Paraguay: Asunción, 1 ♂; Trinidad, 2 ♂. Matto Grosso: Descalvados, 1 ♀; Agua Blanca de Corumbá, 1 ♀.

RANGE:—Brazil: Matto Grosso (Chapada, Descalvados, Agua Blanca de Corumbá); Rio de Janeiro (Sapitiba); São Paulo (Ypanema, Piquete, Iguapé, Avandava, Itapura); Minas Geraes (Marianna); Bahia; Pernambuco; Pará; Rio Tocantins (Arumatheua); Rio Xingú (Victoria, Forte Ambé); Monte Alegre; Eréré; Rio Maecurú; Rio Jamundá (Faro). Paraguay (Asunción, Trinidad); Bolivia (Aguairenda); Argentina; Guiana; Venezuela; Ecuador; Peru.

Generally distributed in South America. The call notes of this species are very different from those of the yellow-billed cuckoo, the "rain-crow" of the north.

(1476) *Coccyzus americanus americanus* (Linnæus)

Cuculus americanus LINNÆUS, 'Syst. Nat.,' I, 10th Ed., 1758, p. 111 ("Habitat in Carolina").

Urucúm, near Corumbá, 1 ♂, November 30, 1 ♀ im., December 11, 1913.

RANGE.—Brazil: Matto Grosso (Urucúm, near Corumbá). Venezuela (Mérida); to New York.

This is the only instance I have found of this species occurring in Matto Grosso; it is an unusual locality, much farther south than any previous record, Ridgway¹ having given Colombia as the southern limit of its winter range.

¹ Birds of North and Middle America, VII, p. 14.

(1477) *Coccyzus eulери* Cabanis

Coccyzus eulери CABANIS, Journ. f. Orn., XXI, 1873, p. 72 (Cantagallo, Rio de Janeiro).

Coccyzus americanus ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 136 (Chapada, Matto Grosso).

Coccyzus eulери CHAPMAN, Auk, VIII, 1891, p. 159 (Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 160 (Matto Grosso).¹

No specimens collected.

RANGE.—British Guiana (Annai, Supenaam River); Dutch Guiana (near Pararah); Venezuela (Ciudad Bolivar, Orinoco); Brazil (Santarém, Rio Tapajóz; Rosario, Maranhão; Paciencia, São Paulo; Chapada, Matto Grosso).

(1486e) *Piaya cayana cabanisi* Allen

Piaya cayana cabanisi ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 136 (Chapada, Matto Grosso, Brazil); IHERING, 'Cat. F. Braz.,' I, 1907, p. 161 (Matto Grosso).

Piaya cayana SHELLEY, 'Cat. B. Brit. Mus.,' XIX, 1891, p. 373 (part; Chapada).

Piaya macrura GRANT, Ibis, 1911, p. 325 (Pan de Azucar and Boca de Homiguera).

Urucúm, near Corumbá, 2 ♂; one, No. 127437, has bare skin about the eye red, eye crimson. Tapirapoan, 1 ♀.

RANGE.—Brazil: Matto Grosso (Chapada, Urucúm, near Corumbá, Tapirapoan, Pan de Azucar, Boca de Homiguera).

I prefer to call the Matto Grosso form *P. c. cabanisi*, based by Dr. Allen on specimens from Chapada, although Dr. Stone² proposes to supplant it by the earlier name *Piaya cayana pallescens* Cabanis and Heine, which has proved on examination of type to be referable to the Bahian race.

Piaya cayana cabanisi appears to be chiefly found in Matto Grosso, specimens having been examined from Chapada, Urucúm, and Tapirapoan. Several specimens from southern Bahia appear to be indistinguishable from *Piaya cayana cabanisi*, while four skins from northwestern Bahia (Sambaiba, near Barra, Rio Grande, and Rio Preto) and southern Piauhy (Parnaguá) are more whitish beneath and more of a bright, foxy red above, and are *Piaya cayana pallescens*.

Piaya cayana macroura ranges all over southeastern Brazil from Espirito Santo and Minas Geraes south to Rio Grande do Sul and Paraguay. Contrary to Dr. Stone's statement (*op. cit.*, p. 501) regarding a specimen from Rio de Janeiro, I find examples from Victoria, Espirito Santo, and Agua Suja near Bagagem, western Minas Geraes, in every respect similar to specimens [from Paraguay, admitted to be the type-locality of *Piaya cayana macroura*.

¹See also Hellmayr, Nov. Zoöl., XX, 1913, pp. 252-3.

²Proc. Acad. Nat. Sci. Phila., LX, 1908, p. 500.

Measurements					
	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Piaya cayana cayana</i>					
Venezuela, Caura	4?	134.2	271.3	26.8	Munich
<i>Piaya cayana obscura</i>					
Brazil, Borba	♂	143.5	255	27.5	Vienna
S. E. Peru, Andes of Carabaya, Chaquimayo	?	142	260	26	Munich
S. E. Peru, Andes of Carabaya, Chaquimayo	♀	136.5	263	25	"
<i>Piaya cayana subspecies</i>					
Brazil, Pará	?	140	260	25	Vienna
" near Pará	?	137.5	248.5		Munich
" Pará, Ipitinga, Rio Acará	juv. ♂	134.5	249	28.5	"
Brazil, near Pará	♀	139.5	253	25.5	"
" Miritiba, Maranhão	♀	146	264	25.5	"
" Maranhão, Bôa Vista	♂	145.5	272	27.5	Vienna
<i>Piaya cayana pallescens</i>					
Northern Bahia, Fac. Taboa:					
Rio Preto	♂	152	295	25.5	Vienna
Northern Bahia, Fac. da Serra,					
Rio Grande (1st an. moult)	♂	140	259	26	"
Northern Bahia, Sambaiba	juv. ♂	145	282	25.5	"
Piauhý, Parnaguá	♂	152	290	27.5	"
<i>Piaya cayana cabanisi</i>					
Brazil, Matto Grosso, Chapada (topotype)					
	?	156	301	25	A. M. N. H.
Brazil, Matto Grosso, Chapada (topotype)					
	?	153	306	25	"
Brazil, Matto Grosso, Urucúm					
	♂	151.5	280	27.5	"
Brazil, Matto Grosso, Urucúm					
	♂	144	282	26	"
Brazil, Matto Grosso, Tapiraipoan (1st annual moult)					
	♀	152	281.5	28	"
<i>Piaya cayana macroura</i>					
S. E. Brazil, Espirito Santo, Victoria					
	♂	158	301	26	Munich
S. E. Brazil, west Minas Geraes, Agua Suja, near Bagagem					
	♀	154	331	26	"

Measurements (Continued)

	SEX	WING	TAIL	CULMEN	MUSEUM
São Paulo, Ypanema	4 ♂	151.3	299.2	24.3	Vienna (Natterer)
" " "	♀	156	340	23.5	Vienna (Natterer)
" " "	♀	147.5	295	23.5	Vienna (Natterer)
Paraguay, Bernalcué, near Asunción	♂	156.5	312	26.5	Munich
Paraguay, Bernalcué, near Asunción	♂	155	292	28.5	"

(1488) *Piaya cayana obscura* Snethlage

Piaya cayana obscura SNETHLAGE, Journ. f. Orn., LVI, 1908, p. 21 (Bom Lugar, Rio Verde, upper Rio Purús, western Brazil).

Tres Buritys, 1 ♂ ad.

RANGE.—Brazil: northern Matto Grosso (Tres Buritys); Rio Purús (Bom Lugar Monte Verde); upper Amazon; from the Rio Madeira west to northern Bolivia and eastern Peru.

Agrees in detail with examples from Porto Velho, Rio Madeira and Todos Santos, Rio Chaparé, Bolivia.

There is no earlier record for this race in Matto Grosso.

(1489) *Piaya melanogastra melanogastra* (Vieillot)

Cuculus melanogaster VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., VIII, 1817, p. 236 ("Java" error! hab. subst. Cayenne, auct. Berlepsch and Hartert).

Monte Cristo, 1 ♀ ad.

RANGE.—Northern Brazil, in state of Amazonas (Borba, Rio Madeira; Rio Juruá; Marabitanas, Rio Negro; Rio Içanna), south to northern Matto Grosso (Monte Cristo). Ecuador; Venezuela; Guiana.

It is impossible to judge the validity of *Piaya melanogaster ochracea* Cory,¹ which is based on a single specimen from Peru (Yurimaguas, Yane Yaca). The Monte Cristo bird shows none of the characters ascribed to the alleged race of Mr. Cory. Without a series from different parts of the range, I refer our bird to the typical race *Piaya melanogastra melanogastra* as I see no difference between our specimen and two skins from the Rio Caura, Venezuela.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
British Guiana, Rockstone,	♀	132	204	27	A. M. N. H.
" " Tumatumari	♀	138.5	217	31.5	"
Venezuela, ft. of Mt. Duida	♀	131	202.5	27	"
French Guiana, Cayenne	?	140.5	216.5	26	"

¹Field Mus. Nat. Hist., Pub. 183, Ornith. Ser., I, No. 9, p. 304.

(1490) *Coccyua rutila rutila* (Illiger)¹

Cuculus rutilus ILLIGER, Abh. der Königl. Ak. Wiss. Berlin, 1812-1813 (1816), p. 224 in text (based essentially on *Cuculus cayanensis minor* Brisson, 'Orn.,' IV, p. 124, Cayenne).

Piaya rutila PELZELN, 'Orn. Bras.,' III, 1870, p. 273 (Cuyabá, Villa Maria, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 161 (Matto Grosso).

Piaya minuta SHELLEY, 'Cat. B. Brit. Mus.,' XIX, 1891, p. 378 (Villa Maria).

No specimens collected.

RANGE:—Brazil: Matto Grosso (Cuyabá, Villa Maria); Goyaz (Rio Araguayá); Amazonas; Rio Juruá; Rio Negro (Barra do Rio Negro); Rio Purús (Cachoeira, Bom Lugar, Ponto Alegre); Pará; Marajó (S. Natal, Rio Arary); Mexiana; Cussary; Rio Jary (St. Antonio da Cachoeira); Monte Alegre; Rio Jamundá (Faro).

(1496a) *Tapera nævia chochi* (Vieillot)

Coccyzus chochi VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., VIII, 1817, p. 272 (based on Azara, Paraguay).

Diplopterus nævius PELZELN, 'Orn. Bras.,' III, 1870, p. 271 (Cuyabá); SHELLEY, 'Cat. B. Brit. Mus.,' XIX, 1891, p. 423 (Chapada); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 140 (Chapada); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 11 (Urucúm).

Tapera nævia IHERING, 'Cat. F. Braz.,' I, 1907, p. 162 (Matto Grosso).

Paraguay: Trinidad (near Asunción), 1 ♂ ad. Matto Grosso: Urucúm, near Corumbá, 1 ♀.

RANGE:—Brazil: Matto Grosso (Cuyabá, Chapada, Urucúm, near Corumbá). Paraguay (Trinidad, near Asunción).

Birds from Paraguay and southern Brazil are different from Venezuelan specimens in being larger, also browner and paler above. One male, Trinidad, Paraguay, measured: wing, 114; tail, 172.5; culmen, 15 mm. At almost every stopping-place on the journey through Brazil this cuckoo was either seen or heard. The favorite haunt is in the tangled thickets that form the borderland between open country and heavy forest. When perched and giving vent to its peculiar whistling call, this bird has the very unusual habit of spreading the short quills forming the bastard wing; these feathers are dark brown and their outline when spread is very conspicuous against the background of the gray breast. It is due to this curious habit that it has acquired the name "four-wings."

"For a good many years we have sought to know something of the breeding habits of this cuckoo, but not until during the last trip did we succeed. One day while collecting at Agua Blanca near Corumbá, the insistent calls of a young bird directed my attention to the mass of carefully interwoven thorny twigs that formed the nest of a pair of pretty-throated or white-cheeked spine-tails (*Schaeniophylax phryganophila*). Investigation revealed a single young bird in the nest cavity.

¹Proc. Acad. Nat. Sci. Phila., LX, 1908, p. 496. A review of the genus *Piaya*, by Witmer Stone.

But while the spine-tails had only one mouth to feed, that one must have seemed to them as never closed. Their charge proved to be a young brown cuckoo, lusty and strong and much larger than either of its foster parents. That the mother cuckoo could have wormed her way through the tortuous and narrow thorn-lined passageway leading to the nest cavity of the spine-tails seemed almost incredible.¹ The proof, however, was before us and we had also learned where the four-wings nested."

(1497) ***Dromococcyx phasianellus*** (Spix)

Macropus phasianellus SPIX, 'Av. Bras.,' I, 1824, p. 53, Pl. XLII ("in sylvis Tonantins—fluvii lateralis fl. Solimões").

Dromococcyx phasianellus PELZELN, 'Orn. Bras.,' III, 1870, p. 270 (Matogrosso); SHELLEY, 'Cat. B. Brit. Mus.,' XIX, 1891, p. 426 (Chapada); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 140 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 162 (Matto Grosso); RIDGWAY, Bull. U. S. Nat. Mus., No. 50, part 7, 1916, p. 87 (Chapada).

Descalvados, 1 ♀, breeding; eye, seal-brown; feet, pale drab; maxilla, black; mandible, dusky plumbeous.

RANGE:—Brazil: Matto Grosso (Chapada, Descalvados); São Paulo (Ypanema, Piracicaba, Itapura); Rio Grande do Sul; Rio de Janeiro; Minas Geraes; Bahia; Piahy; Borba; Rio Negro (Barra do Rio Negro). Bolivia; Colombia; and Central America.

This bird was found in the thick undergrowth at the belt of heavy timber of the river. The flight was undulating, slow and graceful, with the tail broadly spread. A fully developed egg was taken from the oviduct. It is white, marked with liver-brown dots and blotches chiefly in an irregular band about the larger end, but there is also an imperfect band of markings about the smaller end; it is elongate ovate in form, measuring 25×14.5 mm.

(1498) ***Dromococcyx pavoninus*** Pelzeln

Dromococcyx pavoninus PELZELN, 'Orn. Bras.,' III, 1870, p. 270 (Araguayá; Engenho do Gama); IHERING, 'Cat. F. Braz.,' I, 1907, p. 163 (Matto Grosso).

No specimens collected.

RANGE:—Brazil: Matto Grosso (Engenho do Gama); Goyaz (Araguayá); Rio de Janeiro; São Paulo (Itapura, Victoria de Botucatú); Amazonas; Rio Negro; Rio Branco (Arimani). Guiana; eastern Ecuador; Peru.

(1499) ***Crotophaga ani*** Linnæus

Crotophaga ani LINNÆUS, 'Syst. Nat.,' I, 10th. Ed., 1758, p. 105 (based on Browne and Sloane, Jamaica; and Marcgrave, northeastern Brazil); PELZELN, 'Orn. Bras.,' III, 1870, p. 269 (Matogrosso); SHELLEY, 'Cat. B. Brit. Mus.,' XIX, 1891, p. 429

¹See description of nest of spine-tails, p. 234.

(Chapada); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 140 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 163 (Matto Grosso).

Urucúm, near Corumbá, 1 ♂, 1 ♀.

RANGE.—Brazil: Matto Grosso (Chapada, Urucúm, near Corumbá); Rio de Janeiro (Sapitiba de Guaratiba); São Paulo (Ypanema, Ypiranga, S. Sebastião, Franca, S. José do Rio Pardo); Rio Grande do Sul; Bahia; Pernambuco; Ceará; Pará; St. Antonio do Prata; Marajó; Amazonas (Rio Juruá); Rio Negro (Barra do Rio Negro). Paraguay; Argentina (Jujuy; San Lorenzo); Colombia. Central and South America generally; and West Indies.

Flocks were often made up of about equal numbers of *C. ani* and *Guira guira*.

(1500) *Crotophaga major* Gmelin

Crotophaga major GMELIN, 'Syst. Nat.,' I, (I), 1788, p. 363 (based on Brisson and Buffon, Cayenne); PELZELN, 'Orn. Bras.,' III, 1870, p. 268 (Cuyabá, Caiçara, Matogrosso); SHELLEY, 'Cat. B. Brit. Mus.,' XIX, 1891, p. 428 (Matto Grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 140 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 163 (Matto Grosso).

Paraguay: Rio Negro, 1 ♂, 1 ♀. Matto Grosso: Descalvados, 1 ♂; Urucúm, near Corumbá, 2 ♂.

RANGE.—Generally distributed in South America. Brazil: Matto Grosso (Cuyabá, Caiçara, Matto Grosso, Chapada, Descalvados, Urucúm, near Corumbá); São Paulo (Irisanga, Rio Tibaya, Salto Grande do Paranapanema); S. Catharina; Rio de Janeiro (Sepotuba); Bahia; Piahy; Maranhão; Pará (Ilha das Onças, Rio Capim); Marajó; Mexiana; Amazonas (Rio Juruá). Paraguay (Rio Negro); Colombia; Ecuador; Peru; Venezuela; Guiana.

"Irregularly abundant at almost all points visited. At Urucúm there was a tame great ani that came and went according to its own sweet will, wandering about the grounds in the neighborhood of the ranch buildings. It was very inquisitive and seemed to delight in following the children about."

(1502) *Guira guira* (Gmelin)

Cuculus guira GMELIN, 'Syst. Nat.,' I, (I), 1788, p. 414 (based on Brisson, ex Marcgrave, N. E. Brazil).

Octopteryx guira PELZELN, 'Orn. Bras.,' III, 1870, p. 269 (Cuyabá, Caiçara).

Guira guira SHELLEY, 'Cat. B. Brit. Mus.,' XIX, 1891, p. 434 (Chapada); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 140 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 163 (Matto Grosso).

Paraguay: Trinidad, 2 ♀; Puerto Pinasco, 1 ♂. Matto Grosso: Urucúm, near Corumbá, 3 ♂.

RANGE.—Brazil: Matto Grosso (Cuyabá, Caiçara, Chapada, Urucúm, near Corumbá); São Paulo (Ypanema, Ypiranga, S. José do Rio Pardo); Santa Catharina; Rio Grande do Sul; Minas Geraes; Bahia; Maranhão; Pernambuco; Pará (Capanema, Quati-purú); Marajó; Mexiana. Paraguay (Puerto Pinasco, Fort Wheeler. Trinidad); Uruguay; Argentina; Bolivia.

Very abundant about Trinidad, Puerto Pinasco, and Fort Wheeler, Paraguay, and at Urucúm. Early in December, while Mr. Cherrie was in Paraguay, it seemed to be the height of the breeding season. Eggs were removed from the oviducts of two of the females taken at Trinidad. One of the eggs is elliptical-ovate in form, measuring 28×37 mm., and bright glaucous-gray.

(1506a) *Capito dayi* Cherrie

Capito dayi CHERRIE, Bull. Amer. Mus. Nat. Hist., XXXV, 1916, p. 394 (Porto Velho, Rio Madeira).

Monte Cristo, 1 ♂; collected by Leo E. Miller, March 18, 1914.

RANGE.—Brazil: Matto Grosso (Monte Cristo); Porto Velho, Rio Madeira.

I think it appropriate to add a few words about the characters and affinities of this strikingly distinct species which was collected once before (five specimens) by the Collins-Day Expedition, at Porto Velho, on the Rio Madeira.

The adult male is similar to the female, but with the forehead, crown and occiput bright scarlet-red. The sides of the head, superciliary streak, lores, and auriculars are black like the back and wings. An immature male has the scarlet-red pileum of the adult, but the throat and breast are dusky vinaceous-buff. An interesting and unique feature of the species is its red under tail-coverts. It finds its nearest allies in *Capito quinticolor* Elliot and *Capito brunneipectus* Chapman, but all three are very distinct species.

(1523) *Ramphastos toco* Müller

Ramphastos toco MÜLLER, 'Naturst.,' Suppl., 1776, p. 82 (based on Daubenton, Pl. Enl., 82, Cayenne); PELZELN, 'Orn. Bras.,' III, 1870, p. 233 (Caçara); SCLATER, 'Cat. B. Brit. Mus.,' XIX, 1891, p. 125 (Chapada, Matto Grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 132 (Chapada); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 39 (Caceres); IHERING, 'Cat. F. Braz.,' I, 1907, p. 165 (Matto Grosso); GRANT, Ibis, 1911, p. 325 (Pan de Azucar and Coimbra).

Paraguay: Fort Wheeler, 1 ♂. Matto Grosso: Descalvados, 1 ♂; Tapirapoan, 1 ♂.

RANGE.—Brazil: Matto Grosso (Caçara, Chapada, Descalvados, Caceres, Tapirapoan); São Paulo (Ypanema, Itararé, Borda do Matto, Fazenda da Paciência, Itapura, Rio Paraná, Avanhandava); Rio Grande do Sul; Goyaz; Minas Geraes; Bahia; Piahy; Pará; Rio Negro (Barra do Rio Negro, Forte do Rio Branco). Paraguay (Fort Wheeler); Bolivia (Caiza, Chaco, San Francisco); Argentina; Guiana.

(1529) *Ramphastos cuvieri cuvieri* Wagler

Ramphastos cuvieri WAGLER, 'Syst. Av.,' Gen. Rhamph., 1827, p. 5 (Brasilia versus flumen Amazonum; type in Munich Museum).

Ramphastos cuvieri cuvieri HELLMAYR, Nov. Zoöl., XVII, 1910, p. 396 (Jamarysinho and Maroins, Rio Machados).

Rio Roosevelt, Camp 9, 1 ♂ (Camp 9 was at Broken Canoe Rapids or Quebra Canoas).

RANGE.—Brazil, Matto Grosso (Rio Roosevelt; Maroins, Rio Machados); Borba; Rio Negro (Marabitanas); Rio Purús (Bom Lugar); Amazonas (Rio Juruá). Colombia; Ecuador; Peru.

I have seen the type in the Munich Museum. The color of the upper tail-coverts is variable, sometimes sulphur-yellow with darker, more orange tips or nearly bright orange-yellow.

(1548) *Pteroglossus castanotis australis* Cassin

Pteroglossus castanotis b, *australis* CASSIN, Proc. Acad. Nat. Sci. Phila., 1867, p. 112 (Rio Paraná).

Pteroglossus castanotis PELZELN, 'Orn. Bras.,' III, 1870, p. 236 (Engenho do Pari, Caiçara, Engenho do Gama, S. Vicente, Matogrosso); SCLATER, 'Cat. B. Brit. Mus.,' XIX, 1891, p. 140 (Chapada, Abrilongo); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 132 (Chapada); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 11 (Urucúm, Carandasinho); IHERING, 'Cat. F. Braz.,' I, 1907, p. 167 (Fazenda da Faya, Matto Grosso).

Pteroglossus castanotis australis MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 39 (Caceres).

Urucúm, 2 ♀; Descalvados, 2 ♂; Rio São Lourenço, 1 ♂.

RANGE.—Brazil: Matto Grosso (Engenho do Pari, Caiçara, Engenho do Gama, S. Vicente, Chapada, Urucúm, Carandasinho, Caceres, Descalvados, Rio São Lourenço, Fazenda da Faya); São Paulo (Bôa Vista, Rio dos Piloens, Itapura); Goyaz (Catalão, Fazenda Esperança); Minas Geraes (Rio Grande, Rio Jordão). East Bolivia; Paraguay.

(1555) *Pteroglossus sturmi* Natterer

Pteroglossus sturmi NATTERER, in Sturm's ed. Gould's 'Monogr. Rhamph.,' part 3, 1842, p. 13, Pl. VII (Borba, Rio Madeira); GOULD, 'Monogr. Rhamph.,' 2d Ed., 1854, Pl. XVII.

Pteroglossus bitorquatus sturmi HELLMAYR, Nov. Zoöl., XVII, 1910, p. 398 (Jamarysinho and Maroins, Rio Machados).

Tapirapoan, 1 ♀; Urupá, 1 ♀.

RANGE.—Brazil: peculiar to the drainage of the Rio Madeira, north to Borba, extending south into northern Matto Grosso (Tapirapoan, Urupá, Maroins, Jamarysinho).

I regard this as a full species closely related to *P. bitorquatus* and *P. reichenowi*, all replacing each other geographically.

(1560) *Pteroglossus inscriptus inscriptus* Swainson

Pteroglossus inscriptus SWAINSON, Zoöl. Illustr., II, 1821, Pl. xc ("from the interior of Guyana"¹; error; Hellmayr, Nov. Zoöl., XVII, 1910, p. 399, proposes Pará); PELZELN, 'Orn. Bras.,' III, 1870, p. 236 (Cidade de Matogrosso, Forte do Principe de Beira)²; IHERING, 'Cat. F. Braz.,' I, 1907, p. 168 (Matto Grosso).

¹The original locality, "Guyana," given by Swainson for *Pteroglossus inscriptus*, is no doubt erroneous, the bird being known exclusively from northern Brazil, south of the Amazon, east to Maranhão, and so I agree with Dr. Hellmayr in designating Pará as type-locality.

²From here to the Rio Machados the fauna is Amazonian in its character.

Tapirapoan, 1 ♂, 2 ♀.

RANGE.—Brazil: Matto Grosso (Cidade de Matto Grosso, Forte do Principe de Beira, Tapirapoan); Amazonia; Borba; Santarém; Pará; Providencia; Benevides; St. Antonio do Prata; Rio Guamá; Rio Mojú; Rio Tocantins (Mazagão, Baião, Arumatheua); Rio Tapajóz (Pinhel); Maranhão.

I have compared specimens from the lower Amazon in the Munich Museum. Birds from Villa Bella de Matto Grosso and Borba, Rio Madeira, in coloration of the bill form the transition to the upper Amazonian *Pteroglossus inscriptus humboldti* Wagler.

(1582) *Urogalba dea amazonum* Sclater

Urogalba amazonum SCLATER, P. Z. S., XXIII, 1855, p. 14 (Pará and Amazon River).

Galbula paradisea PELZELN, 'Orn. Bras.,' I, 1868, p. 24 (Salto do Girão).¹

Urogalba paradisea IHERING, 'Cat. F. Braz.,' I, 1907, p. 170 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: south of the Amazon from Pará west to the Rio Solimões, south to the northern boundary line of Matto Grosso (Salto do Girão).

It is now a well-established fact that the Amazon Valley divides the ranges of *Urogalba dea dea* and *Urogalba dea amazonum*. See Hellmayr, Nov. Zoöl., XIV, 1907, pp. 27, 28, and XVII, 1910, p. 388.

(1585) *Galbula rufo-viridis* Cabanis

Galbula rufo-viridis CABANIS, in Ersch and Gruber, 'Allg. Enc. Wiss. und Künste,' LII, 1851, p. 308 ("Brasilia"); SCLATER, 'Cat. B. Brit. Mus.,' XIX, 1891, p. 165 (Chapada); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 133 (Chapada); SALVADORI, Boll. Mus. Torino, X, No. 208, 1895, p. 16 (Corumbá); idem, XV, No. 378, 1900, p. 11 (Urucúm); IHERING, 'Cat. F. Braz.,' I, 1907, p. 170 (Matto Grosso).

Galbula maculicauda PELZELN, 'Orn. Bras.,' I, 1868, p. 24 (Cuyabá, Villa Maria, S. Vicente, Theotônio).

Urucúm, 6 ♂, 1 ♀, 2 ♀; Belvedere de Urucúm, 1 ♀?; Agua Blanca de Corumbá, 1 ♀; Descalvados, 3 ♂, 2 ♀; Rio São Lourenço, 1 ♂, 1 ♀; Fazenda do São João, 1 ♀; Calama, 1 ♂.

RANGE.—Brazil: Matto Grosso (Chapada, Corumbá, Urucúm, Cuyabá, Villa Maria, S. Vicente, Agua Blanca de Corumbá, Descalvados, Rio São Lourenço, Fazenda do São João); São Paulo (Rio Pardo, Porto do Rio Paraná, Batataes, Rio Feio, Itapura, Avanhandava); Paraná (Ourinho); Rio de Janeiro (Sepotuba, Registro do Sai); Espirito Santo (Porto Cachoeiro); Goyaz (Araguayá); Minas Geraes; Bahia; Pernambuco; Maranhão; Piahy; Pará; Rio Tocantins (Arumatheua); Rio Tapajóz (Pimental); Rio Jmauchim (Castello, Conceição, Tucunaré); Marajó (S. Natal); Cussary; Rio Madeira (Calama, Theotoni). Bolivia.

This species was not uncommon and a good series was brought together. The food is exclusively insects, most, if not all, of which are captured on the wing. Dragon-flies frequently fall prey to the jacamars.

¹Matto Grosso politically.

(1594) *Galbula albirostris cyanicollis* Cassin

Galbula cyanicollis CASSIN, Proc. Acad. Nat. Sci. Phila., V, 1852, p. 154, Pl. VII (Pará).

Rio Roosevelt, Camp 7, 1 ♀.

RANGE.—Brazil: south bank of the Amazon from northern Maranhão, west to the Solimões and Juruá, south to northern Matto Grosso (Rio Roosevelt).

I see no sufficient reason for separating this species generically from *Galbula*.

(1602) *Brachygalba lugubris melanosterna* Sclater

Brachygalba melanosterna SCLATER, P. Z. S., XXIII, 1855, p. 15 (Goyaz, Brazil); 'Cat. B. Brit. Mus.,' XIX, 1891, p. 174 (Chapada); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 134 (Abrilongo, Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 172 (Matto Grosso).

Uturity, 1 ♂, 2 ♀; Campos Novos, 1 ♂.

RANGE.—Brazil: Matto Grosso (Chapada, Abrilongo, Uturity, Campos Novos); São Paulo (Barretos, Avanhandava, Rio Paraná); Goyaz; Minas Geraes; Rio Curuá. Bolivia.

(1622a) *Nystactes tamatia interior* Cherrie and Reichenberger

Nystactes tamatia interior CHERRIE AND REICHENBERGER, Amer. Mus. Novit., No. 27, 1921, p. 3 (Campos Novos, Cerro do Norte, Matto Grosso, Brazil).

Bucco tamatia PELZELN, 'Orn. Bras.,' I, 1868, p. 22 (Engenho do Cap. Gama, S. Vicente); IHERING, 'Cat. F. Braz.,' I, 1907, p. 174 (Matto Grosso).

Tapirapoan, 1 ♀; Campos Novos, Cerro do Norte, 1 ♂, 1 ♀.

RANGE.—Brazil: Matto Grosso (Campos Novos, Cerro do Norte, Engenho do Cap. Gama, S. Vicente, Tapirapoan).

Endemic in Matto Grosso.

Since describing the above, I have seen an additional specimen from Engenho do Gama, Rio Guaporé, west Matto Grosso (♂ ad., July 14, 1826), collected by Johann Natterer, in the Munich Museum; wing, 75.5; tail, 60.5; culmen, 20 mm.

(1624b) *Nystalus maculatus pallidigula* Cherrie and Reichenberger

Nystalus maculatus pallidigula CHERRIE AND REICHENBERGER, Amer. Mus. Novit., No. 58, 1923, p. 6 (Urucúm, Matto Grosso).

Bucco maculatus PELZELN, Sitzungsber. Ak. Wiss. Wien, Math.-Naturw. Kl., XX, 1856, p. 509 (Caiçara, Cuyabá); 'Orn. Bras.,' I, 1868, p. 22 (Cuyabá, Caiçara, Retiro); IHERING, 'Cat. F. Braz.,' I, 1907, p. 174 (Matto Grosso).

Bucco striatipectus SALVADORI, Boll. Mus. Torino, X, No. 208, 1895, p. 17 (Corumbá); Boll. Mus. Torino, XV, No. 378, 1900, p. 11 (Urucúm); IHERING, 'Cat. F. Braz.,' I, 1907, p. 174 (Matto Grosso).

Bucco maculatus striatipectus ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 134 (Matto Grosso).

Urucúm, 4 ♂, 3 ♀.

RANGE.—Brazil: western and eastern Matto Grosso (Urucúm, Cuyabá, Caiçara, Retiro, Corumbá).

Endemic in Matto Grosso.

(1627) *Nystalus chacuru chacuru* (Vieillot)

Bucco chacuru VIEILLOT, 'Nouv. Dict. d' Hist. Nat.,' nouv. éd., III, 1816, p. 239 (ex Azara, No. 261, Paraguay); PELZELN, 'Orn. Bras.,' I, 1868, p. 22 (Caiçara, Matto-grosso); SCLATER, 'Cat. B. Brit. Mus.,' XIX, 1891, p. 191 (Chapada); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 135 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 174 (Matto Grosso).

Campos Novos, Cerro do Norte, 1 ♂, 1 ♀; Vilhena, 1 ♂.

RANGE.—Brazil: Matto Grosso (Chapada, Caiçara, Villa Bella); Campos Novos, Cerro do Norte, Vilhena); São Paulo (Taipa, Mattodentro, Mugy das Cruzes, Ypanema; Itararé; Piquete; S. Carlos do Pinhal; Victoria de Botucatu); Paraná (Ourinho); Minas Geraes; Goyaz; Bahia; Piauh (Santo Antonio de Gilboez; Corrientes). Bolivia; Paraguay.

This bird is found exclusively in the campo region. The bird from Vilhena is an immature bird and has the underparts much more buffy than in the adult. It also has the foreneck, breast and flanks traversed by numerous black streaks and bars (produced by narrow black tips to the feathers).

(1628) *Nystalus striolatus* (Pelzeln)

Bucco striolatus PELZELN, Sitzungsber. Ak. Wiss. Wien, Math.-Naturw. Kl., XX, 1856, p. 509 (Engenho do Cap. Gama); 'Orn. Bras.,' I, 1868, p. 22 (Engenho do Gama and No Dourado); SCLATER, 'Cat. B. Brit. Mus.,' XIX, 1891, p. 192 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 175 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Engenho do Cap. Gama, No Dourado); Pará; St. Antonio do Prata; Rio Guamá (Sta. Maria de S. Miguel). Bolivia; Peru (Chanchamayo); east Ecuador.

(1645) *Nonnula ruficapilla nattereri* Hellmayr

Nonnula ruficapilla nattereri HELLMAYR, Anzeig. Ornith. Ges. in Bayern, No. 5, 1921, Dec. 19, p. 42 (São Luiz de Cáceres, Rio Paraguay, Matto Grosso).

Nonnula ruficapilla pallida CHERRIE AND REICHENBERGER, Amer. Mus. Novit., No. 27, 1921, p. 4 (Tapirapoan, Matto Grosso, Brazil).

Monasa ruficapilla PELZELN, Sitzungsber. Ak. Wiss. Wien, Math.-Naturw. Kl., XX, 1856, p. 512 (Villa Maria); 'Orn. Bras.,' I, 1868, p. 23 (Villa Maria, Engenho do Cap. Gama, Ponte do Guaporé).

Nonnula ruficapilla IHERING, 'Cat. F. Braz.,' I, 1907, p. 176 (Matto Grosso).

Tapirapoan, 2 ♂, 1 ♀ (incl. type of *N. r. pallida*).

RANGE.—Brazil: Matto Grosso (São Luiz de Cáceres, Rio Paraguay, Tapirapoan, Engenho do Cap. Gama, Ponte do Guaporé).

Endemic in Matto Grosso.

(1653) *Monasa morphæus peruana* Sclater

Monasa peruana SCLATER, P. Z. S., XXIII, 1855, p. 194 ("Chamicuros").

Monasa morphæus IHERING, 'Cat. F. Braz.,' I, 1907, p. 176 (Matto Grosso).

Urupá, 1 ♀ ad.

RANGE.—Brazil: Matto Grosso (Urupá); Rio Purús (Cachoeira); upper Amazonas; Rio Negro; Rio Madeira; Teffé. Peru; Ecuador; Colombia.

An Amazonian race reaching the southern limit of its range in northern Matto Grosso.

This is not a good subspecies, being distinguishable only by the lesser amount of white on forehead and chin. Some specimens are hardly different from *M. morphæus morphæus*, ranging over eastern Brazil from Pará to Rio de Janeiro.

(1656) *Monasa nigrifrons* (Spix)

Bucco nigrifrons SPIX, 'Av. Bras.,' I, 1824, p. 53, Pl. xli, fig. 2 ("in sylvis fl. Solimões").

Monasa nigrifrons PELZELN, 'Orn. Bras.,' I, 1868, p. 22 (Cuyabá, Villa Maria, Caiçara); SCLATER, 'Cat. B. Brit. Mus.,' XIX, 1891, p. 206 (Chapada, Matto Grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 135 (Chapada); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 11 (Carandasinho); IHERING, 'Cat. F. Braz.,' I, 1907, p. 177 (Matto Grosso).

Rio São Lourenço, 1 ♂, 1 ♀.

RANGE.—Brazil: Matto Grosso (Cuyabá, Villa Maria, Caiçara, Chapada, Carandasinho, Rio São Lourenço); São Paulo (Goyabeira, Taquaral, Itapura); Minas Geraes (Rio Jordão); Piauh; Maranhão; Pará (Quati-purú); Rio Guamá (Ourém); Rio Capim (Resacca); Rio Tocantins (Arumatheua); Rio Iriri; Rio Jamauchim (Viração); Rio Tapajóz (Goyana, Villa Nova); Monte Alegre; Rio Jamundá (Faro); Rio Madeira (Calama); Rio Purus; (Bom Lugar, Cachoeira); Rio Juruá. Peru; eastern Ecuador.

(1658) *Chelidoptera tenebrosa tenebrosa* (Pallas)

Cuculus tenebrosus PALLAS, Neue Nord. Beitr., III, 1782, p. 2, Pl. i, fig. i (Surinam).

Chelidoptera tenebrosa SCLATER, 'Cat. B. Brit. Mus.,' XIX, 1891, p. 207 (Chapada, Matto Grosso).

Chelidoptera tenebrosa brasiliensis ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 135 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 177 (Matto Grosso).

Tapirapoan, 2 ♂.

RANGE.—From Guiana and Venezuela, south to northern Goyaz (Goyaz City and Leopoldina, Rio Araguayá) and northwestern Bahia (Rio Preto).

Chelidoptera tenebrosa brasiliensis is evidently restricted to south-eastern Brazil from southern Bahia (coast district) and Minas Geraes (I have seen specimens from near Lagôa Santa and Rio de Janeiro). The exact distribution of the two forms in the state of Bahia has yet to be

ascertained. It is quite possible that *brasiliensis* extends along the coast north to Pernambuco, whence I have no material.

(1659) ***Colaptes campestris campestris*** (Vieillot)

Picus campestris VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXVI, 1818, p. 101 (based on Azara, No. 253, Paraguay).

Pediopipo campestris PELZELN, 'Orn. Bras.,' III, 1870, p. 249 (Engenho do Pari, Matto Grosso).

Colaptes campestris ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 129 (Chapada); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 40 (Poconé).

No specimens collected.

RANGE.—Paraguay; southern Brazil from Goyaz and Minas Geraes south to Paraná, west to Matto Grosso (Engenho do Pari, Poconé).

Replaced farther north by *Colaptes campestris chrysostrernus* (Swainson).

(1668) ***Piculus¹ chrysochloros chrysochloros*** (Vieillot)

Picus chrysochloros VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXVI, 1818, p. 98 (ex Azara, No. 256, ♂, Paraguay).

Chloronerypes chrysochlorus PELZELN, 'Orn. Bras.,' III, 1870, p. 243 (Cuyabá); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 129 (Corumbá, Piedra Blanca); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 10 (Corumbá).

Chloronerypes chrysochloros IHERING, 'Cat. F. Braz.,' I, 1907, p. 178 (Matto Grosso).

Paraguay: Fort Wheeler, 1 ♂ (probably a breeding bird). Matto Grosso: Rio São Lourenço, 1 ♂.

RANGE.—Brazil: Matto Grosso (Corumbá, Cuyabá, Rio São Lourenço), east to Bahia, north to Ceará and Piauhy (Parnaguá, Fazenda do Mata, near Santo Antonio de Gilboez). Paraguay (Fort Wheeler). S. E. Bolivia (Chaco, San Francisco, Piedra Blanca); northern Argentina (Orán, Salta, Jujuy).

(1675) ***Piculus leucolæmus*** (Malherbe)

Picus leucolæmus MALHERBE, Mém. Soc. Roy. Sci. Liège, II, 1845, p. 68 ("Brésil" = Engenho do Gama, Matto Grosso; type in Vienna Mus.).

Chloronerypes leucolæmus PELZELN, 'Orn. Bras.,' III, 1870, p. 244 (Engenho do Cap. Gama); HARGITT, 'Cat. B. Brit. Mus.,' XVIII, 1890, p. 76 (Engenho do Gama); IHERING, 'Cat. F. Braz.,' I, 1907, p. 179 (Matto Grosso).

No specimens collected.

RANGE.—An upper Amazonian species ranging from the eastern base of the Colombian Andes south through Ecuador and Peru to eastern Bolivia and western Matto Grosso (Rio Guaporé, Engenho do Cap. Gama).

(1677) ***Piculus flavigula magnus*** (Cherrie and Reichenberger)

Chloronerypes flavigula magnus CHERRIE AND REICHENBERGER, Amer. Mus. Novit., No. 27, 1921, p. 4 (Monte Cristo, Matto Grosso, Brazil).

¹See Oberholser, Proc. Biol. Soc. Wash., XXXVI, 1923, p. 201.



Leucomerpes candidus (Otto), ♂; ♀; Tapirapoan, Matto Grosso, Brazil, January 16, 1914, Roosevelt Expedition; George K. Cherrie.

Monte Cristo, 1 ♂, 1 ♀ (type).

RANGE.—Brazil: Matto Grosso (Monte Cristo; Maroins, Rio Machados); Rio Madeira (Borba, Calama); Pará (Peixe-Boi¹); Maranhão Tury-assú).

In addition to specimens examined in connection with the original description, I have seen material in the Vienna Museum from various localities in Brazil. The valley of the Amazon separates *P. flavigula magnus* from *P. flavigula flavigula* found farther north.

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Piculus flavigula flavigula</i>					
Brazil, Marabitanas	♂	113	64	19	Vienna
“ “	♀	110	59	19.5	(Natterer Coll.)
“ Barra (Manáos)	♀	115	67		“
“ “ “	♀	112	62	17.5	“
<i>Piculus flavigula magnus</i>					
Brazil, Borba, 3 ♂; Peixe-Boi, 1 ♂	4 ♂	117.8	65.3	20.7	“
Brazil, Peixe-Boi, Pará	♀	118.5	64.5	18.5	Munich
“ Maroins, Rio Machados	♀	121	68	20	“

(1693) *Chrysoptilus melanochloros nattereri* (Malherbe)

Picus nattereri or *Chrysoptilus* (Swainson) *nattereri* MALHERBE, Mém. Soc. Roy. Sci. Liège, II, 1845, p. 66 (“Brésil” = Cuyabá, Matto Grosso).

Chrysoptilus icteromelas PELZELN, ‘Orn. Bras.,’ III, 1870, p. 248 (Cuyabá, Villa Maria, Caiçara); HARGITT, ‘Cat. B. Brit. Mus.,’ XVIII, 1890, p. 114 (Cuyabá, Caiçara); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 129 (Chapada); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 10 (Carandasinho).

Chrysoptilus nattereri IHERING, ‘Cat. F. Braz.,’ I, 1907, p. 180 (Matto Grosso).

Palmiras, 1 ?

RANGE.—Brazil: Matto Grosso (Cuyabá, Villa Maria, Caiçara, Palmiras, Carandasinho); Goyaz. Eastern Bolivia (Buenavista, Santa Cruz).

(1701) *Leuconerpes candidus* (Otto)

Figure 20

Picus candidus OTTO, Buffon’s ‘Naturg. Vögel,’ XXIII, 1796, p. 191 (ex Holandre, ‘Abrégé d’Hist. Nat.,’ III, p. 404a, Cayenne).²

Leuconerpes candidus PELZELN, ‘Orn. Bras.,’ III, 1870, p. 247 (Cuyabá, Caiçara); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 129 (Chapada); IHERING, ‘Cat. F. Braz.,’ I, 1907, p. 182 (Matto Grosso).

Melanerpes candidus HARGITT, ‘Cat. B. Brit. Mus.,’ XVIII, 1890, p. 148 (Chapada, Matto Grosso).

Paraguay: Puerto Pinasco, 1 ♂. Matto Grosso: Urucúm, 2 ♂, 1 ♀; Tapirapoan, 2 ♂. The colors taken from a fresh bird were: eye, gray; bare skin about eye bright lemon-yellow; feet greenish slate-gray; bill slate-black, changing to slate color at the base of the mandible.

¹Numerous other localities recorded by Snethlage, Bol. Mus. Goeldi, VIII, 1914, p. 245.

²So far as known there are no Cayenne specimens anywhere.

RANGE.—Brazil: Matto Grosso (Cuyabá, Caiçara, Chapada, Urucúm, Tapirapoan); São Paulo (Taixeira, Aldea de Taguahy, Mattodentro, Varga Grande, Ypanema, Itararé, Irisanga, Itatiba, Rio Mogy-Guassú); Minas Geraes (Agua Suja); Rio de Janeiro; Marajó; Mexiana; Monte Alegre; Maranhão (Miritiba). Paraguay

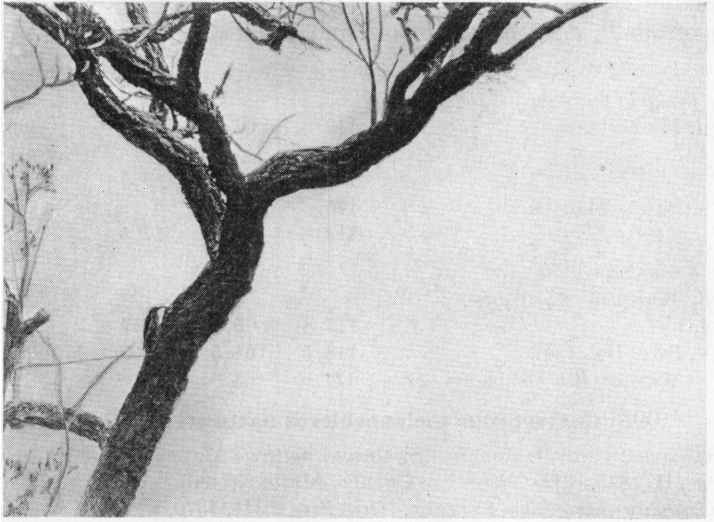


Fig. 20. White-bellied woodpecker, *Leuconerpes candidus* (Otto), Urucúm, Matto Grosso, Brazil.

(Bernalcué, near Asunción; Concepción, Puerto Pinasco); Uruguay; Bolivia (San Lorenzo); Argentina (Dist. Col. Grande Vedia, Rio de Oro).

“At Puerto Pinasco mating was taking place during early September and family parties composed of five or six immature individuals and the parent birds were observed about Urucúm and at Tapirapoan during December and January.”

	Measurements				MUSEUM
	SEX	WING	TAIL	CULMEN	
Paraguay, Puerto Pinasco, 1 ♂;					
Concepción, 1 ♂; Bernalcué,					A. M. N. H.
1 ♂	3 ♂	159.3	108.5	30.5	Munich
Bernalcué, near Asunción	1 ♀	152	103	30	"
Brazil, Matto Grosso, Urucúm	1 ♂ juv.	145.5	102	25	A. M. N. H.
" " " " "	1 ♂ juv.	144.5	102	25	"
" " " Tapirapoan	1 ♂	162	111.5	31.5	"
" " " " "	1 ♂	155.5	99	32	"
Minas Geraes, Agua Suja	1 ♂	163	102.5	32.5	Munich
Maranhão, Miritiba	1 ♂	158	107.5	32	"
" " " "	1 ♀	146.5	83	29	"
Argentina, Dist. Col. Grande					
Vedia, Rio de Oro	1 ♂	158	105	30	"
Argentina, Dist. Col. Grande					
Vedia, Rio de Oro	1 ♂	153	105	31	"

(1703) *Tripsurus cruentatus* (Boddaert)

Picus cruentatus BODDAERT, 'Tabl. Pl. Enl.,' 1783, p. 43 (Cayenne); based on Daubenton, 'Pl. Enl.,' 694, fig. 2.

Melanerpes hirundinaceus PELZELN, 'Orn. Bras.,' III, 1870, p. 248 (Villa Maria, Caçara, Salto do Girão).

Melanerpes cruentatus HARGITT, 'Cat. B. Brit. Mus.,' XVIII, 1890, p. 155 (Chapada); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 130 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 182 (Matto Grosso).

Tapirapoan, 1 ♀; bare skin about eye pale yellow; eye orange-yellow; bill dusky blackish.

RANGE.—Guianan-Amazonian subregion, west to eastern base of the Andes, south to Bolivia and Matto Grosso (Villa Maria, Caçara, Salto do Girão, Chapada, Tapirapoan).

(1714) *Dryobates cancellatus* (Wagler)

Picus cancellatus WAGLER, Isis, 1829, p. 510 ("Mexico," errore = São Paulo); PELZELN, 'Orn. Bras.,' III, 1870, p. 245 (Cuyabá).

Dryobates cancellatus ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 130 (Chapada).

Dendrocopos cancellatus IHERING, 'Cat. F. Braz.,' I, 1907, p. 183 (Matto Grosso). No specimens collected.

RANGE.—Brazil: Matto Grosso (Chapada, Cuyabá); Goyaz (Cidade de Goyaz); São Paulo (Itapura); Minas Geraes (Lagôa Santa, Sete Lagôas).

(1728) *Veniliornis olivinus olivinus* (Malherbe)

Picus olivinus MALHERBE, Mém. Soc. Roy. Sci. Liège, II, 1845, p. 67 (Matto Grosso, Cuyabá; type in Vienna Museum, ♂, June 16, 1824, Natterer Coll.).

Picus murinus MALHERBE, Mém. Soc. Roy. Sci. Liège, II, 1845, p. 67 (type from Engenho do Gama, Matto Grosso; = ♂ juv.).

¹See Hellmayr, Nov. Zool., XV, 1908, p. 81.

Campias olivinus PELZELN, 'Orn. Bras.,' III, 1870, p. 246 (Cuyabá, Villa Maria, Caiçara, Engenho do Cap. Gama).

Campias murinus PELZELN, 'Orn. Bras.,' III, 1870, p. 246 (Engenho do Gama).

Dendrobates olivinus HARGITT, 'Cat. B. Brit. Mus.,' XVIII, 1890, p. 356 (Engenho do Gama, Chapada, Caiçara); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 130 (Chapada).

Eleopicus olivinus SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 10 (Urucúm, Carandasinho).

Veniliornis olivinus IHERING, 'Cat. F. Braz.,' I, 1907, p. 184 (Matto Grosso); GRANT, Ibis, 1911, p. 323 (Albuquerque).

RANGE.—Restricted to Paraguay, the Chaco, Goyaz and Matto Grosso (Cuyabá, Villa Maria, Caiçara, Engenho do Gama, Chapada).

Two specimens from the Rio Negro, Paraguay, and one from Bernalcué, near Asunción, average slightly larger in the measurements of wing and bill than the series from Matto Grosso.

Measurements					
SEX	WING	TAIL	CULMEN	MUSEUM	
Brazil, Matto Grosso, Belvedere de Urucúm, 1 ♂					
Brazil, Matto Grosso, Agua Blanca de Corumbá, 1 ♂					
Brazil, Matto Grosso, Tapiraipoan, 1 ♂					
Brazil, Matto Grosso, Descalvados, 1 ♂	4 ♂	90	50.8	19.5	A. M. N. H.
Brazil, Matto Grosso, Tapiraipoan, 1 ♀					
Brazil, Matto Grosso, Rio Juruena, 1 ♀					
Brazil, Matto Grosso, Urucúm, 1 ♀	3 ♀	89.3	55.3	17.8	"
Paraguay, Rio Negro	1 ♂	95	55	22	"
" "	1 ♀	92	55	20	"
" Bernalcué, near Asunción	1 ♀	90.5	57.5	19	Munich

(1733) *Veniliornis affinis hæmatostigma* (Malherbe)

Mesopicus hæmatostigma MALHERBE, 'Picidæ,' II, 1862, p. 72, Pl. LXI, figs. 2-5 (Brazil = Engenho do Gama, Matto Grosso).¹

Campias ruficeps PELZELN, 'Orn. Bras.,' III, 1870, p. 245 (part; Villa Maria, right bank of the Rio Paraguay, Engenho do Gama, Nas Pedras, Destacamento do Ribeirão).²

Rio Roosevelt, Camp 14, 1 ♂ ad.; eye dark; feet slate; bill blackish above, slate below. Barão Melgaço, 1 ♀ ad.

¹See Hellmayr, Abhand. 2. Kl. Bayr. Ak. Wiss., XXII, No. 3, 1906, pp. 610-611.

²Matto Grosso politically.

RANGE.—Brazil: Matto Grosso (Villa Maria, right bank of the Rio Paraguay, Engenho do Gama, Nas Pedras, Rio Roosevelt, Barão Melgaço, Destacamento do Ribeirão). Bolivia; Ecuador; Peru.

(1742) *Celeus lugubris lugubris* (Malherbe)

Picus lugubris MALHERBE, Bull. Soc. d'Hist. Nat. du Dept. de la Moselle, Metz, 6. cahier, 1851, p. 77 ("Brésil"; I designate Matto Grosso as type-locality).

Celeus lugubris PELZELN, 'Orn. Bras.,' III, 1870, p. 250 (Cuyabá, Corcunda, Engenho do Pari, Villa Maria, Caiçara); HARGITT, 'Cat. B. Brit. Mus.,' XVIII, 1890, p. 424 (Chapada); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 130 (Chapada, Matto Grosso); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 10 (Urucúm); IHERING, 'Cat. F. Braz.,' I, 1907, p. 185 (Matto Grosso); LIMA, Rev. Mus. Paul., XII, (2), 1920, p. 93 (Matto Grosso).

Celeus kerri GRANT Ibis, 1911, p. 323, (Pan de Azucar).

Descalvados, 2 ♀; Urucúm, 2 ♂, 2 ♀; Tapirapoan, 1 ♀ juv.; an adult male taken in December has the skin of the abdomen thickened as in a brooding female.

RANGE.—Brazil: Matto Grosso (Cuyabá, Corcunda, Engenho do Pari, Villa Maria, Caiçara, Chapada, Urucúm, Descalvados, Tapirapoan) and adjacent section of Bolivia (Piedra Blanca).

I feel sure that *Celeus roosevelti* Cherrie¹ is not separable from *Celeus lugubris*. The bird from Tapirapoan I consider as an example of extreme individual variation, admitting at the same time that it possesses a number of characters indicating immaturity: such as the yellowish base of the maxilla; the texture of the feathers of the upper back, upper and lower tail-coverts; the pattern of the bands on the back, which are rather narrower and closer than in undoubted adults; as well as the rufous edges to the tips of the third to sixth primaries, inclusive.

The large series of adult birds which I have before me shows a considerable amount of individual variation in different portions of the plumage. The sides of the head in dark individuals have the ochraceous area rather restricted, the malar region being dark brown and tipped with rufous. The amount of ochraceous on the throat is variable, in some specimens this color being uniform, in others ochraceous tipped with russet. Some skins have the frontal feathers dusky tipped with ochraceous, whereas in others they are uniform ochraceous to the base.

The upperparts show variation in the pattern and color of the bands. The markings of the type of *Celeus roosevelti* are quite different when compared to the male from Villa Maria; the first having narrower, rather indistinct yellow and rufescent bands, the second having broad and distinct sepia-brown and yellow bands. The upper tail-coverts vary, being uniform cinnamon-rufous in most skins, sometimes distinctly barred with black; whereas they are uniform light yellow, lacking all

¹Bull. Amer. Mus. Nat. Hist., XXXV, p. 183.

trace of rufous in No. 34294 from Chapada, and in the male from Villa Maria. The lowerparts also show variation in the degree of the rufous admixture. Several fully adult birds have distinct rufous edges to the feathers of the lowerparts, while others are either uniform sepia or reddish brown. The specimen from Chapada, No. 34294, described by Dr. Allen as the immature *Celeus lugubris*, is just moulting from the juvenal plumage. It has renewed most of the body plumage, but still retains the outer primaries edged with light rufous at the tips of the juvenal feathers. This bird very nearly agrees in the coloration of the underparts with an adult female from Descalvados, but by having more rufous admixture it forms the connection with the still more rufous bird from Tapirapoan (type of *Celeus roosevelti*).¹ My conclusions are, therefore, that with the large amount of individual variation shown by our series of adult birds, one may feel reasonably certain that immature birds showing definite signs of immaturity may also show a great degree of individual variation. At this point I want to add that, as Malherbe described the species from one of Natterer's skins, and Natterer found it only in Matto Grosso, I designate Matto Grosso as the type-locality.

Measurements					
SEX	WING	TAIL	CULMEN	MUSEUM	
Brazil, Matto Grosso, Villa Maria, 1 ♂ (Natterer)					Vienna
Brazil, Matto Grosso, Corcunda, 1 ♂					"
Brazil, Matto Grosso, Urucúm, near Corumbá, 2 ♂	4 ♂	143.3	91.3	26.3	A. M. N. H.
Brazil, Matto Grosso, Urucúm, near Corumbá, 2 ♀					
Brazil, Matto Grosso, Descalvados, 2 ♀					
Brazil, Matto Grosso, Engenho do Pari, 1 ♀ (Natterer)					Vienna
Brazil, Matto Grosso, Cuyabá, 1 ♀					"
Brazil, Matto Grosso, Caiçara, 1 ♀					"
Brazil, Matto Grosso, Chapada, 1 ♀					A. M. N. H.
Brazil, Matto Grosso, Tapirapoan, 1 ♀	9 ♀	143.8	91.7	27.3	"

¹The type of *Celeus roosevelti* Cherrie is, in fact, more rufous below than any other specimen I have examined.

(1747) *Celeus jumana jumana* (Spix)

Picus jumana SPIX, 'Av. Bras.,' I, 1824, p. 57, Pl. XLVII ("in sylvis fl. Amazonum").

Celeus jumana PELZELN, 'Orn. Bras.,' III, 1870, p. 251 (Salto do Girão)¹; IHERING, 'Cat. F. Braz.,' I, 1907, p. 186 (Matto Grosso).

Monte Cristo, 1 ♀.

RANGE.—Brazil: Rio Negro (Barra do Rio Negro, Marabitanas); Rio Içana; Borba; Rio Tapajóz (Bella Vista); Rio Tocantins (Cametá); St. Antonio do Prata; Sta. Isabel; Rio Muriá; Pará; Matto Grosso (Salto do Girão, Monte Cristo).

(1752) *Celeus grammicus* (Malherbe)

Picus grammicus MALHERBE, Mém. Soc. Roy. Sci. Liège, II, 1845, p. 69 "Brazil"; I designate Marabitanas, upper Rio Negro, as type-locality.²

Celeus grammicus PELZELN, 'Orn. Bras.,' III, 1870, p. 252 (Salto do Girão, right bank); IHERING, 'Cat. F. Braz.,' I, 1907, p. 186 (Matto Grosso).

Monte Cristo, 1 ♀; Rio Roosevelt, Camp 2, 1 ♀.

RANGE.—Brazil: Matto Grosso (Monte Cristo, Rio Roosevelt, Salto do Girão); Marabitanas, upper Rio Negro; Rio Xié; Rio Vaupes; Cussary; Rio Juruá, Rio Purús (Bom Lugar). Ecuador; Peru; Venezuela (Orinoco-Caura region).

The two specimens in the Roosevelt collection and an adult male from the Rio Juruá differ from five specimens, including the type, collected by Natterer (Vienna Museum), at Marabitanas, on the upper Rio Negro and on its tributaries, Rio Xié and Rio Vaupes, by having the rump light orange-yellow, in strong contrast to the cinnamon-rufous of the upper back and tail-coverts, instead of dull sap-green more or less washed with cinnamon. This character, however, appears to be purely individual, since other examples from northern localities, notably a pair from the upper Orinoco and a male from Shanusi (Yurimaguas, N. E. Peru), also have the rump yellow. Judging from two specimens from Sarayaçu, eastern Ecuador, which I believe might be taken to represent *Celeopicus verreauxii* Malherbe, it appears that this supposed species is not even subspecifically distinct from *Celeus grammicus*. It is true, one has the black barring above rather narrow and restricted, but the second specimen is as heavily banded on the upperparts as the typical series of *C. grammicus* from the Rio Negro. The same amount of individual variation in the black barring of the upperparts may be noticed in two males from the Rio Orinoco.

¹*C. reichenbachii* Pelzeln, 'Orn. Bras.,' III, 1870, p. 251 (Villa Bella de Matto Grosso). Dr. Hellmayr (*in lit.*) states that the single male secured by J. Natterer on Sept. 23, 1828, differs from *C. j. jumana* in having the forehead and crown buffy yellow, mesially streaked with rufous brown. Our specimen from Monte Cristo does not show the same peculiarities.

²Berlepsch and Hartert (Nov. Zoöl., IX, 1902, p. 94) and again Berlepsch (Nov. Zoöl., XV, 1908, p. 273) give Salto do Girão, Rio Madeira, as the probable type-locality of *Celeus grammicus*. As, however, the only specimen with a yellow rump, taken by Natterer, is from Salto do Girão, and as this aberration was only incidentally mentioned by Malherbe, this specimen cannot by any means be regarded as the type, and I, therefore, expressly designate as such Vienna Museum No. 31855, ♂, ad., Marabitanas, May 5, 1831, Natterer Coll., which agrees particularly well with Malherbe's description.

	Measurements				
	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Marabitanas, upper Rio Negro, type, No. 31855	♂	128.5	80	22.5	Vienna
Brazil, Rio Xié, tributary of the upper Rio Negro	♂	132	82 ¹	20	"
Brazil, Rio Vaupes	♂	124	81.5	19.5	"
" Marabitanas	♀	118	79	19	"
" Monte Cristo, Matto Grosso	♀	126	84	20	A. M. N. H.
Brazil, Rio Roosevelt, Matto Grosso	♀ juv.	128	84.5	2	"
Brazil, Amazonas, Rio Juruá	♂	120	76	20	Berlepsch Coll.
Venezuela, Munduapo, Rio Orinoco	♂	120	79.5	20	"
Venezuela, Nericagua, Rio Orinoco	♂	121.5	86.5	22	"
East Ecuador, Sarayaçu	♂	129	87.5	21.5	"
" " "	♂	129.5	88	23	"
N. E. Peru, Yurimaguas, Shanusi	?	120.5	83.5	23	"

(1756) *Cerchneipicus tinnunculus occidentalis* Hargitt

Cerchneipicus occidentalis HARGITT, Ibis, 1889, p. 230 (upper Rio Ucayali); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 131 (Chapada).

Celeus tinnunculus PELZELN, 'Orn. Bras.,' III, 1870, p. 250 (Caiçara, Engenho do Gama, Rio Guaporé).

Cerchneipicus tinnunculus IHERING, 'Cat. F. Braz.,' I, 1907, p. 186 (Chapada, Matto Grosso).

Cerchneipicus tinnunculus occidentalis HELLMAYR, Nov. Zoöl., XVIII, 1910, p. 384 (Caiçara, Engenho do Gama).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Caiçara, Engenho do Gama, Chapada); Amazonas, (Rio Juruá; Manaqueri, Rio Solimões). Northeast Peru.³

(1761) *Phlœcoastes trachelopyrus* (Malherbe)

Megapicus trachelopyrus MALHERBE, Bull. de la Soc. Hist. Nat. Dept. de la Moselle, Metz, 8 cahier, 1857, p. 1 ("Pérou").

Campephilus trachelopyrus PELZELN, 'Orn. Bras.,' III, 1870, p. 242 (Engenho do Gama); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 131 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 187 (Matto Grosso).

Campophilus trachelopyrus HARGITT, 'Cat. B. Brit. Mus.,' XVIII, 1890, p. 469 (Chapada).

Rio Roosevelt, Camp 1, 1 ♂ ad.

¹Tail moulting.

²Bill imperfect.

³I have seen no specimens from Chapada or from the Rio Mojú, Cussary, or the Rio Tapajóz, but they are most likely *Cerchneipicus tinnunculus tinnunculus*.

RANGE.—Brazil: Rio Purús (Bom Lugar); Cussary; Rio Tocantins (Baião); Maripanim; Rio Guamá (Ourém, Sta. Maria de S. Miguel); St. Antonio do Prata; Peixe-Boi; Sta. Izabel; Maguary; Benevides; Apehú; Ananindeua; Pará; Maranhão (Miritiba); Rio Madeira (Calama); Matto Grosso (Engenho do Gama, Chapada). Bolivia; Peru.

An Amazonian species reaching in Matto Grosso and Bolivia, the southern limit of its range. Probably conspecific with *Phlœocestes rubricollis*. The bird from the Rio Roosevelt, No. 127515, has a longer bill, and has the feathers of the chest and breast less washed with rufous than specimens from Pará.

	Measurements				
	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Matto Grosso, Rio Roosevelt	1 ♂	175.5	119	47	A. M. N. H.
Brazil, Peixe-Boi, Pará	1 ♂	179	121	43.5	Munich
“ “ “	1 ♂	177	115	42	“
S. E. Peru (Yahuarmayo)	1 ♂	184	115	39	“

For lack of sufficient material I cannot decide whether the north Brazilian bird is separable from the Peruvian bird.

(1762) *Phlœocestes melanoleucos melanoleucos* (Gmelin)

- *Picus melanoleucos* GMELIN, 'Syst. Nat.,' I, (1), 1788, p. 426 (based on Latham; Surinam).

Campephilus melanoleucos PELZELN, 'Orn. Bras.,' III, 1870, p. 242 (Cuyabá, Engenho do Pari, Villa Maria, Caiçara, Barra do Rio Jaurú, Matogrosso); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 131 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 187 (Matto Grosso).

Campephilus melanoleucos SALVADORI, Boll. Mus. Torino, XV, 1900, No. 378, p. 11 (Urucúm).

Paraguay: Fort Wheeler, 1 ♀; Puerto Pinasco, 1 ♀. Matto Grosso: Urucúm, 2 ♂, 1 ♀.

RANGE.—Brazil: Rio Negro (Barra do Rio Negro, Marabitanas); Rio Purús; Rio Jamundá (Faro); Arumanduba; Monte Alegre; Santarém; Marajó (Pindobal); Mexiana; Pará; Maranhão; Matto Grosso (Cuyabá, Engenho do Pari, Villa Maria, Caiçara, Barra do Rio Jaurú, Chapada, Urucúm; Rio São Lourenço); Goyaz; Minas Geraes. Paraguay (Puerto Pinasco, Fort Wheeler); Guiana; Venezuela; Trinidad; Colombia; Ecuador; Peru.

This species shows great variation in size, partly individual, partly geographic. The smallest Matto Grosso specimen approaches *P. melanoleucos cearæ* both in size and the greater amount of black on the breast.

Measurements					
	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Matto Grosso, Rio São Lourenço	1 ♂				
Brazil, Matto Grosso, Urucúm,	2 ♂				
Brazil, Matto Grosso, Chapada,	2 ♂				
Brazil, Matto Grosso, Urucúm	1 ♀	176.5	103.9	43.3	A. M. N. H.
" Pará	1 ♂	176	112	40.5	"
" Santarém	1 ♀	184	116.5	45	"
Paraguay, Puerto Pinasco	1 ♀	180	116.5	45	"
" Fort Wheeler	1 ♀	179	111.5	42.5	"
Trinidad, Princetown	1 ♀	175.5	115	43.5	"
" "	1 ♀	199	129.5	45.5	"
" "	1 ♀	198	126.5	46	"
Colombia, Florencia	1 ♂	188	116	46.5	"
" Villavicencio	1 ♀	201	131.5	41.5	"
S. E. Peru, Astillero	1 ♂	203	128	48	"
" Tulumayo	1 ♀	194	132	45	"
Venezuela, Sacupana	1 ♂	179	117	44	"
" "	1 ♀	181	125	42	"
" Cristóbal Colón	1 ♂	164	113	43.5	"
Ecuador, Zamora	1 ♂	188		44	"
" "	1 ♀	193	123.5	45	"

The tail measurements of most specimens are only approximate, inasmuch as most tails are broken, moulting, or in poor condition.

I have seen two specimens of *P. melanoleucos cearæ* from the type-locality (Juá, Ceará) lent by Field Museum. These specimens are much smaller throughout than *Phlæoceastes melanoleucos melanoleucos*. The chin, throat, and neck are black, the black extending farther on the breast than in the typical bird. The black barring on the lowerparts seems more definite and more distinct and the feathers seem firmer and shorter.

Measurements					
	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Ceará, Juá (type)	1 ♂	157	96.5	41.5	Field
" " "	1 ♀	160	94	41.5	"

(1770) *Ceophlæus lineatus lineatus* (Linnæus)

Picus lineatus LINNÆUS, 'Syst. Nat.,' 12th Ed., I, 1766, p. 174 ("Habitat in Cayana.")

Ceophlæus lineatus HARGITT, 'Cat. B. Brit. Mus.,' XVIII, 1890, p. 508 (Chapada); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 131 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 188 (Matto Grosso).

Descalvados, 1 ♂ ad.; Rio Roosevelt, Camp 2, 1 ♂ ad.

RANGE.—Brazil: Matto Grosso (Chapada, Descalvados, Rio Roosevelt); Paraná to Rio de Janeiro; Minas Geraes (Agua Suja); São Paulo (Franca, Barretos, Bebedouro); Espirito Santo (Rio Doce); Paraná (Ourinho); Pará; Castanhal; St. Antonio do Prata; Cussary; Marajó (Pacoval, Dunas, Pindobal, S. Natal); Mexiana; Amapá; Maranhão. Paraguay (Bernalcué, near Asunción); Colombia; Venezuela; Trinidad; Guiana; Ecuador; Peru; Bolivia (Chaco, Caiza, San Francisco).

While there may be several forms in South America, the specimens from Bahia have been described by Bangs and Penard (Bull. Mus. Comp. Zoöl., LXII, 1918, p. 58) as *Ceophlæus lineatus improcerus*. Their distinctness is, however, questionable.

Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
N. E. Venezuela, Bermúdez, 2 ♂;					
Rio Caura, 1 ♂	3 ♂	200	133.6	36.8	Munich
Mexiana Island, Fazenda					
Nazareth	1 ♂	181.5	141.5	37	"
Mexiana Island, Fazenda					
Nazareth	1 ♀	150	1	30	"
Marajó, Natal	1 ♂	183	125	36 ²	"
" "	1 ♀	188	135.5	38	"
" Sant' Anna	1 ♀	183	139	35	"
Brazil, Matto Grosso, Descalvados	1 ♂	196	136	38.5	A. M. N. H.
Brazil, Matto Grosso, Rio Roosevelt	1 ♂	195	141	34 ²	"
Paraguay, Bernalcué, near Asunción	1 ♂	188.5	135	38.5	Munich
Minas Geraes, Agua Suja	1 ♂	190.5	136.5	40	"
" " " "	1 ♀	188	136	37	"
" " " "	1 ♀	190.5	141.5	38	"
Rio de Janeiro	1 ♂	199.5	149.5	37.5	A. M. N. H.
" "	1 ♂	185.5	125 ¹	38.5	"
Brazil, Pará, Peixe-Boi	1 ♀	189	142.5	37.5	"
West Colombia, Santa Marta	1 ♂ juv.	150.5	139 ¹	37.5	"
" Chocó	1 ♀	179.5	1	36.5	"
" Santa Marta	1 ♀	177	127.5	35	"
" Bogotá Coll.	1 ♀	188.5	135.5	39	"

(1779) *Picumnus fuscus* Pelzeln

Picumnus fuscus PELZELN, 'Orn. Bras.,' III, 1870, p. 242 (Rio Guaporé); PELZELN AND LORENZ, Ann. K. K. Naturhist. Hofm. Wien, 1888, p. 42 (West Brasilien,

¹Tail moulting.

²Bill imperfect.

Rio Guaporé); HARGITT, 'Cat. B. Brit. Mus.,' XVIII, 1890, p. 530 (Rio Guaporé, west of Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 189 (Matto Grosso, Rio Guaporé).

No specimens collected.

RANGE.—Central Brazil: Matto Grosso (Rio Guaporé).

The type of this species is in the museum in Vienna. So far as known the range is confined to the Rio Guaporé, western Matto Grosso, Brazil, and from our present data I am inclined to add this species to our endemic list; the type (and only known specimen) being quite a young bird, the status of this species must remain in doubt. Perhaps it is only a young of *P. castelnaudi*.

(1782) ***Picumnus cirratus pilcomayensis*** Hargitt

Picumnus pilcomayensis HARGITT, Ibis, 1891, p. 606 (Rio Pilcomayo).

Paraguay: Trinidad, 1 ♂, 1 ♀; Rio Negro, 1 ♂. Matto Grosso: Urucúm, 1 ♂.

RANGE.—Brazil: Matto Grosso (Urucúm). Paraguay (Trinidad, Rio Negro); Argentine Chaco (Rio Pilcomayo; Ocampo, Santa Fé).

To quote Mr. Hargitt, this subspecies is "intermediate between *Picumnus cirrhatus* and *P. d'orbignyianus*. Differs from *P. cirrhatus cirrhatus* in lacking the brown auricular spot; back more grayish brown with white bars and lacks the buff tinge on flanks and thighs." I agree with Mr. Cory ('Cat. Bds. of the Americas,' 1919, p. 503) and Dr. Hellmayr (Verh. der Orn. Gesell. Bayern, XII, 1915, p. 156) in believing *P. c. pilcomayensis* to be a subspecies of *Picumnus cirratus* (type-locality, Brazil).

An adult male (taken Nov. 9) agrees very closely with Hargitt's description; another example (a male) showing some signs of immaturity has the throat much paler, less heavily barred with black; while a third male is distinctly immature, the forehead, crown and occiput dusky blackish without markings (no red or white tips to feathers), the underparts less heavily barred with black, or blackish, while the belly is strongly washed with buffy. A female (not fully adult) is similar to the adult male, but the top of the head is dusky blackish as in the immature male, and without markings.

Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Picumnus cirratus cirratus</i>					
S. E. Brazil, Espirito Santo, Victoria	1 ♂	54.5	39	11.5	Munich
S. E. Brazil, Espirito Santo, Victoria	1 ♀	53	37.5	11	"
S. E. Brazil, Rio de Janeiro, Manguinhos	1 ♀	50	34	11	"
<i>Picumnus cirratus pilcomayensis</i>					
Paraguay, Trinidad	1 ♂	48	35	10.5	A. M. N. H.
" Rio Negro	1 ♂	48	32	10	"
" Bernalcué, near Asunción	1 ♂	50.5	34	11	Munich
Paraguay, Trinidad	1 ♀	49.5	37.5	11	A. M. N. H.
Argentina, Ocampo	1 ♂	51	37	11	Munich

(1792) *Picumnus guttifer* Sundevall

Picumnus guttifer SUNDEVALL, Consp. Av. Picin., 1866, p. 101 ("Prov. Goyaz"); HARGITT, 'Cat. B. Brit. Mus.,' XVIII, 1890, p. 538 (Chapada); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 132 (Chapada); SALVADORI, Boll. Mus. Torino, XV, 1900, No. 378, p. 11 (Urucúm); IHERING, 'Cat. F. Braz.,' I, 1907, p. 190 (Matto Grosso); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 40 (Poconé).

Picumnus sagittatus PELZELN, 'Orn. Bras.,' III, 1870, p. 241 (Cuyabá, Rio das Frechas).

Picumnus lepidotus corumbanus LIMA, Rev. Mus. Paul., XII, (2), 1920, p. 94, Pl., fig. 2 (Corumbá, Matto Grosso).

Urucúm, 4 ♀; Agua Blanca de Corumbá, 1 ♀; Descalvados, 1 ♂, 1 ♀; Tapirapoan, 1 ♂; Rio São Lourenço, 1 ♂; Fazenda do São João, 1 ♀. In the second expedition breeding birds were collected at Descalvados, December 5.

RANGE.—Brazil: Matto Grosso (Urucúm, Agua Blanca de Corumbá, Descalvados, Tapirapoan, Rio São Lourenço, Fazenda do São João, Chapada, Poconé, Cuyabá, Rio das Frechas); São Paulo (Victoria de Botucatu, Rincão, Rio Feio, Baurú, Avanhandava, Bebedouro, Barretos, Itapura); Goyaz; Minas Geraes (Agua Suja, near Bagagem; Rio Jordão, near Araguay).

There is a very considerable variation in the relative amount of grayish white and dusky or blackish in the markings of the feathers of the underparts. Specimens from Matto Grosso show two of the three phases mentioned by Dr. Hellmayr (Nov. Zoöl., XV, 1908, p. 83) as partly due to individual variation, partly due to age. They present the same variation with regard to the black markings on the lowerparts.

(1804) *Picumnus aurifrons aurifrons* Pelzeln¹

Picumnus aurifrons PELZELN, 'Orn. Bras.,' III, 1870, p. 334 (Engenho do Gama, Caiçara, Salto do Girão); PELZELN AND LORENZ, Ann. K. K. Naturhist. Hofm. Wien, 1888, p. 42 (Matogrosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 191 (Matto Grosso).

¹This species was not previously represented in the Museum collection.

Campos Novos, Cerro do Norte, 1 ♂; Doze de Outubro, 1 ♀ ad.; Barão Melgaço, 1 ♀ ad.; the male, not yet fully mature, has the tips of the feathers of the sinciput bright golden (or lemon) yellow.

RANGE.—Brazil: Matto Grosso (Engenho do Gama, Caiçara, Salto do Girão, Campos Novos, Cerro do Norte, Doze de Outubro, Barão Melgaço); Rio Tocantins (Arumatheua); Rio Curuá (Malocca de Manoelsinho); Rio Madeira (Borba, Humaythá, Calama, Santa Izabel).

Typical *Picumnus aurifrons* (type-locality, Engenho do Gama) differs from *P. aurifrons flavifrons* by having longitudinal streaks instead of rounded spots on the belly.

(1848) **Conopophaga lineata** (Wied)

Myiagrus lineatus WIED, Beitr. Naturg. Bras., III, (2), 1831, p. 1064 (Arrayal = Cidade da Conquista, southern Bahia; descr. ♀).

Conopophaga lineata PELZELN, 'Orn. Bras.,' II, 1868, p. 92 (Sangrador, E. Matto Grosso).

No specimens collected.

RANGE.—Southeastern Brazil, from Pernambuco and southern Bahia to Rio Grande do Sul, west through Goyaz and Minas Geraes to eastern Matto Grosso (Sangrador) and adjoining parts of Paraguay.

(1851) **Corythopsis delalandi** (Lesson)¹

Muscicapa delalandi LESSON, 'Traité d'Orn.,' livr. 5, end of 1830, p. 392 (the types examined by Dr. Hellmayr in the Paris Museum were obtained by Delalande, Jr., in the vicinity of Rio de Janeiro, southeastern Brazil).²

Myiothera calcarata WIED, Beitr. Naturg. Bras., III, (2), 1831, p. 1101 (no locality given; the type in The American Museum Natural History is from southeastern Brazil).

Corythopsis calcarata PELZELN, 'Orn. Bras.,' II, 1868, p. 92 (Villa Maria, Matto Grosso); SCLATER, 'Cat. B. Brit. Mus.,' XV, 1890, p. 335 (Chapada, Matto Grosso, Brazil); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 121 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 194 (Matto Grosso, Chapada).

Rio São Lourenço, 1 ♀ ad.; maxilla blackish, mandible pale; tarsi pale gray; feet darker.

RANGE.—Brazil: in states of Bahia, Minas Geraes, Matto Grosso (Villa Maria, Chapada, São Lourenço), Rio de Janeiro, and São Paulo. Eastern Bolivia (Chiquitos); Paraguay; and northeastern Argentina (Misiones).

A single female, not in fully adult plumage, is browner olive than the adult taken on the Rio São Lourenço (near the mouth of the Rio Cuyabá).

¹Lesson's name has apparently slight priority.

²According to 'Catalogue of Birds of the Americas' (Field Mus. Nat. Hist. Pub. 223, Zoölogical Series, XIII, part 3, p. 34), "Lesson's description is erroneous, the upperparts of the type specimens being light brownish olive and by no means 'gris cendré.'" C. E. Hellmayr.

(1854) *Cymbilaimus lineatus intermedius* (Hartert and Goodson)

Cymbilainius lineatus intermedius HARTERT AND GOODSON, Nov. Zoöl., XXIV, No. 3, 1917, p. 495 (Amazonia, from the Rio Tapajóz to Peru, and Rio Caura, Venezuela; type from Humaythá, left bank of the Rio Madeira, Brazil).

Morinho Lyra, 1 ♂; Rio Roosevelt, Camp 14, 1 ♀.

RANGE.—Amazonia, from the Tocantins westward; in Brazil only south of the Amazon, ranging as far south as western Matto Grosso (Rio Roosevelt and Morinho Lyra). Peru, northward through eastern Ecuador to eastern Colombia and east to the upper Rio Negro and the Rio Caura, Venezuela.

Cymbilaimus lineatus intermedius Hartert and Goodson differs from *Cymbilaimus lineatus lineatus* only by the uniform black crown and nape of the male and the rufous instead of buffy tail-bands of the female.

The Matto Grosso specimen differs from typical *Cymbilaimus lineatus* (type-locality, Berbice, Guiana) in that the white cross-bars on the upper side are slightly wider, those on the under side much wider than the black ones. The tail of the female has wider and more rufous cross-bars and the ground color is more brownish and not so blackish as in typical *C. lineatus*. I have compared the Matto Grosso specimens with two skins, 1 ♂, 1 ♀, from Tumatumari, Potaro River, British Guiana.

(1867) *Taraba major major* (Vieillot)

Thammophilus major VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., III, 1816, p. 313 (based on Azara, No. 211, "*Batara mayor*"; Paraguay); PELZELN, 'Orn. Bras.,' II, 1868, p. 75, part (Cuyabá, São Vicente, Matto Grosso); SCLATER, 'Cat. B. Brit. Mus.,' XV, 1890, p. 186, part (Abrilongo, Chapada, Matto Grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 115 (Corumbá, Abrilongo, Chapada); SALVADORI, Boll. Mus. Torino, X, No. 208, 1895, p. 13 (Corumbá, Matto Grosso); GRANT, Ibis, 1911, p. 135 (below Boca de Homiguera, southwest Matto Grosso).

Paraguay: Trinidad, 1 ♀. Matto Grosso: Descalvados, 1 ♀; Urucúm, 6 ♂, 3 ♀; Rio São Lourenço, 1 ♂, 1 ♀; Tapirapoan, 1 ♂; Fazenda do São João, 1 ♂.

RANGE.—Western Brazil in states of Goyaz and Matto Grosso (Cuyabá, São Vicente, Chapada, Corumbá, Abrilongo, Boca de Homiguera, Descalvados, Urucúm, Rio São Lourenço, Tapirapoan, Fazenda do São João), south to northern São Paulo (Paraná, Tieté region).

The males agree with a number of Paraguay birds. There is a certain amount of individual variation in the size of the bill. I am sorry to say that the separation of *Taraba major virgultorum* Cherrie¹ turned out to be due to a complete misconception of facts. The author has entirely overlooked the fact that the alleged racial character, that is, the absence of white apical spots on the upper wing-coverts, is merely due to the extreme abrasion of these feathers. The same remark applies to the white edgings of the quills. The bird is changing its wings; the newly grown

¹Bull. Amer. Mus. Nat. Hist., XXXV, p. 391.

wing-coverts are as largely tipped with white as in Paraguay specimens of *Taraba major major*, and the seventh primary (just coming out) is outwardly edged with white as usual. The submedian rectrix shows less white than in *Taraba major major*, but this may be individual. I am unable to see in the type anything but an extremely worn male example of *Taraba major major*.

The female, No. 148401, from Porto Velho, Rio Madeira, described by Mr. Cherrie, belongs to *Taraba major borbæ*, and not to *Taraba major virgultorum*.

Average Measurements of Specimens Examined

	SEX	WING	TAIL	CULMEN	MUSEUM
Paraguay: Trinidad, Bernalcué, near Asunción, Concepción	3 ♂	89	86.5	21.6	A. M. N. H.
Brazil, Matto Grosso: Urucúm, Belvedere, Tapirapoan, Rio São Lourenço, Fazenda do São João	9 ♂	89.3	82.1	23.3	"
Brazil, Matto Grosso: Urucúm	4 ♀	86.5	79.6	23.5	"

(1873) *Thamnophilus æthiops punctuliger* (Pelzeln)

Thamnophilus punctuliger PELZELN, 'Orn. Bras.,' II, 1868, pp. 77, 146 (Borba, Rio Madeira; descr. ♂, type in Vienna Museum examined).

Morinho Lyra, 1 ♂ ad.; Rio Roosevelt, Camp 9, 1 ♂.

RANGE.—Brazilian Amazonia, from the Rio Madeira and northern Matto Grosso (Morinho Lyra, Rio Roosevelt) east to the Rio Tapajóz.

The birds from Matto Grosso, except in having the white dorsal spot less extended, agree with the type from Borba. Matto Grosso and Borba specimens are of a lighter slate-gray below than *Thamnophilus æthiops polionotus* and differ also in having a white dorsal spot, which is altogether wanting in the western race.

One bird from Morinho Lyra is an adult male, while the other from the Rio Roosevelt is in first annual plumage with rufescent brown instead of slate-gray edges to the remiges.

Measurements of Specimens Examined

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Thamnophilus zethiops punctuliger</i> (white dorsal spot)					
Borba, Rio Madeira (type)	♂	74	60	16.5	Natterer Coll. Vienna
Matto Grosso, Morinho Lyra,	♂	72	57.5	19	A. M. N. H.
“ “ Rio Roosevelt	♂	68	60.5	18	“
<i>Thamnophilus zethiops polionotus</i> (without white dorsal spot)					
N. E. Brazil, Marabitanas (type, No. 16609)	♂	71.5	¹	18.5	Vienna
N. E. Brazil, Marabitanas (type, No. 16607)	♂	70	58.5	19	“
N. E. Brazil, Marabitanas (type, No. 16608)	♂	69.5	58	17	“

(1883a) *Thamnophilus punctatus saturatus* Todd

Thamnophilus punctatus saturatus TODD, Proc. Biol. Soc. Wash., XL, 1927, p. 153 (Villa Braga, Rio Tapajóz).

Rio Roosevelt, Camp 2, 1 ♂; Utiarity, 1 ♀ ad.

RANGE.—Northern Brazil, south of the Amazon, from the Tocantins (Cametá) and Tapajóz (Santarém, Boim, Villa Braga) south to the northern part of Matto Grosso (Rio Roosevelt and Utiarity).

Having examined the types of *Thamnophilus cinereinucha* Pelzeln in the Vienna Museum, I believe them to be indistinguishable from *Thamnophilus punctatus punctatus* Shaw. *Thamnophilus cinereinucha* appears to be merely *T. punctatus punctatus* redescribed, birds of Manáos being identical with a series from French Guiana. The type of *T. stictocephalus* (according to the locality, São Vicente, Matto Grosso, only a short distance from Engenho do Gama, the terra typica of *Thamnophilus sticturus*) is most probably merely an individual variant of *sticturus*. According to Dr. Hellmayr, it is not the same as our specimens from the Rio Roosevelt and Utiarity, though he has not seen our male from the Rio Roosevelt. His notes, however, on the Utiarity female agree so well with the characters of *T. punctatus saturatus* that I believe Mr. Todd to be right in referring our specimens to *T. p. saturatus*, which obviously represents *T. p. punctatus* south of the Amazon, extending to northern Matto Grosso.

¹Tail moulting.

Average Measurements of Specimens Examined

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Thamnophilus punctatus punctatus</i>					
Brazil, Serra Caraumán, Rio Branco (No. 16615)	♂	68.5	55	16	Vienna
Brazil, Barra do Rio Negro (type, No. 16613)	♂	66.5	54.5	16	"
Brazil, Barra do Rio Negro, (type, No. 16614)	♂	66.5	52	17	"
Brazil, Barra do Rio Negro (No. 16616)	♀	67	53	16.5	"
Brazil, Barra do Rio Negro (No. 16617)	♀	64.5	53	17.5	"
<i>Thamnophilus punctatus saturatus</i>					
Brazil, Matto Grosso, Utiarity, near Salto Bello	♀	66.5	56	16	A. M. N. H.
Brazil, Matto Grosso, Rio Roosevelt	♂	69.5	1	1	"
<i>Thamnophilus punctatus punctatus</i>					
French Guiana, Cayenne	♂	66.5	54.5	17	Munich
Brit. Guiana, Wismar, Demerara River	♂	68.5	55.5	15.5	A. M. N. H.
Brit. Guiana, Wismar, Demerara River	♂	66	2	16	"
Venezuela, Cristóbal Colón, Paria Peninsula	6♂	68.5	54.6	17	"
Venezuela, Cristóbal Colón, Paria Peninsula	4♀	67.6	55.5	16.6	"
Brit. Guiana, Wismar, Demerara River	♀	65.5	53.5	17	"

(1883 pt.) *Thamnophilus punctatus pelzelni* Hellmayr

Thamnophilus punctatus pelzelni HELLMAYR, Field Mus. Nat. Hist. Pub., Zoöl. Ser., XIII, part 3, 1924, p. 96 (Abrilongo, near Chapada, eastern Matto Grosso³).

Thamnophilus sticturus (not of Pelzeln) PELZELN, 'Orn. Bras.', II, 1868, pp. 76, 122 (part; "var." from Goyaz).

Thamnophilus ambiguus ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 115 (Chapada, Matto Grosso).

Thamnophilus ambiguus sticturus (not of Pelzeln) HELLMAYR, Nov. Zoöl., XV, 1908, p. 66 (part; Chapada, E. Matto Grosso).

No specimens collected.

RANGE.—Interior of Brazil, central tableland from eastern Matto Grosso (Chapada, Abrilongo) and northern São Paulo through Goyaz to Bahia, Ceará, Piauhy and Maranhão (Miritiba).

¹Tail detached; bill imperfect.

²Tail missing.

³Type in collection of Amer. Mus. Nat. Hist., No. 33937, ♂ ad., Abrilongo, near Chapada, eastern Matto Grosso, Feb. 21, 1885, H. H. Smith Coll.

(1898) *Thamnophilus punctatus sticturus* Pelzeln

Thamnophilus sticturus PELZELN, 'Orn. Bras.,' II, 1868, pp. 76, 144 (Engenho do Gama, western Matto Grosso); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 9 (Urucúm, Corumbá, southwestern Matto Grosso).

Thamnophilus stictocephalus PELZELN, 'Orn. Bras.,' II, 1868, pp. 77, 146 (São Vicente, Matto Grosso).

Thamnophilus ambiguus sticturus HELLMAYR, Nov. Zoöl., XV, 1908, p. 66 (part; Engenho do Gama, Corumbá, Urucúm, western Matto Grosso).

Thamnophilus ambiguus IHERING, 'Cat. F. Braz.,' I, 1907, p. 199 (part; western Matto Grosso).

Belvedere de Urucúm, 7 ♂, 4 ♀; one breeding, December 4.

RANGE.—Southwestern Brazil, in western Matto Grosso (Corumbá, Urucúm, Rio Guaporé, Engenho do Gama), and eastern Bolivia.

I refer birds from Rio de Janeiro to *Thamnophilus punctatus ambiguus*, though I have seen none from Minas Geraes, the type-locality. Males from Rio de Janeiro differ from specimens from western Matto Grosso, *Thamnophilus punctatus sticturus*, by their larger size and the extent of white on the inner web of the outer tail-feathers. In *Thamnophilus punctatus sticturus* the white spot on the inner web of the outer tail-feather is entirely absent, while in males from Bahia (trade-skins) it is sometimes present and sometimes absent. A male from Piauhy, *Thamnophilus punctatus pelzelni*, has no white mark on the inner web of the outer tail-feather. However, in size, males and females from Bahia agree with *Thamnophilus punctatus ambiguus* from Rio de Janeiro.

The males from Bahia, *Thamnophilus punctatus ambiguus*, differ from *Thamnophilus punctatus pelzelni* and *Thamnophilus punctatus sticturus* by much darker slate-gray underparts with little whitish color along the abdomen, and by all the rectrices being marked with a distinct white marginal stripe.

Average Measurements of Specimens Examined

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Thamnophilus punctatus ambiguus</i>					
Brazil, Bahia (6); Rio de Janeiro (4)	10 ♂	68.8	58.7	14.5	Vienna
Brazil, Bahia (6); Rio de Janeiro (4)	10 ♀	68.9	59.5	17	"
<i>Thamnophilus sticturus sticturus</i>					
Brazil, Matto Grosso, Engenho do Gama, 1 ♂; Corumbá, 2 ♂	3 ♂	64.5	56	15.3	"
Brazil, Matto Grosso, Engenho do Gama (type, No. 16692, 1 ♀); Urucúm, 2 ♀	3 ♀	62.8	51.5	15.5	"

Average Measurements of Specimens Examined (*Continued*)

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Thamnophilus punctatus pelzelni</i>					Vienna
Brazil, Goyaz	♂	66.5	54	16	"
" Maranhão	♂	66.5	57	15	"
Brazil, Piauhy (Parnaguá, 4 ♀), Maranhão (Miritiba, 1 ♀), Matto Grosso (Chapada, 4 ♀)	9 ♀	63.1	57.5	15.3	Vienna; A. M. N. H.

(1889) *Thamnophilus amazonicus amazonicus* Sclater

Thamnophilus amazonicus SCLATER, P. Z. S., 1858, p. 214, Pl. CXXXIX, figs. 1, 2 (types from "upper Amazons [Bates]" = Rio Javarri; British Guiana [ex Schomburgk]); idem, 'Cat. Coll. Amer. Birds,' 1862, p. 174 (types from "upper Amazons"); PELZELN, 'Orn. Bras.,' II, 1868, p. 77 (part; Villa Maria [=São Luiz de Cáceres], Engenho do Gama, western Matto Grosso; specimens in Vienna Museum examined); HELLMAYR, Abhandl. Bayr. Ak. Wiss., II. Kl., XXII, No. 3, 1906, p. 658 (part; Engenho do Gama); Nov. Zoöl., XVII, 1910, p. 341 (Maroins, Rio Machados).

Tapirapoan, 1 ♀ ad.; Barão Melgaço, 1 ♀ ad.

RANGE.—Amazonia, south to western Matto Grosso (Villa Maria; Engenho do Gama; Maroins, Rio Machados; Tapirapoan; Barão Melgaço), and northeastern Bolivia.

These females show a considerable amount of individual variation. A series from Pará¹ (Munich Museum) has some females bright ochraceous below, while others are tawny.

Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Thamnophilus amazonicus paraensis</i>					
Apehú (No. 5)	♂	68.5	60	17	PARÁ
Baião (No. 40)	♂	70	60.5	18	"
" (No. 99)	♀	65.5	59	17	"
Santa Isabel (No. 36)	♀	68	55	16.5	"
Utinga, near Pará (Collins-Day Expedition, No. 148369)	♀	68.5	58.5	17	A. M. N. H.
<i>Thamnophilus amazonicus amazonicus</i>					
Porto Velho, Rio Madeira (Collins-Day Expedition, No. 148367)	♂	69.5		18.5	"
Porto Velho, Rio Madeira (Collins-Day Expedition, No. 148368)	♀	66.5	54.5	16.5	"
Tapirapoan (No. 127136)	♀	68.5	60.5	17.5	"
Barão Melgaço (No. 127555)	♀	70	60	16.5	"

¹Recently separated by Todd (Proc. Biol. Soc. Wash., XL, 1927, p. 154) as *Thamnophilus amazonicus paraensis*.

(1912) *Thamnophilus doliatus subradiatus* Berlepsch

Thamnophilus subradiatus BERLEPSCH, Journ. f. Ornith., XXXV, 1887, p. 17 (Upper Amazon = Iquitos, Peru).

Calama, 1 ♀, ad.

RANGE.—Eastern Peru and western Brazil (Rio Purús, Juruá, east to Rio Madeira, north to Rio Solimões).

(1915) *Thamnophilus doliatus radiatus* Vieillot

Thamnophilus radiatus VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., III, 1816, p. 315 based on "Batara listado" Azara, No. 212 (Paraguay); PELZELN, 'Orn. Bras.,' II, 1868, p. 78 (Arica, Estiva, Cuyabá, Matto Grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 115 (Chapada, Matto Grosso); SALVADORI, Boll. Mus. Torino, X, No. 208, 1895, p. 13 (part; Corumbá, Matto Grosso); idem, XV, No. 378, 1900, p. 9 (Urucúm, Matto Grosso); GRANT, Ibis, 1911, p. 136 (Boca de Homiguera, Matto Grosso); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, No. 96, 1917, p. 55 (São Luiz de Cáceres, Matto Grosso).

Utarity, 2 ♂, 2 ♀; Tres Buritys, 1 ♂; Juruena, 1 ♀; Tapirapoan, 2 ♂, 1 ♀; Rio São Lourenço, 1 ♀; Agua Blanca de Corumbá, 2 ♂; Urucúm, 5 ♂, 3 ♀. Paraguay: Trinidad, 1 ♀.

RANGE.—Paraguay; Bolivia. Southwestern Brazil: Matto Grosso (Chapada, Cuyabá, Arica, Estiva, São Luiz de Cáceres, Corumbá, Urucúm, Boca de Homiguera, Utarity, Tres Buritys, Juruena, Tapirapoan, Rio São Lourenço).

A male taken at Trinidad, Paraguay, on November 6, is not yet in the plumage of the adult. The females average paler than the series from Chapada (Smith Collection).

(1922) *Thamnophilus palliatus* (Lichtenstein)

Lanius palliatus LICHTENSTEIN, 'Verz. Doubl., Berlin. Mus.,' 1823, p. 46 (Bahia, eastern Brazil).

Thamnophilus palliatus PELZELN, 'Orn. Bras.,' II, 1868, p. 78 (part; Engenho do Cap. Gama, western Matto Grosso).

Barão Melgaço, 1 ♂.

RANGE.—Eastern Brazil, from Rio de Janeiro and Espirito Santo north to Pará, west to the Tapajóz; Matto Grosso (Engenho do Cap. Gama). Eastern and northern Bolivia.

Leo Miller collected this specimen, which agrees very closely with an example from the Rio Guamá.

(1923) *Thamnophilus torquatus* Swainson

Thamnophilus torquatus SWAINSON, Zoöl. Journ., II, No. 5, 1825, p. 89 ("Urupé," Bahia, eastern Brazil = ♂); PELZELN, 'Orn. Bras.,' II, 1868, p. 79 (Cuyabá, Matto Grosso).

Rhopochares argentinus CABANIS AND HEINE, 'Mus. Heine.,' II, 1859, p. 17 ("Montevideo, Buenos Ayres," localities erroneous; types in Mus. Heine examined by C. E. Hellmayr).

Thamnophilus ruficapillus (not of Vieillot) ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 118 (Chapada, Matto Grosso).

Rio de Color, 1 ♂ ad., 1 ♀, 1 ♂ ? juv.

RANGE.—Eastern and central Brazil, from Piauí and Pernambuco south to Bahia, western Minas Geraes, and northern São Paulo (Tieté region), west through Goyaz to Matto Grosso (Cuyabá, Chapada, Rio de Color), and adjoining parts of eastern Bolivia.

The young bird (juvinal plumage) has the general tone of the upperparts dusky brownish with rufous wash, the feathers of the top of the head with subterminal blackish bands and tawny ochraceous tips, while those of the remaining upperparts have less sharply defined subterminal bands of dusky blackish and tips of dusky buff. The general tone of the underparts is soiled buffy white faintly barred with dusky. The wing-quills (just starting) are fuscous, edged externally with reddish brown.

“The nest is vireo-like, cup-shaped, suspended between the twigs making a horizontal fork, the bottom and walls are thick, the whole firmly and strongly bound to the supporting twigs. The body of the nest is composed of fine, soft, dried grasses bound by comparatively broad strips of inner bark to the supports. The nest lining is composed of long, coarse hair-like vegetable fibres of a dark brown color. The free edge of the nest is rolled over forming a strong rim between the two supports. The nest was located in a thicket of bushes only about a meter from the ground. The parent birds were shy and secured only after a long and patient wait.”

(1947) *Thamnophilus schistaceus schistaceus* (d'Orbigny)

Thamnophilus schistaceus D'ORBIGNY, 'Voy. Amér. Mérid., Ois.,' 1838, p. 170, Pl. v, fig. 1 (Yuracares, northern Bolivia; type in Paris Museum = ♂ ad.); PELZELN, 'Orn. Bras.,' II, 1868, pp. 77, 148 (part; Salto do Girão, Borba, Rio Madeira).

Barão Melgaço, 1 ♀.

RANGE.—Western Brazil (Rio Purús, Rio Juruá, Rio Madeira down to Borba) east to the left bank of the Tapajóz (Villa Braga, Boim).

Two females, one from Todos Santos, Rio Chaparé, Prov. Cochabamba, and one from the mouth of the Rio San Antonio, Espirito Santo, Bolivia, show a slight difference when compared to our specimen from Barão Melgaço, Brazil. One is a February and two are March birds. The Bolivian birds are slightly darker above, the cap is deeper rufous and the specimens are more ochraceous below.

A female from Maroins, Rio Machados, agrees with the Bolivian specimens, and with a female from Yahuar mayo, southeastern Peru, and so I regard our bird, which is lighter below, as an example of individual variation. I have not seen a series of *Thamnophilus schistaceus inornatus* Ridgway,¹ but I know that it averages somewhat larger than *Thamnophilus schistaceus schistaceus*, and that it is rather an unsatisfactory race, some specimens being indistinguishable from *Thamnophilus schistaceus schistaceus*.

Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Thamnophilus schistaceus schistaceus</i>					
Brazil, Barão Melgaço	♀	63.5	²	16.5	A. M. N. H.
“ Maroins, Rio Machados	♀	64	60.5	17.5	Munich
S. E. Peru, Yahuar mayo	♀	62	²	19.5	“
Bolivia, Prov. Cochabamba, San Antonio	8 ♀	63.4	52.5	17.5	A. M. N. H.

(1930) *Pygiptila stellaris* (Spix)³

Thamnophilus stellaris SPIX, 'Av. Bras.,' II, 1825, p. 27, Pl. xxxvi, fig. 2. ♂ ("In Provincia Parã"). Type formerly in Munich Museum (lost).

Barão Melgaço, 1 ♂; Monte Cristo, 1 ♂.

RANGE.—Pará, Brazil, and throughout the Amazonian forest region westward to the eastern slopes of the Andes.

(1939) *Dysithamnus mentalis affinis* Pelzeln

Dysithamnus affinis PELZELN, 'Orn. Bras.,' II, 1868, pp. 80, 149 (Villa Maria [=São Luiz de Cáceres], western Matto Grosso; types in Vienna Museum examined); BERLEPSCH AND HELLMAYR, Journ. f. Ornith., LIII, 1905, p. 15; crit., descr. ♂, ♀, (Matto Grosso); LIMA, Rev. Mus. Paul., XII, (2), 1920, p. 93 (Matto Grosso).

Dysithamnus affinis affinis HELLMAYR, Nov. Zoöl., XIII, 1906, p. 31, diag. (Villa Maria, Chapada, Matto Grosso); TODD, Bull. Amer. Mus. Nat. Hist., XXXV, 1906, p. 552, crit. (Chapada, Rio São Lourenço, Matto Grosso).

Dysithamnus affinis IHERING, 'Cat. F. Braz.,' I, 1907, p. 203 (Villa Maria, Chapada).

Dysithamnus mentalis affinis HELLMAYR, Arch. f. Naturg., LXXXV, Heft 10, 1920, p. 90, crit. (Matto Grosso).

Dysithamnus mentalis (not of Temminck) ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 118 (Chapada, Matto Grosso).

Dysithamnus olivaceus (not of Tschudi) SCLATER, 'Cat. B. Brit. Mus.,' XV, 1890, p. 222, part (Chapada); OBERHOLSER, Proc. U. S. Nat. Mus., XXXV, 1902, p. 129 (crit., Chapada).

Rio São Lourenço, 1 ♂.

RANGE.—Central Brazil, from western Matto Grosso (Rio São Lourenço, Chapada, São Luiz de Cáceres) east to southern Goyaz.

¹Proc. U. S. Nat. Mus., X, 1887, p. 522 (Diamantina, near Santarém).

²Tails moulting.

³Perhaps referable to *P. stellaris purusiana* Todd, Proc. Biol. Soc. Wash., XL, 1927, p. 155 (Hyutanahán, Rio Purús, Brazil, January 16, 1922, S. M. Klages.)

(1959) *Thamnomanes caesioides persimilis* Hellmayr

Thamnomanes caesioides persimilis HELLMAYR, Nov. Zoöl., XIV, 1907, pp. 64, 65 (Teffé, Rio Solimões, northwestern Brazil).

Thamnomanes caesioides (not of Temminck) PELZELN, 'Orn. Bras.,' II, 1868, p. 80 (part; Salto do Girão, Rio Madeira; ♂ examined by C. E. Hellmayr).

Monte Cristo, 1 ♀ ad. Our specimen is a female in moult.

RANGE.—Western and northern Brazil (Rio Solimões, Rio Juruá, Rio Madeira, and Rio Machados).

The female closely resembles the female of *Thamnomanes caesioides glaucus*, in fact is almost indistinguishable, and differs only by the deeper buff coloring of the throat.

	Measurements				MUSEUM
	SEX	WING	TAIL	CULMEN	
<i>Thamnomanes caesioides persimilis</i>					
Monte Cristo	♀	68	68	17	A. M. N. H.
Calamá	♀	71	64.5	17	Munich
Villa Braga	♀	69	65.5	16	"
<i>Thamnomanes glaucus</i>					
Rio Caura, Venezuela	3 ♀	63.8	66	17	"

(1961a) *Myrmotherula sclateri* Sneath

Myrmotherula sclateri SNEATH, 'Orn. Monatsber.,' XX, 1912, p. 153 (Boim, Rio Tapajóz; types examined).

Barão Melgaço, 1 ♀. Wing, 45; tail, 26.5; culmen, 15 mm.

RANGE.—Northern Brazil: as yet known only from Boim, left bank of Rio Tapajóz, and Barão Melgaço, northern Matto Grosso.

I have concluded that *Myrmotherula kermi*¹ Cherrie is not separable from *Myrmotherula sclateri* Sneath.

Dr. Sneath's measurements given in 'Orn. Monatsber.,' 1912, p. 153, are wrong, as is shown in two of her topotypes from Boim, Rio Tapajóz (Munich Museum).

	SEX	WING	TAIL	CULMEN	
No. 8705, Boim, Rio Tapajóz,	♂		45	27	15
No. 8757, " " " "	♀		43.5	29.5	15

(1965) *Myrmotherula surinamensis multostriata* Selater

Myrmotherula multostriata SELATER, P. Z. S., XXVI, 1858, p. 234, Pl. CXXLI, fig. 2 (♂), 3 (♀), (Rio Ucayali, east Peru).

Rio Roosevelt, Camp 8, 1 ♀ ad.

RANGE.—Amazonia, south of the Amazon, from the Prov. of Pará to the lowlands of northeastern Peru and Matto Grosso (Rio Roosevelt).

¹Bull. Amer. Mus. Nat. Hist., XXXV, 1916, p. 184 (Barão Melgaço, Matto Grosso); type in coll. Amer. Mus. Nat. Hist. examined = ♀.

(1970) *Myrmotherula leucophthalma leucophthalma* (Pelzeln)

Formicivora leucophthalma PELZELN, 'Orn. Bras.,' II, 1868, pp. 83, 155 (Salto do Girão on the upper Rio Madeira; type (= ♀) in Vienna Museum examined by E. M. B. N.).

Rio Roosevelt, Camp 8, 2 ♂; Camp 14, 1 ♀.

RANGE.—Northern and western Brazil, south of the Amazon, ranging from the Rio Madeira west to the upper Purús (Bom Lugar), south to northwestern Matto Grosso (Rio Roosevelt).

I notice some individual variation in the two males from the Rio Roosevelt, one being of a brighter olive-brown above with a slight rufous admixture on the middle of the back, and having the buffy ochraceous of the abdomen extended up to the lower breast; while the other example has the upperparts of a duller brownish olive without rufous shade and the whole breast clear cinereous, the buffy brown being confined to the flanks and under tail-coverts. The first-named example also has the apical spots to the wing-coverts much larger and of a deep ochraceous tinge, while the other specimen in that respect hardly differs from a male of *Myrmotherula leucophthalma sororia* from northeast Peru. Two males from the River Jamauchim, lower Amazon, are slightly different again, being paler, less brownish above, with the tail less rufous (approaching thereby *Myrmotherula leucophthalma leucophthalma*) and having the belly less fulvous though still brighter than in *Myrmotherula leucophthalma sororia*. They doubtless belong to the race recently separated by Todd¹ as *M. l. sordida*.

Measurements					
	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Myrmotherula leucophthalma leucophthalma</i>					
Rio Roosevelt, Camp 8	♂	51.5	45.5	13.5	"
" " " 8	♂	50.5	45	13	"
" " " 14	♀	50.5	46.5	13	"
Maroins, Rio Machados	♀	51.5	45.5	13.5	Munich
<i>M. leucophthalma sordida</i>					
Sta. Helena, Rio Jamauchim	♂	52.5	44.5	14.5	Berl. Coll.
Tucunará, Rio Jamauchim	♂	50.5	42	13	Munich
<i>Myrmotherula leucophthalma sororia</i> ²					
Peru, La Gloria, Chanchamayo	♀	50.5	46.5	15	Berlepsch
" Amaz. sup., Rio Tigre	♂	49.5	42.5	12.5	Coll.

¹Proc. Biol. Soc. Wash., XL, 1927, p. 156 (Colonia do Mojuy, Santarém).

²According to Dr. Hellmayr, *Rhopias spodiota juninensis* Chubb (Bull. Brit. Orn. Club, XXXVIII, 1913, p. 84) is a synonym of *Myrmotherula leucophthalma sororia*. I have not seen the bird from Junin, central Peru.

(1978) **Myrmotherula ornata hoffmannsi** Hellmayr

Myrmotherula ornata hoffmannsi HELLMAYR, Bull. Brit. Orn. Club, XVI, 1906, p. 84 (Itaituba, Rio Tapajóz, north Brazil).

Myrmotherula ornata (not of Sclater) PELZELN, 'Orn. Bras.,' II, 1868, p. 81 (Salto Theotônio, Destacamento do Ribeirão, Rio Madeira; specimens in Vienna Museum examined by E. M. B. N.).

Rio Roosevelt, Camp 17, 1 ♂ ad.; feet slate-gray.

RANGE.—Northern Brazil, south of the Amazon, from the Tocantins to the Rio Madeira and Matto Grosso (Rio Roosevelt, Destacamento do Ribeirão).

(1980) **Myrmotherula hauxwelli hauxwelli** (Sclater)

Formicivora hauxwelli SCLATER, P. Z. S., XXV, 1857, p. 131, Pl. CXXVI, fig. 2 ("Chamicuros," northeastern Peru).

Myrmotherula hauxwelli PELZELN, 'Orn. Bras.,' II, 1868, p. 81 (Engenho do Cap. Gama, west Matto Grosso; Salto do Girão, Rio Madeira).

Rio Roosevelt, Camp 8, 1 ♂; Camp 17, 2 ♂; Calama, 1 ♂.

RANGE.—Amazonia, from the Tapajóz west to eastern Peru, south to western Matto Grosso (Engenho do Cap. Gama, Rio Roosevelt, Rio Guaporé); in Brazil only south of the Amazon.

(1982) **Myrmotherula axillaris axillaris** Vieillot

Myrmotherula axillaris VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XII, 1817, p. 113 ("la Guyane" = Cayenne); PELZELN, 'Orn. Bras.,' II, 1868, p. 82 (Villa Maria [= São Luiz de Cáceres], Engenho do Gama, Matto Grosso, São Vicente, west Matto Grosso).

Utarity, 2 ♂, 3 ♀; Rio Roosevelt, Camp 8, 1 ♂; Rio Roosevelt, Camp 27, 1 ♀; Monte Cristo, 1 ♀; Barão Melgaço, 1 ♂.

RANGE.—Northern Brazil, on the north bank of the Amazon as far west as the Rio Jamundá, south of the river from Maranhão, west to eastern Peru, south to western Matto Grosso (Utarity, Rio Roosevelt, Monte Cristo, Barão Melgaço, São Luiz de Cáceres, Rio Guaporé). Northern Bolivia.

The Matto Grosso specimens agree with birds from Tumatumari, Potaro River, British Guiana.

(1987b) **Myrmotherula iheringi heteroptera** Todd

Myrmotherula iheringi heteroptera TODD, Proc. Biol. Soc. Wash., XL, 1927, p. 158 (Hyutanahán, Rio Purús).

Myrmotherula garbei HELLMAYR, Nov. Zoöl., XIV, 1907, p. 383 (Humaythá, Rio Madeira); idem, *op. cit.*, XVII, 1910, p. 350 (same locality).

Barão Melgaço, 1 ♂; Rio Roosevelt, 1 ♀.

RANGE.—Northern Brazil, from the left bank of the Rio Madeira (Humaythá) to the Purús, ranging south to northern Matto Grosso.

The male from Barão Melgaço agrees well with an authentic specimen of *M. i. iheringi* secured by Dr. Snethlage at Villa Braga, Rio

Tapajóz, except in having the black throat-patch much farther extended on the breast, a difference which is very likely individual. *Myrmotherula iheringi*, while superficially resembling in the male sex the well-known *Myrmotherula longipennis*, appears to find its nearest ally in the south-eastern Brazilian *Myrmotherula minor* Salvadori, which it resembles in proportions as well as in the coloration of the female. The male differs from that of *Myrmotherula minor* by its much stronger and broader bill, by the absence of the white edges to the secondaries, by the absence of the black subterminal band and the white apical margin of the rectrices, by having the upper wing-coverts of a deeper, more uniform black without slaty edges, and spotted rather than edged with white at the tips, and by the plain white axillaries and under wing-coverts. The female is quite distinct from that of *Myrmotherula longipennis*.

The upperparts are a little lighter slate-gray than in our two males from Barão Melgaço and Villa Braga, and slightly washed with olive on the forehead and the lower rump; the upper wing-coverts are somewhat duller black than in the male and the apical spots are pale buff instead of pure white; the edges of the remiges instead of being slate-gray are light olivaceous, passing into pale brownish on the outer primaries. Rectrices more of a brownish black, externally edged with brownish olive; the lores and sides of the head dingy light buff narrowly streaked with grayish. Underparts buff, inclining to ochraceous on breast and abdomen, and washed with pale olive on the flanks; feathers of the foreneck with irregular spots of blackish, producing a variegated appearance. Axillaries, under wing-coverts and a distinct edge along the inner web of the remiges bright buff; basal half of lower mandible decidedly pale yellow. In the coloration and markings of the underparts, this bird recalls *M. minor*, but may be immediately distinguished from it by the light slate-gray instead of olive-brown back and by having the upper wing-coverts black and broadly tipped with buff instead of dusky, narrowly and indistinctly margined with light rufescent brown.

While the males of *Myrmotherula i. iheringi* and *Myrmotherula i. heteroptera* do not appear to be distinguishable by any constant character, unless it be the slightly greater extent of black on the lowerparts in the western race, the female from the Rio Roosevelt, by reason of its olive-edged quills and buff-tipped upper wing-coverts, clearly shows that the bird from Matto Grosso belongs to Mr. Todd's *M. i. heteroptera*.

Measurements					
	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Myrmotherula iheringi iheringi</i>					
Brazil, Villa Braga	1 ♂	49	30	13	Munich
<i>Myrmotherula iheringi heteroptera</i>					
Brazil, Barão Melgaço	1 ♂	51	32.5	13	A. M. N. H.
“ Rio Roosevelt	1 ♀	48.5	31.5	13.5	“
<i>Myrmotherula minor</i>					
São Paulo, Alto da Serra	♂	49	33.5	10.5	Berlepsch Coll.
Southern Brazil, Rio de Janeiro	♂	48.5	34.5	10.5	
São Paulo, Alto da Serra	♀	47	1	11	

(1988) *Myrmotherula longipennis transitiva* Hellmayr

Myrmotherula longipennis transitiva HELLMAYR. Journ. f. Ornith., 1929, 'Festschrift Hartert,' p. 47 (Maroins, Rio Machado).

Barão Melgaço, 1 ♂; Rio Roosevelt, 1 ♂, 1 ♀.

RANGE.—Western Brazil, from the upper Rio Madeira (Calama, Maroins) to northern Matto Grosso (Barão Melgaço, Rio Roosevelt).

The males have the lowerparts of a lighter gray than the majority of northern birds,² but some from the Rio Caura are hardly distinguishable in that respect. The male from the Rio Roosevelt agrees in the short wing with the Maroins specimen mentioned by Dr. Hellmayr,³ while that from Barão Melgaço is fully as large as typical *Myrmotherula longipennis* from French Guiana. Both specimens have the whitish quill-lining as well developed as in those from French Guiana, so it appears to be a variable character. The female from the Rio Roosevelt, while otherwise agreeing with the type from Maroins, is much more rufous on the wings, being nearly identical in coloration of upperparts with a series from Venezuela and French Guiana.

Our birds are different from the recently described *Myrmopagis paraensis* Todd,⁴ which is obviously a race of *Myrmotherula longipennis*.⁵

Measurements					
	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Myrmotherula longipennis longipennis</i>					
French Guiana	1 ♂	61.5	39	14	Munich
“ “	1 ♂	61.5	37	13.5	“
Venezuela, Rio Caura	1 ♂	60	38.5	13.5	“
French Guiana	1 ♀	56.5	37.5	12	“
“ “	1 ♀	53.5	36.5	14.5	“

¹Tail missing.

²I have examined the types of *Myrmotherula longipennis* Pelzeln ['Orn. Bras.,' 1868, pp. 82, 153 (Rio Negro, Marabitanas)], in the Vienna Museum.

³Nov. Zoöl., XVII, 1910, p. 350.

⁴Proc. Biol. Soc. Wash., XXXIII, 1920, p. 73.

⁵See Hellmayr's review of the group in Journ. f. Orn., 1929, 'Festschrift Hartert,' pp. 43-49.

	SEX	WING	TAIL	CULMEN	MUSEUM
Measurements (<i>Continued</i>)					
Venezuela, Rio Caura	1 ♀	59	38	13.5	Munich
“ “ “	1 ♀	57.5	38.5	12.5	“
<i>Myrmotherula longipennis transitiva</i>					
Brazil, Maroins, Rio Machados	1 ♂	55	32.5	12.5	“
Brazil, Barão Melgaço	1 ♂	61.5	36.5	13	A. M. N. H.
“ Maroins, Rio Machados (type)	1 ♀	55	33	12	Munich
Brazil, Rio Roosevelt	1 ♀	54.5	33		A. M. N. H.

(1995) *Myrmotherula menetriesii berlepschi* Hellmayr

Myrmotherula berlepschi HELLMAYR, Verhandl. Zool. Bot. Gesell. Wien, LIII, 1903, p. 211 (Salto do Girão, Rio Madeira; descr. ♂, ♀).

Myrmotherula menetriesii (not of d'Orbigny) PELZELN, 'Orn. Bras.,' II, 1868, p. 82 (Salto do Girão, Ribeirão, Rio Madeira).

Myrmotherula menetriesii berlepschi HELLMAYR, Nov. Zoöl., XVII, 1910, pp. 350, 351 (range: Calama, Rio Madeira, Maroins, Rio Machados; crit.).

Barão Melgaço, 1 ♀; Rio Roosevelt, 1 ♂ juv., 1 ♀; maxilla black, mandible and feet gray.

RANGE.—Northern Brazil, on the upper Rio Madeira and its affluents (Rio Machados and Rio Roosevelt).

I have compared the two females with a female from Maroins, Rio Machados, with which they agree. The specimen from Maroins was compared by Dr. Hellmayr¹ with the type in the Vienna Museum. These females show the extreme in coloration of this subspecies as, according to Dr. Hellmayr, a female from Calama is less rufescent on the back and tail.

(1998) *Herpsilochmus pileatus atricapillus* Pelzeln

Herpsilochmus atricapillus PELZELN, 'Orn. Bras.,' II, 1868, pp. 80, 150 (Porto do Rio Paraná, São Paulo [type]; City of Goyaz).

Urucúm, 1 ♂, 1 ♀; the male had the feet and mandible slate-gray, maxilla black, eye dark.

RANGE.—Tableland of central Brazil: Matto Grosso (Urucúm); São Paulo; Goyaz; Minas Geraes; northwestern Bahia; and extreme southern Piauhy. Eastern Bolivia; northwestern Argentina.

I see only very slight differences in size between the specimens from Urucúm and a small series in the Munich Museum from western Minas Geraes and northwestern Argentina.

¹Nov. Zoöl., XVII, 1910, p. 351.

Measurements of Specimens Examined

	SEX	WING	TAIL	CULMEN	MUSEUM
Urucúm	♂	51.5	54.5 ¹	12.5	A. M. N. H.
"	♀	49.5	57.5	13	"
Western Minas Geraes, Agua Suja	♂	53.5	62	14.5	Munich
" " " " "	♂	53.5	60.5	14	"
" " " " "	♀	53	60	15	"
Northwestern Argentina, Jujuy	♂ ad.	52.5	59	14.5	"
" " " " "	♂ ad.	53.5	57	14	"

(2003) *Herpsilochmus longirostris* Pelzeln

Herpsilochmus longirostris PELZELN, 'Orn. Bras.,' II, 1868, pp. 80, 150 (Porto do Rio Paraná, northern São Paulo; Rio Araguayá, Goyaz; Cuyabá and Rio Guaporé, Matto Grosso; I accept Cuyabá as type-locality; specimens in Vienna Museum examined by E. M. B. N.); SCLATER, 'Cat. B. Brit. Mus.,' XV, 1890, p. 246 (Chapada, Matto Grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 120 (Chapada); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 55 (Poconé, Matto Grosso).

Descalvados, 1 ♂; Rio São Lourenço, 1 ♀.

RANGE.—Tableland of Brazil, in northern São Paulo (Paraná-Tieté district), in states of Matto Grosso (Rio Guaporé, Poconé, Descalvados, Rio São Lourenço, Cuyabá, Chapada), Goyaz, and southern Piauhy.

(2006) *Herpsilochmus rufimarginatus frater* Sclater and Salvin

Herpsilochmus frater SCLATER AND SALVIN, P. Z. S. Lond., 1880, p. 159 (Sarayaçu, Ecuador).

Herpsilochmus rufimarginatus PELZELN, II, 'Orn. Bras.,' II, 1868, p. 80 (part; Engenho do Gama, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 210 (Matto Grosso).

No specimens collected.

RANGE.—Venezuela (from the north coast to the Orinoco and its tributaries); eastern Colombia and Ecuador; eastern Peru. Brazil, in states of Pará (Peixe-Boi, Island of Marajó), Maranhão (Tury-assú), and Matto Grosso (Engenho do Gama).

Birds from Matto Grosso are not quite typical of this form, so far as the males are concerned, but females agree in coloration with others from Venezuela and Colombia. More material is required to definitely settle the pertinence of the Matto Grosso race.

(2009) *Neorhoptias grisea grisea* (Boddaert)

Turdus griseus (sic) BODDAERT, 'Tabl. Pl. Enl.,' 1783, p. 39; based on "Le Grisin, de Cayenne" Daubenton, 'Pl. Enl.,' 643, fig. 1 [= ♂] (Cayenne).

Ellipura grisea PELZELN, 'Orn. Bras.,' II, 1868, p. 83 (part; São Vicente, Engenho do Gama, Villa Bella, Matto Grosso).

Tapirapoan, 2 ♂, 3 ♂; Utiarity, 1 ♂, 1 ♀. An adult female had the feet and mandible dark slate-gray; maxilla black; eye dark red-brown.

¹Tail imperfect.

RANGE.—Northern Brazil, south to the Amazon Valley from Pará west to the Rio Madeira, south to western Matto Grosso (São Vicente, Engenho do Gama, Villa Bella, Tapirapoan, Utiarity) and Goyaz.

RANGE.—French, Dutch, and British Guiana. Northern Brazil from Amapá west to the Rio Negro, south of the Amazon, west to the Rio Madeira, south to western Matto Grosso (São Vicente, Engenho do Gama, Villa Bella, Tapirapoan, Utiarity) and Goyaz, and through Maranhão, Piahy, and Pernambuco to Bahia.

I have examined a large series of this race in the Frankfort, Munich, and Vienna museums, and have concluded that all the differences seen in regard to color and size are due to individual variation. Our males from Matto Grosso are rufescent brown above when compared to a sooty-backed specimen from Cayenne (type-locality of *Neorhapias grisea grisea*, No. 4234, Berlepsch Coll.).

One might almost think that this color-difference was of subspecific value, but two males from Tapirapoan, Nos. 127141 and 127142, agree more nearly with typical *Neorhapias grisea grisea* in the slaty color above.

As regards the females, I notice the same differences. Two females from Piahy and Bahia (Ilha S. Martin on the Parnahyba and Pension Bellevue near Bahia City), Nos. 1240 and 92, Reiser Coll., Vienna Museum, are the palest below, while other Bahia specimens (4 ♀ trade-skins) in the intensity of the ochraceous lowerparts agree with a series from northern Brazil and Matto Grosso. Two specimens from the Rio Içanna, Nos. 15267 and 15266, are the darkest of all in the color of the lowerparts.

Average Measurements of Specimens Examined

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Neorhapias grisea grisea</i>					
French Guiana, Cayenne	1 ♂	55	49	13.5	Berlepsch Coll.
British Guiana, Wismar, Demerara River	3 ♂	54.5	50.4	13.6	A. M. N. H.
N. Brazil, Rio Içanna (Rio Negro), 1 ♂; Forte do Rio Branco, 3 ♂; Borba, Rio Madeira, 2 ♂					Vienna
Sta. Izabel, right bank of Rio Madeira; Miritiba, Maranhão, 2 ♂					Munich
Boim, on the Tapajóz, 1 ♂; Marajó, Chaves, 1 ♂	10 ♂	54.5	49.5	14.3	A. M. N. H.

Average Measurements of Specimens Examined (*Continued*)

	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Matto Grosso, ¹ Engenho do Gama, 3 ♂; São Vicente, ² 2 ♂; Utiarity, 1 ♂; Tapirapoan, 2 ♂	8 ♂	53	48.3	13.5	Vienna A. M. N. H.
Bahia (trade-skin)	1 ♂	57	52.5	15	Munich
“ “ “	1 ♂	54.5	49.5	³	Berlepsch Coll.
“ “ “	1 ♂	54	49.5	13	
French Guiana, Cayenne	1 ♀	56	48	14	Munich
British Guiana, Merumé Mts.	1 ♀	53.5	53	14	Berlepsch Coll.
North Brazil, Rio Içanna, 2 ♀; Borba, Rio Madeira, 1 ♀					Vienna
Sta. Izabel (right bank, Rio Madeira), 1 ♀; Marajó (Tuyuyú), 1 ♀					Munich
Fazenda Teso São José, 1 ♀					
Arumatheua, Rio Tocantins, 1 ♀	7 ♀	52.6	47.3	13.6	A. M. N. H.
Brazil, Matto Grosso, São Vicente, 1 ♀; Engenho do Gama, 2 ♀; Villa Bella, 1 ♀					Vienna Berlepsch Coll.
Engenho do Gama, 1 ♀					
Tapirapoan, 3 ♀; Utiarity, 1 ♀	9 ♀	51.3	48.5	13.6	A. M. N. H.
Bahia (trade-skin), 4 ♀					Munich and Berlepsch Coll.
“ near Pension Bellevue, 1 ♀	5 ♀	51.8	49.7	13.5	Vienna
Piauhy, Rio Parnahyba, Ilha S. Martin	1 ♀	51	44	14	“

(2014) *Neorhopias melanogaster melanogaster* (Pelzeln)

Formicivora melanogaster PELZELN, 'Orn. Bras.', II, 1868, pp. 83, 154 (City of Goyaz, central Brazil).

Urucúm, 1 ♀ ad.

RANGE.—Central Brazil, in states of Goyaz and Matto Grosso (Urucúm, near Corumbá), south to northern São Paulo, and eastern Bolivia.⁴

¹One specimen in first annual plumage.

²Both specimens in first annual plumage.

³Culmen broken.

⁴*N. melanogaster bahia* (Hellmayr), from northeastern Brazil (Bahia to Ceará and Piauhy), proves to be separable, after all. Cf. Hellmayr, Field Mus. Nat. Hist., Zool. Ser., XII, 1929, p. 375.

This specimen agrees in detail with the description given by Dr. Hellmayr (Nov. Zoöl., XV, 1908, p. 72).

(2016a) **Neorhophias rufa rufatra** (Lafresnaye and d'Orbigny)

Thamnophilus rufater LAFRESNAYE AND D'ORBIGNY, 'Syn. Av.,' I, in Mag. de Zool., VII, Cl. 2, 1837, p. 12 (Prov. Chiquitos, Moxos, eastern Bolivia; descr. ♂, ♀).

Formicivora rufatra D'ORBIGNY, 'Voy. Amér. Mérid., Ois.,' 1838, p. 204 (Chiquitos, Moxos, Bolivia); PELZELN, 'Orn. Bras.,' II, 1868, p. 83 (Cuyabá, Matto Grosso); SCLATER, 'Cat. B. Brit. Mus.,' XV, 1890, p. 250 (part; spec. g-k, Chapada, Matto Grosso); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 9 (Urucúm, southwestern Matto Grosso).

Formicivora rufa (not of Wied) MÉNÉTRIÈS, Mém. Acad. Sci. St. Pétersb., (6), III, part 2 (Sci. Nat.), 1835, p. 497, Pl. IX, fig. 1 (Cuyabá, Matto Grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 121 (Chapada, Matto Grosso); GRANT, Ibis, 1911, p. 136 (Albuquerque, southwestern Matto Grosso); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 55 (Caceres).

Microrhophias rufa HELLMAYR, Nov. Zoöl., XXVIII, 1921, p. 204 (part; Matto Grosso).

Urucúm, 3 ♂, 4 ♀ (laying in December); Descalvados, 1 ♂; Palmiras, 1 ♀; Tapirapoan, 1 ♂; Campos Novos, 1 ♂.

RANGE.—Interior of Brazil, in states of Goyaz and Matto Grosso (Cuyabá, Chapada, Urucúm, Caceres, Descalvados, Palmiras, Tapirapoan, Campos Novos), south to northern São Paulo, and western Minas Geraes. Eastern Bolivia; Paraguay (near Asunción); eastern Peru (Urubamba Valley).

In life, adult males have the feet slate-gray; bill blackish; eye dark.

Although Dr. Hellmayr has declared *Thamnophilus rufater* Lafresnaye and d'Orbigny to be inseparable from *Neorhophias rufa*,¹ I find, on comparing a large series, that the females from Matto Grosso, northern São Paulo, and Paraguay differ from those of Bahia and Piauhy by the much narrower black streaking on the lowerparts. Also, both sexes have the basal portion of the lateral rectrices more or less grayish brown in decided contrast to the black subapical band, while in birds from the eastern provinces of Brazil (Piauhy and Bahia), the tail-feathers appear nearly uniform black down to the base, and are also lighter cinnamon instead of chestnut above. These differences were correctly pointed out by Mr. Cherrie,² but, unfortunately, he renamed the typical *Neorhophias rufa rufa*, with heavily striped lowerparts in the female, as *Formicivora rufa chapmani*.

From a note supplied by Dr. Hellmayr, I gather that the female type of *Thamnophilus rufater* from Chiquitos, Bolivia, differs from a Bahia specimen in the narrower markings of the underparts, so the applicability

¹Nov. Zoöl., XXVIII, 1921, p. 204.

²Bull. Amer. Mus. Nat. Hist., XXXV, 1916, p. 396.

of this subspecific name for the birds of central Brazil may be considered certain.

Neorhopias rufa rufa inhabits eastern Brazil, extending west at least to the Tapajóz, while *Neorhopias rufa rufatra* is the western representative inhabiting eastern Bolivia (Chiquitos) and Matto Grosso, south to northern São Paulo and Paraguay (near Asunción). I refer one male from Peru, Santa Ana, provisionally to *Neorhopias rufa rufatra*, though it is larger than all of our other specimens.

Average Measurements of Specimens Examined

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Neorhopias rufa rufatra</i>					
Peru, Santa Ana	1 ♂	57.5	60	14	Berlepsch Coll.
Brazil, northern São Paulo, Rincão	1 ♂	51	59.5	13	Berlepsch Coll.
Brazil, Matto Grosso, Urucúm, 3 ♂; Descalvados, 1 ♂; Tapirapoan, ¹ 1 ♂; Campos Novos, 1 ♂; Chapada, 3 ♂ ¹	9 ♂	51.9	57.7	13.7	A. M. N. H.
Brazil, Matto Grosso, Urucúm, 4 ♀; Cuyabá, 1 ♀	5 ♀	51.4	57	12.9	Berlepsch Coll.
Brazil, São Paulo, S. Jeronymo (Tieté)	1 ♀	49.5	60	13	Berlepsch Coll.
Brazil, São Paulo, Itapura	1 ♀	51	61	13	Tring
Paraguay, Bernalcué, near Asunción	1 ♀	50.5	62	14	Munich
Paraguay, Bernalcué, near Asunción	1 ♀	50	65.5	14.5	"
<i>Neorhopias rufa rufa</i>					
Brazil, Bahia (trade-skin)	9 ♂	50.5	55.5	13.6	Berlepsch Coll.; Munich; Tring
" Goyaz, Rio Thesouras	1 ♂	49.5	59	13	Tring
" " " "	1 ♂	50.5	58.5	13.5	"
" Humaythá, Rio Madeira	4 ♂	50.6	53	13.8	"
Brazil, Piauhy, Santa Philomena, 1 ♂; Santa Maria, 1 ♂ ² ; Corrientes, on the Parnahyba, 1 ♂	3 ♂	50.8	55.5	14.1	Vienna (Reiser Coll.)

¹One specimen in juv. moult.

²End of first annual moult.

Average Measurements of Specimens Examined (*Continued*)

	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Piauí, Corrientes on the Parnahyba, 1 ♀; Serra of Philomena, 3 ♀	4 ♀	49.5	57.5	13.5	Vienna (Reiser Coll.)
Brazil, Bahia	1 ♀	49.5	53.5	13	Berlepsch Coll.
" Goyaz	3 ♀	49.5	58.8	13.6	Tring
" Humaythá, Rio Madeira	1 ♀	49	51.5	13.5	"

(2017*a*) *Myrmorchilus strigilatus suspicax* Wetmore

Myrmorchilus strigilatus suspicax WETMORE, Journ. Wash. Acad. Sci., XII, No. 14, 1922, p. 327 (Riacho Pilaga, near Kilometro 182 [Ferro-carril del Estado], Gob. de Formosa, Argentina [Type]; Rio Vermejo).

Formicivora strigilata (not of Wied) SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 9 (Urucúm, Matto Grosso).

Paraguay: Fort Wheeler, 3 ♂, 1 ♀. Matto Grosso: Urucúm, 4 ♂. 2 ♀ (one im.).

RANGE.—Southwestern Matto Grosso (Urucúm, near Corumbá), western Paraguay (Chaco) and northern Argentina (Terr. de Formosa, Rio Vermejo, and Jujuy).

This species was common at Urucúm. It seemed to keep entirely to the thick undergrowth of the forest. On the supplementary expedition it was found to be common at Fort Wheeler. Its nesting habits are unknown.

(2029) *Microrhopias quizensis bicolor* (Pelzeln)

Formicivora bicolor PELZELN, 'Orn. Bras.,' II, 1868, pp. 84, 156 (Engenho do Cap. Gama, western Matto Grosso; specimens examined in Vienna Museum by E. M. B. N.).

Microrhopias boucardi bicolor CHAPMAN, Amer. Mus. Novit., No. 2, 1921, p. 4 (Rio Tapajóz; Rio Roosevelt; Barão Melgaço).

Rio Roosevelt, Camp 16, 1 ♂ ad.; Barão Melgaço, 2 ♀ ad.

RANGE.—Brazilian Amazonia, from the left bank of the Rio Tapajóz on the southerly affluents of the Amazon west to the Rio Solimões and the Rio Juruá, south to western and northern Matto Grosso (Rio Guaporé, Rio Roosevelt, Barão Melgaço). Southeastern Peru; northern Bolivia.

(2032) *Melanopareia¹ torquata rufescens* Hellmayr

Melanopareia torquata rufescens HELLMAYR, Field Mus. Nat. Hist. Pub., Zoöl. Ser., XIII, part 3, 1924, p. 167 (Irisanga, São Paulo, Brazil).

Synallaxis torquata (not of Wied) PELZELN, 'Orn. Bras.,' I, 1868, p. 36 (Cimeteiro do Lambari, Irisanga, Paciência, State of São Paulo); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 112 (Chapada, Matto Grosso).

¹According to the late Mr. W. DeWitt Miller, the genus *Melanopareia* is apparently referable to the Pteroptochidae.

Melanopareia torquata bitorquata (not of Lafresnaye and d'Orbigny) HELLMAYR, Nov. Zoöl., XXVIII, 1921, pp. 266, 267 (part; Brazil, in states of Minas Geraes, São Paulo, Goyaz, and Matto Grosso).

Rio do Color, 1 ♂ ad. Feet dusky brownish horn-color.

RANGE.—Interior of Brazil, in states of Minas Geraes (Lagôa Santa, Sant' Anna dos Alegres), São Paulo, Goyaz, and Matto Grosso (Rio do Color).

A single specimen secured was running about on the ground under the scrub oaks and other bushes on the "plano."

(2046) *Ramphocænus melanurus sticturus* Hellmayr

Ramphocænus sticturus HELLMAYR, Verhandl. Zool. Bot. Gesell. Wien, LII, 1902, p. 97 (Villa Bella de Matto Grosso, west Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 214 (ex Hellmayr).

Ramphocænus melanurus (not of Vieillot) PELZELN, 'Orn. Bras.,' II, 1868, p. 84 (part; Engenho do Gama, Villa Bella, São Vicente, west Matto Grosso).

Ramphocænus melanurus sticturus HELLMAYR, Nov. Zoöl., XIV, 1907, p. 375 (diag., Villa Bella, Engenho do Gama, São Vicente, west Matto Grosso).

Barão Melgaço, 1 ♂; Primavera, 1 ♀.

RANGE.—Central Brazil, in western Matto Grosso (São Vicente, Engenho do Gama, Villa Bella de Matto Grosso, on the headwaters of the Guaporé, Primavera, Barão Melgaço). Endemic.

The bird from Barão Melgaço has no tail, but it agrees essentially in the color of the underparts with a topotype from Villa Bella, Matto Grosso, No. 14.1126, Munich Museum; while the specimen from Primavera has the outer rectrices broadly tipped with pure white, but is much more deeply ochraceous below, thus recalling *Ramphocænus rufiventris rufiventris*.

According to the late W. DeWitt Miller, *Ramphocænus* and its near ally, *Microbates*, are not antbirds, but are oscine, as shown by the syrinx muscles and the long aftershaft. They are evidently closely allied to the Sylviidæ, perhaps belonging to that family.

(2051) *Cercomacra sclateri* Hellmayr

Cercomacra sclateri HELLMAYR, Nov. Zoöl., XII, 1905, p. 288 (Chyavetas, upper Ucayali; "Iquitos," northeastern Peru; Igarapé-Assú, Pará; Borba, and Salto do Girão, Rio Madeira; Villa Bella de Matto Grosso, Brazil).

Cercomacra cærulescens (not *Myrmothera cærulescens* Vieillot) PELZELN, 'Orn. Bras.,' II, 1868, p. 84 (Borba, Salto Girão, Rio Madeira; [Villa Bella de] Matto Grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 121 (Cachoeira, west Matto Grosso).

Rio São Lourenço, 1 ♀; Fazenda do São João, 1 ♂, 1 ♀; Siete de Setembro, 1 ♀; Morinho Lyra, 1 ♂; Barão Melgaço, 1 ♂.

RANGE.—From the south bank¹ of the Marañón, northern Peru, and Rio Solimões (Teffé), through eastern Peru and northern Brazil south to western Matto Grosso (Villa Bella, Cachoeira, Rio São Lourenço, Fazenda do São João, Siete de Setembro, Morinho Lyra, Barão Melgaço), east to northern Maranhão.

(2055) *Cercomacra nigrescens approximans* Pelzeln

Cercomacra approximans PELZELN, 'Orn. Bras.,' II, 1868, pp. 85, 158 (Engenho do Gama, Villa Bella, Matto Grosso); SCLATER, 'Cat. B. Brit. Mus.,' XV, 1890, p. 266 (Engenho do Gama); IHERING, 'Cat. F. Braz.,' I, 1907, p. 215 (Matto Grosso).

No specimens collected.

RANGE.—Northern Brazil, south of the Amazon, from the Rio Tocantins westward and south to western Matto Grosso (Engenho do Gama, Rio Guaporé). Northern Bolivia; eastern Peru; eastern Ecuador.

An Amazonian representative of the Guianan *C. n. nigrescens* reaching the southern limit of its range in western Matto Grosso.

(2060) *Cercomacra melanaria* (Ménétrières)

Formicivora melanaria MÉNÉTRIÈS, Mém. Acad. Sci. St. Pétersb., (6), III, part 2, (Sci. Nat.), 1835, p. 500, Pl. IX, fig. 2 [= ♂ ad.] ("Minas Geraes"; according to Dr. Hellmayr, the type-locality is Cuyabá, Matto Grosso).

Cercomacra melanaria PELZELN, 'Orn. Bras.,' II, 1868, p. 85 (Cuyabá, Villa Maria [= São Luiz de Cáceres], Matto Grosso); SCLATER, 'Cat. B. Brit. Mus.,' XV, 1890, p. 268 (Cuyabá); MÉNÉGAUX AND HELLMAYR, Bull. Soc. Philom. Paris, (9), VIII, 1906, p. 42 (Rio Paraguay, southwestern Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 215 (Matto Grosso); GRANT, Ibis, 1911, p. 136 (Albuquerque, Rabicho, Boca de Homiguera, upper Paraguay, near Corumbá, southwestern Matto Grosso); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 55 (Poconé, Cáceres, Matto Grosso).

Água Blanca de Corumbá, 1 ♂; Descalvados, 1 ♂; Rio São Lourenço, 2 ♂; São João Ranch, 2 ♂.

RANGE.—Central Brazil, in southwestern portion of Matto Grosso, on the upper Paraguay (Albuquerque, Rabicho, Boca de Homiguera, near Corumbá, Cambará, near Descalvados, São Luiz de Cáceres, Rio São Lourenço, São João Ranch), and its affluent, the Rio Cuyabá (Poconé, Cuyabá).

(2065) *Pyriglena leuconota maura*² (Ménétrières)

Formicivora maura MÉNÉTRIÈS, Mém. Acad. Sci. St. Pétersb., (6), III, part 2, (Sci. Nat.), 1835, p. 506, Pl. VII, fig. 1 [interscapular feather of ♂] ("Minas Geraes," locality no doubt erroneous; Dr. Hellmayr substitutes Matto Grosso).

Pyriglena maura PELZELN, 'Orn. Bras.,' II, 1868, p. 85 (Rio das Frechas, Engenho do Gama, western Matto Grosso).

Pyriglena atra (not of Swainson) SCLATER, 'Cat. B. Brit. Mus.,' XV, 1890, p. 270 (part; spec. g, from Engenho do Gama); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 9 (Urucúm).

¹For description, see Field Mus. Nat. Hist. Pub., Zoöl. Ser., XIII, part 3, p. 214.

²Field Mus. Nat. Hist. Pub., Zoöl. Ser., XIII, part 3, p. 228.

Pyriglena leuconota (err. typ.) *maura* HELLMAYR, Abhandl. 2. Kl. Bayr. Akad. Wiss., XXII, No. 3, 1906, p. 623 (diag. ♂, ♀; "Minas Geraes"; Matto Grosso).

Pyriglena leuconota maura IHERING, 'Cat. F. Braz.,' I, 1907, p. 216 ("Minas Geraes"; Matto Grosso); CHAPMAN, Amer. Mus. Novit., No. 67, Apr., 1923, p. 6, in text (Tapirapoan, Urucúm, Matto Grosso).

Urucúm, 4 ♂, 3 ♀; Tapirapoan, 1 ♂, 1 ♀. In life the males have the eye reddish pink; bill and feet black.

RANGE.—Western Matto Grosso (Urucúm, Tapirapoan, Engenho do Gama, Rio das Frechas) and eastern Bolivia.

Comparing this form with typical *Pyriglena leuconota* from Pará, the female is at once distinguishable by having a sharp white supraloral streak, being paler above, and lacking on the feathers of the upper back the black sub-terminal band which in *Pyriglena leuconota leuconota* separates the white base from the rufous brown apical portion. The feathers of the foreneck and breast are brighter ochraceous; the bill is shorter and narrower, which is the only distinguishing character of the male.

Average Measurements of Specimens Examined

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Pyriglena leuconota leuconota</i>					
Brazil, Pará, Peixe-Boi, 3 ♂,					
Murutucú, near Pará, 1 ♂	4 ♂	75.3	69	17.3	Munich
Brazil, Murutucú, near Pará,					
1 ♀					
Brazil, Pará, Ipitinga, Rio					
Acará, 1 ♀					
Brazil, Pará, Peixe-Boi, 1 ♀					
Brazil, Pará, 1 ♀, (type)	4 ♀	72	70.8	16.3	"
<i>Pyriglena leuconota maura</i>					
Brazil, Matto Grosso,					
Urucúm, 3 ♂					A. M. N. H.
Brazil, Matto Grosso, Engenho					
do Gama, 1 ♂					Munich
Brazil, Matto Grosso, Tapira-					
poan, 1 ♂	5 ♂	76	73.3	15.5	A. M. N. H.
Brazil, Matto Grosso,					
Urucúm	1 ♀	72.5	1	15	
Brazil, Matto Grosso, Tapira-					
poan	1 ♀	70.5	67	16.5	A. M. N. H.

(2097) *Sclateria naevia argentata* (Des Murs)

Herpsilochmus argentatus DES MURS, in Castelnau, 'Expéd. Amér. Sud,' Zool., I, Ois., livr. 18, 1856, p. 53, Pl. xvii, fig. 2 [= ♂ im.] (Nauta, northeast Peru).

Heterocnemis albiventris PELZELN, 'Orn. Bras.,' II, 1868, p. 87, 161 (Engenho do

¹Tail moulting

Gama, Matto Grosso, west Matto Grosso; specimens in Vienna Museum examined by E. M. B. N.)

Sclateria argentata IHERING, 'Cat. F. Braz.,' I, 1907, p. 219 (Matto Grosso).

No specimens collected.

RANGE.—Upper Amazonia, from the Rio Madeira and the upper Rio Negro, south to western Matto Grosso (Rio Guaporé, Engenho do Gama).

(2103) **Schistocichla¹ leucostigma humaythæ** (Hellmayr)

Sclateria schistacea humaythæ HELLMAYR, Bull. Brit. Orn. Club, XIX, 1907, p. 51 (Humaythá, Rio Madeira).

Urupá, 1 ♂ ad.

RANGE.—Northern Brazil, south of the Amazon, from the upper Rio Madeira (Humaythá), north to the Rio Solimões, south to northern Matto Grosso (Urupá).

(2114) **Myrmophylax atrothorax melanurus** (Ménétriès)

Formicivora melanura MÉNÉTRIÈS, Mém. Acad. Sci. St. Pétersb., (6), III, part 2, (Sci. Nat.), 1835, p. 508, Pl. VIII, fig. 1 (♂), 2 (♀) ("montagnes non loin de la ville de Queluz, Minas Geraes" [errore] and Cuyabá, Matto Grosso; the types in the Leningrad Museum are from Cuyabá).

Cercomacra melanura PELZELN, 'Orn. Bras.,' II, 1868, p. 85 (part; Villa Maria, Engenho do Gama, west Matto Grosso).

Myrmeciza atrothorax (not of Boddaert) SCLATER, 'Cat. B. Brit. Mus.,' XV, 1890, p. 282 (part; spec. i-k, Villa Maria, Chapada, Matto Grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 121 (Chapada, Matto Grosso).

Myrmeciza atrothorax melanura HELLMAYR, Verhandl. Zool. Bot. Gesell. Wien, LIII, 1903, pp. 213, 214 (characters; "Minas Geraes," Matto Grosso, eastern Bolivia).

Tapirapoan, 2 ♂; Utiarity, 2 ♂, 2 ♀; Rio Roosevelt, Camp 4, 1 ♂, 1 ♀; Siete de Septiembre, 1 ♀; Campos Novos, 1 ♂.

RANGE.—Western Brazil, in state of Matto Grosso (Cuyabá, Chapada, Tapirapoan, Utiarity, Campos Novos, Rio Roosevelt, Engenho do Gama, Villa Maria [=São Luiz de Caçeres]) and eastern Bolivia.

This series shows most of the differences pointed out by Dr. Hellmayr.² Compared to a series of seven males and three females of *Myrmophylax³ atrothorax atrothorax* from Cayenne, the Rio Negro, the Rio Cassiquiare and the Rio Caura, the Matto Grosso specimens have a shorter culmen, and the lower back and upper tail-coverts olive-brown instead of sooty gray; also the abdomen and flanks of the males are lighter gray, the outer webs of the primaries and tertiaries are more olivaceous, less rufescent.

¹Todd (Proc. Biol. Soc. Wash., XL, 1927, p. 165) proposed the genus *Schistocichla* for *Sclateria schistacea* and allies. Dr. Hellmayr, who has gone over the material at Pittsburgh, quite agrees with him in the disposition of the case. Klages's discovery of *S. leucostigma infuscata* Todd on the north bank of the Solimões, where it lives side by side with *S. schistacea schistacea*, clearly shows that there are two "Formenkreise," viz.:

(a) *S. schistacea*, three races: *schistacea*, *intensa*, and *subplumbea*.

(b) *S. leucostigma*, four races: *leucostigma*, *infuscata*, *humaythæ*, and *rufifacies*.

²Verhandl. Zool. Bot. Gesell., Wien, LIII, 1903, p. 214; Field Mus. Nat. Hist. Pub., Zool. Ser., XIII, part 3, p. 274.

³See Todd, Proc. Biol. Soc. Wash., XL, 1927, p. 172.

As to the coloration of the females, I find that three specimens of *Myrmophylax atrothorax atrothorax* from St. Laurent du Maroni, S. Carlos, Rio Cassiquiare, and the Rio Caura, have the underparts from the lower throat downward of a very bright reddish ochraceous passing into bright buff along the median line, and to dark brown on the flanks. Seven females from Matto Grosso have the throat more purely white in marked contrast to the color of the chest, while an extensive white area covers the center of the belly, the flanks being of a decidedly paler olive or grayish brown. Only a few approach the typical race in the intensity of the ochraceous color of the breast, which, however, is always less extended. The divergency in the color of the head and upperparts I am inclined to attribute partly to the age of the skins, partly to individual variation. The five specimens of the Roosevelt Collection have the upperparts olivaceous brown, while four males from the Vienna Museum (Matto Grosso) of the Natterer Collection have the upperparts rather a bright reddish brown. This difference is also seen in the typical race, *Myrmophylax atrothorax atrothorax*, fresh skins from St. Laurent du Maroni and the Rio Caura in the Munich Collection being more olivaceous above than those from the Rio Negro and Rio Cassiquiare.

Average Measurements of Specimens Examined

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Myrmophylax atrothorax atrothorax</i>					
French Guiana, Cayenne	1 ♂	55		15.5	Vienna
French Guiana, St. Laurent du Maroni	1 ♂	56	58.5	15	Munich
Venezuela, Rio Caura, 1 ♂; S. Carlos, Rio Cassiquiare, 2 ♂	3 ♂	58.5	59.5	18.2	Vienna
Brazil, Marabitanas, Rio Negro	1 ♂	59.5	58	16.5	"
French Guiana, St. Laurent du Maroni	1 ♀	56	58	18	Munich
Venezuela, Rio Caura	1 ♀	60	61	16	"
Venezuela, S. Carlos, Rio Cassiquiare	1 ♀	55.5	59	17.5	Vienna
<i>Myrmophylax atrothorax melanurus</i>					
Brazil, Matto Grosso, Campos Novos, 1 ♂					
Rio Roosevelt, 1 ♂; Utiarity, 1 ♂; Tapirapoan, 2 ♂					
Engenho do Gama, 2 ♂; São Luiz de Caceres, 2 ♂	9 ♂	57.2	55.1	15.2	A. M. N. H. Vienna

Average Measurements of Specimens Examined (*Continued*)

	SEX	WING	TAIL	CULMEN	MUSEUM
Rio Roosevelt, 1 ♀; Siete de Septembre, 1 ♀; Utiarity, 2 ♀					
São Luiz de Cáceres, 1 ♀; Matogrosso, 1 ♀; Engenho do Gama, 1 ♀	7 ♀	56.9	57.3	16	A. M. N. H. Vienna

(2118) *Myrmeciza hemimelæna pallens* Berlepsch and Hellmayr

Myrmeciza hemimelæna pallens BERLEPSCH AND HELLMAYR, Journ. f. Ornith., LIII, 1905, p. 32 (Villa Bella de Matto Grosso, west Matto Grosso).

Formicivora ruficauda (not *Myiothera ruficauda* Wied) PELZELN, 'Orn. Bras.,' II, 1868, pp. 83, 155 (Engenho do Gama, Villa Bella de Matto Grosso, west Matto Grosso; descr. ♂).

No specimens collected.

RANGE.—Northern and western Brazil, south of the Amazon, from the Tapajós (Santarém), west to the Rio Madeira and Rio Juruá, south to western Matto Grosso (Rio Guaporé, Engenho do Gama, Villa Bella de Matto Grosso).

(2121) *Hypocnemis cantator peruviana* Taczanowski

Hypocnemis cantator peruvianus TACZANOWSKI, 'Orn. Pérou,' II, 1884, p. 61 (Yurimaguas, northern Peru; descr. ♂, ♀).

Hypocnemis cantator PELZELN, 'Orn. Bras.,' II, 1868, p. 87 (part; Villa Maria, Engenho do Gama, western Matto Grosso).

Tapirapoan, 2 ♂, 2 ♀; Morinho Lyra, 1 ♀; Camp 9, Rio Roosevelt, 1 ♀; Inferno Rapids, Amazonia, 1 ♂, 1 ♀.

RANGE.—Northern Brazil, south of the Amazon, from the Tocantins westward, south to western Matto Grosso (Tapirapoan, Morinho Lyra, Rio Roosevelt, Inferno Rapids, Villa Maria, Engenho do Gama). Northern Bolivia; Peru; eastern Ecuador; southeastern Colombia.

(2126) *Hylophylax pæcilinota griseiventris* (Pelzeln)

Pithys griseiventris PELZELN, 'Orn. Bras.,' II, 1868, pp. 89, 167 (Villa Maria [=São Luiz de Cáceres] and Engenho do Gama, west Matto Grosso).

Hypocnemis pæcilinota griseiventris HELLMAYR, Nov. Zoöl., XIII, 1906, pp. 371 (crit.), 372 (characters ♂, ♀; Borba, Rio Madeira; Villa Maria, Engenho do Gama, western Matto Grosso).

Hypocnemis pæcilinota griseiventris IHERING, 'Cat. F. Braz.,' I, 1907, p. 222 (Matto Grosso, Rio Madeira); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 297 (Amazonia, Matto Grosso).

Hylophylax griseiventris griseiventris CHAPMAN, Amer. Mus. Novit., No. 86, 1923, p. 7, in text (Rio Roosevelt, Matto Grosso).

Rio Roosevelt, Camp 14, 1 ♂ im.; bill black, feet gray.

RANGE.—Upper Amazonian region of Brazil, from the Rio Madeira (both banks), westward, north to Teffé, Rio Solimões, south to western Matto Grosso (Engenho do Gama, Rio Guaporé; São Luiz de Cáceres; Rio Roosevelt).

(2130) *Myrmoborus leucophrys angustirostris* (Cabanis)

Conopophaga angustirostris CABANIS, in Schomburgk's, 'Reisen Brit. Guiana,' III, 1848, p. 685 (coastal forests of British Guiana; descr. ♀).

Barão Melgaço, 1 ♂.

RANGE.—Lowlands of the Amazonian forests, from French Guiana through southern Venezuela to the upper Orinoco, and from the Tocantins, west to the Rio Solimões and Rio Javari, south to northern Matto Grosso (Barão Melgaço).

Birds of the lowlands, ranging from British Guiana to the headwaters of the Rio Madeira and all over Brazil, are referable to *Myrmoborus leucophrys angustirostris*, while birds of the highlands found in southeast and central Peru, Colombia, and northwest Venezuela may be referred to *Myrmoborus leucophrys leucophrys*.

Average Measurements of Specimens Examined

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Myrmoborus leucophrys angustirostris</i>					
Brazil, Barão Melgaço	1 ♂	66.5	55	16	A. M. N. H.
" Calama	1 ♂	68.5	48.5	16.5	"
Venezuela, Rio Caura	3 ♂	64.6	50.3	17.1	Munich
French Guiana, Approuague	1 ♂	67	50	16.5	"
Bolivia, Rio Espirito Santo	1 ♂	63	50	17	"
<i>Myrmoborus leucophrys leucophrys</i>					
S. E. Peru, Chaquimayo, 1 ♂;					
Yahuarmayo, 1 ♂; Carabaya, 1 ♂					
	3 ♂	64.1	51.5	15.6	Munich
Bogotá Coll.	1 ♂	70	1	17.5	"
" "	1 ♂	70.5	55	17.5	"
Colombia, Buena Vista	1 ♂	69	56	17.5	"
West Venezuela, Tachira	1 ♂	69	56.5	16.5	"
<i>Myrmoborus leucophrys angustirostris</i>					
French Guiana, Approuague	1 ♀	62.5	47.5	16	"
Venezuela, Rio Caura	3 ♀	64.5	51	16.3	"
Brazil, Maroins, Rio Machados	1 ♀	63	48.5	16.5	"
Bolivia, Todos Santos	1 ♀	65.5	49.5	15.5	"
<i>Myrmoborus leucophrys leucophrys</i>					
Bogotá Coll.	1 ♀	65	54	16	"
" "	1 ♀	65	48.5	15.5	"
Colombia, Buena Vista	1 ♀	65	51.5	17	"
S. E. Peru, Yahuarmayo	4 ♀	66	50.6	15.5	"

¹Tail moulting.

I refer the specimens from Bolivia provisionally to *M. l. angustirostris*, but a good series should be examined in order to confirm my identification.

(2132) **Myrmoborus myotherinus melanolæma** (Sclater)

Hypocnemis melanolæma SCLATER, P. Z. S., XXII, "1854," 1855, p. 254, Pl. LXXII, fig. 2 ("in Peruvia, Chamicuros"; the type, now in British Museum, according to C. E. Hellmayr is from "Peru" ex Verreaux; descr. ♂ ad.).

Rio Roosevelt, Camp 14, 1 ♂ im.¹

RANGE.—Upper Amazonia from the left bank of the Rio Madeira, west to eastern Peru, south to Bolivia and Matto Grosso (Rio Roosevelt).

This is an immature bird with the throat still white and the back showing patches of olive-brown.

(2133) **Myrmoborus myotherinus sororius** (Hellmayr)

Hypocnemis myotherina sororia HELLMAYR, Nov. Zoöl., XVII, 1910, p. 358 (Calama, Rio Madeira [type], Jamarysinho, Maroins, Rio Machados).

Morinho Lyra, 1 ♂; Calama, 1 ♂.

RANGE.—Northern Brazil, on the right bank of the upper Rio Madeira (Paraiso, Calama) and its tributary, the Machados, south to northern Matto Grosso (Maroins, Jamarysinho, Morinho Lyra).

(2140) **Hypocnemoides maculicauda** (Pelzeln)

Hypocnemis maculicauda PELZELN, 'Orn. Bras.,' II, 1868, pp. 89, 164 (São Luiz de Cáceres [type], Engenho do Gama and [Villa Bella de] Matto Grosso); SCLATER, 'Cat. B. Brit. Mus.,' XV, 1890, p. 291 (Matto Grosso).

Descalvados, 1 ♂; maxilla black; mandible blackish; feet and claws plumbeous gray; eye dark. 1 ♀, the gray of the feet and claws not so deep.

RANGE.—Northern and western Brazil, only south of the Amazon, in states of Pará (S. Antonio do Prata, Rio Acará, Rio Capim; Rio Tapajóz), Amazonas (Rio Solimões, Rio Juruá, Rio Purús; Maroins, Rio Machados), and Matto Grosso (Villa Bella de Matto Grosso, and Engenho do Gama, Rio Guaporé; Villa Maria [=São Luiz de Cáceres] and Descalvados, upper Paraguay).

These specimens were found in the undergrowth of a thickly forested area near the river.

(2143) **Hylophylax nævia theresæ** (Des Murs)

Conopophaga theresæ DES MURS, in Castelnau, 'Expéd. Amér. Sud,' Zool., I, Ois., livr. 18, 1856, p. 51, Pl. XVI, fig. 2 (Rio Javari, northeastern Peru; type = ♀).

Rio Roosevelt, Camps 17 and 21, 2 ♂; bill black; eye gray; feet and claws pale horny white.

¹As there is only a single immature specimen available, the bird from the Rio Roosevelt may be referable to *M. m. sororius*.

RANGE.—Upper Amazonia, from eastern Colombia south to northern Bolivia, east through western Brazil, south of the Amazon Valley to the left bank of the Tapajóz (Villa Braga), south to northern Matto Grosso (Rio Roosevelt).

The specimen from Camp 21, No. 127686, is in the plumage of the female, and I consider it in all probability incorrectly sexed.

(2153) **Myrmornis torquata** (Boddaert)

Formicarius torquatus BODDAERT, 'Tabl. Pl. Enl.,' 1783, p. 43 (based on "Le Fourmillier, de Cayenne," Daubenton, 'Pl. Enl.,' 700; fig. 1 (= ♂ ad.).

Rhopoterpe torquata tragicus CHERRIE, Bull. Amer. Mus. Nat. Hist., XXXV, 1916, p. 184 (Rio Roosevelt, northern Matto Grosso).

Rio Roosevelt, Camp 17, ♀.

RANGE.—Guiana; Venezuela (Caura Valley); eastern Colombia; and Ecuador; northern Brazil, from Pará west to Manáos and the Rio Madeira, south to northern Matto Grosso (Rio Roosevelt); (?) also eastern Brazil (Prov. Bahia).

The examination of seven specimens from the same general region (Maroins, Rio Machados) leads me to believe that *Rhopoterpe torquata tragicus* has been based upon individual variation of the typical race. In comparing five females, I notice a great deal of variation in the width and extent of the white wing-band, as well as in the markings of the lower-parts.

One of our specimens (Munich Museum, No. 09.575), has, like two others from Cayenne and the Merumé Mts., British Guiana, the two outermost primaries uniform dusky on the inner web, while in three others there is, as in the type of *Rhopoterpe torquata tragicus*,¹ a distinct white band on the second primary.

In another specimen from Guiana the white wing-band begins on the fourth primary, while the third shows hardly a slight indication of it on the border of the inner web.

One of our females from Maroins has even less blackish edges to the feathers of the foreneck; while another possessing broad, black regular cross-bars resembles an adult female from the Merumé Mts., in British Guiana, which has the chest strongly washed with olive-brownish as the type of *R. t. tragicus* and No. 09.572 (Munich Museum) from Maroins. While there is thus no constant difference between females from Matto Grosso and the Guianas, it would appear that males from the former region have the underparts generally of a slightly paler gray, though several examples are not distinguishable on this score. The preceding observations are partly based on notes supplied by Dr. Hellmayr, who lately made a study of the geographical variation of this bird.

¹The first primary is missing on both wings of the type of *R. t. tragicus*.

Average Measurements of Specimens Examined

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Myrmornis torquata</i>					
Brazil, Maroins, Rio Machados	3 ♂	93.5	43	24	Munich
Brazil, Rio Roosevelt, Camp 17, 1 ♀					A. M. N. H.
Brazil, Maroins, Rio Machados, 4 ♀	5 ♀	91.7	44.3	23.2	Munich

(2154) *Formicarius ruficeps amazonicus* Hellmayr

Formicarius ruficeps amazonicus HELLMAYR, 'Orn. Monatsber.,' X, 1902, p. 34 (Borba, Rio Madeira [type]; Pará; [Villa Bella de] Matto Grosso, western Matto Grosso).

Formicarius ruficeps (not of Spix) PELZELN, 'Orn. Bras.,' II, 1868, p. 90 (part; Pará, Borba, city of Matto Grosso, western Matto Grosso).

Broken Canoe Rapids, Rio Roosevelt, 1 ♀ ad.; eye dark; bill black; feet brownish slate.

RANGE.—Northern Brazil, south of the Amazon, from Maranhão west to the Rio Madeira (right bank), southward to western Matto Grosso (Villa Bella, Rio Guaporé, Rio Roosevelt).

(2156) *Formicarius analis analis* (Lafresnaye and d'Orbigny)

Myothera analis LAFRESNAYE AND D'ORBIGNY, 'Syn. Av.,' I, in Mag. de Zool., VII, 1837, Cl. 2, p. 14 ("Yuracares et Chiquitos, Bolivia").

Formicarius analis PELZELN, 'Orn. Bras.,' II, 1868, p. 90 (Salto do Girão, Borba, Rio Madeira).

Barão Melgaço, 1 ♂.

RANGE.—Northern Brazil, south of the Amazon, from Maranhão westward to the Solimões and Purús, south to the upper Madeira; northern Bolivia (Yuracares, Rio San Mateo); eastern Peru.

This specimen is slightly vinaceous-brown on the posterior half of the auriculars and on the sides of the neck.

(2208) *Grallaria berlepschi* Hellmayr

Grallaria berlepschi HELLMAYR, Verhandl. Zool. Bot. Gesell. Wien, LIII, 1903, p. 218 (Engenho do Gama, Rio Guaporé, west Matto Grosso); Nov. Zoöl., XVII, 1910, p. 370, in text (characters; Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 226 (Matto Grosso).

Grallaria fulviventris ? (not of Sclater) PELZELN, 'Orn. Bras.,' II, 1868, p. 91 (Engenho do Gama).

No specimens collected.

RANGE.—Western and northern Brazil, western Matto Grosso (Engenho do Gama, Rio Guaporé); Bom Lugar, upper Purús, and south bank of lower Amazon.

(2219) *Geobates pæcilopterus* (Wied)

Anthus pæcilopterus WIED, Beitr. Naturg. Bras., III, (1), 1831, p. 633 (Campos Geraes, interior of Brazil, on the confines of Minas Geraes and Bahia).

Geobates pæcilopterus SCLATER, 'Cat. B. Brit. Mus.,' XV, 1890, p. 4 (Chapada); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 110 (Chapada).

Rio Nicola, 1 ♂ ad.; feet dusky flesh color; eyes dark; bill blackish, basal two-thirds of mandible pale.

RANGE.—Campos of Brazil in Minas Geraes, São Paulo, and Matto Grosso (Chapada, Rio Nicola).

In habits this bird acts much like one of the small larks. It frequents the more open parts of the savanna country and was never seen to perch in trees.

(2234) *Furnarius rufus commersoni* Pelzeln

Furnarius commersoni PELZELN, 'Orn. Bras.,' I, 1868, p. 34, Note 2, part (Cuyabá, Matto Grosso, designated as type-locality).

Furnarius badius var. PELZELN, Sitzungsber. Akad. Wiss., Math.-Naturw. Kl., Wien, XXXIV, 1859, p. 114 (part; Cuyabá).

Furnarius albogularis (not of Spix) PELZELN, Ibis, 1881, p. 405 (part; descr. and hab. Cuyabá); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 111 (Chapada, Matto Grosso).

Furnarius albigularis SCLATER, 'Cat. B. Brit. Mus.,' XV, 1890, p. 11 (part; Chapada, Cuyabá).

Furnarius rufus commersoni MÉNÉGAUX AND HELLMAYR, Mém. Soc. Hist. Nat., Autun, XIX, 1906, p. 50 (Cuyabá, Matto Grosso); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 56 (Caceres, Amaça, Barra-Caceres, Matto Grosso); CHERRIE AND REICHENBERGER, Amer. Mus. Novit., No. 27, 1921, p. 6 (part; Chapada; Urucúm).

Urucúm, 2 ♂, 3 ♀.

RANGE.—Interior of Brazil, in State of Matto Grosso (Cuyabá; Chapada; São Luiz de Caceres; Amaça; Urucúm).¹

Three of the five specimens are immature, exactly similar in plumage to the adults.

(2241) *Furnarius leucopus assimilis* Cabanis and Heine

Figures 21 to 23

Furnarius assimilis CABANIS AND HEINE, 'Mus. Hein.,' II, p. 1959, p. 22 ("Brasilien"; Dr. Hellmayr suggests Bahia as type-locality)²; PELZELN, Ibis, 1881, p. 406 (Cuyabá; monog.); GRANT, Ibis, 1911, p. 127 (Mirim, Rio Paraguay, Matto Grosso).

Opetiarhynchus rufus (errore) THIENEMANN, Fortpflanzungsg. Ges. Vogel, 1848, p. 136 (nest collected by Natterer [at Cuyabá] described).

Furnarius leucopus (not of Swainson) PELZELN, Sitzungsber. Akad. Wiss., Math.-Naturw. Kl., Wien, XXXI, 1858, p. 322 (nests from Cuyabá); *loc. cit.*, XXXIV, 1859, p. 115 (part; Cuyabá); *idem*, 'Orn. Bras.,' I, 1868, p. 35 (part; Cuyabá); SCLATER

¹Birds from eastern Bolivia appear to belong here, too.

²Hellmayr, Field Mus. Nat. Hist., Zool. Ser., XIII, part 4, p. 19.

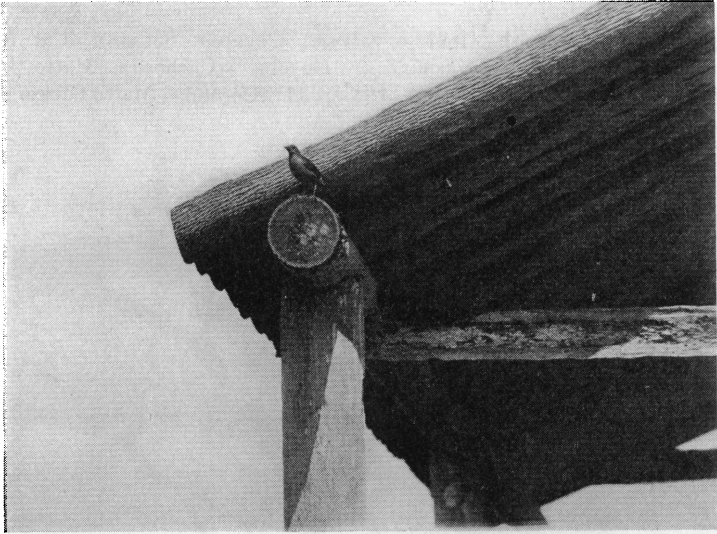


Fig. 21. Nest of *Furnarius leucopus assimilis* Cabanis and Heine, Matto Grosso, Brazil.

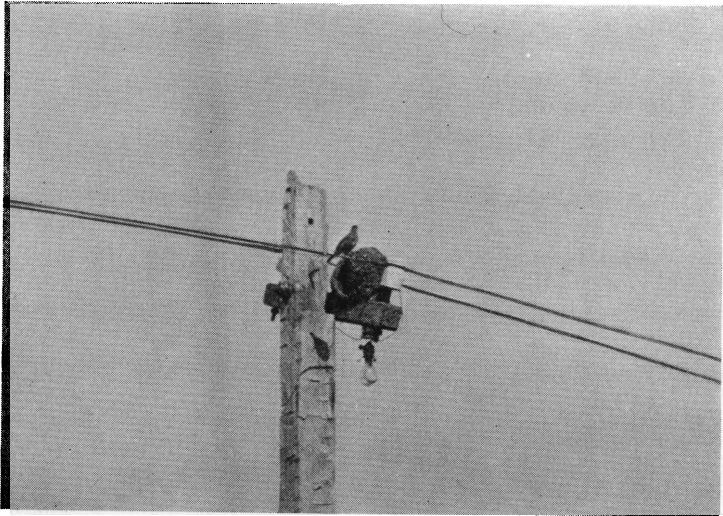


Fig. 22. Nest of *Furnarius leucopus assimilis* Cabanis and Heine, Corumbá, Matto Grosso, Brazil.

AND SALVIN, 'Exotic Ornith.,' 1867, p. 8 (part; Cuyabá); SCLATER, 'Cat. B. Brit. Mus,' XV, 1890, p. 13 (part; spec. e, "Cuyabá"=Cachoeira, Matto Grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 111 (Corumbá, Matto Grosso).

No specimens collected.



Fig. 23. An ovenbird's nest.

RANGE.—Brazil, from Maranhão, Ceará, and Piauhý, south to Bahia and Goyaz, west to Matto Grosso (Cuyabá, Rio São Lourenço, Cachoeira (near Cuyabá), Descalvados, Corumbá) and southeastern Bolivia.

Average Measurements of Specimens Examined

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Furnarius leucopus leucopus</i>					
N. Brazil, Forte do Rio Branco	3 ♂	82.2	54.5	19.5	Vienna
<i>Furnarius leucopus torridus</i>					
N. Brazil, lower Solimões	1 ♂	86	56.5	18	A. M. N. H.
" " "	1 ♂	83.5		21.5	"
<i>Furnarius leucopus assimilis</i>					
Maranhão, Miritiba, 1 ♂					
Piauhý, Therezina, 1 ♂					
" Pedrinha (west side of Lake Parnaguá), 1 ♂	3 ♂	88.3	61.5	20.2	Munich Vienna
Piauhý, Pedrinha (west side of Lake Parnaguá) 1 ♀	1 ♀	88.5	63	19	"

Average Measurements of Specimens Examined (*Continued*)

	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Matto Grosso, Cuyabá, 4 ♂					
Brazil, Matto Grosso, Descalvados, 1 ♂	5 ♂	86.6	55.6	19.3	A. M. N. H.
Brazil, Matto Grosso, Cuyabá, 1 ♀					
Brazil, Matto Grosso, Corumbá, 1 ♀					
Brazil, Matto Grosso, Descalvados, 1 ♀	3 ♀	83.5	52	20.1	"
Brazil, Agua Blanca de Corumbá	1?	87	53.5	21	"

(2243) *Furnarius leucopus torridus* Sclater and Salvin

Furnarius torridus SCLATER AND SALVIN, P. Z. S., 1866, p. 183 (Rio Ucayali, Peru).

Furnarius tricolor GEIBEL, Zeits. Ges. Naturw., XXXI, 1868, p. 11 (Bolivia = Santa Cruz de la Sierra—type in Halle Museum, Germany).

Furnarius leucopus hauxwelli CHUBB, Bull. Brit. Orn. Club, XXXVIII, 1918, p. 87 (Pebas, Peru).

Lower Solimões, 2 ♂.

RANGE.—Upper Amazonia, from the north bank of the Marañón (Pebas, Elvira) and the lower Solimões, through Peru (Ucayali and Huallaga Valleys, Astillero, Carabaya) and western Brazil (Rio Purús), south to northern and eastern Bolivia.

Furnarius leucopus torridus agrees with *Furnarius leucopus leucopus* from British Guiana and the Rio Branco district, in northern Brazil, in the deep, almost chestnut-rufous coloration of the wings and tail; in the uniform blackish inner web of the outermost, and in the restriction of the ochraceous band on that of the second and third primaries; but it may be immediately distinguished by the sooty brown instead of chocolate-brown pileum, decidedly lighter cinnamon-rufous back; by having the underparts, except a narrow ochraceous area on the chest and a slight buffy suffusion on the flanks, pure white, and the blackish basal portion on the lower tail-coverts much more extensive. The upper mandible is whitish except at the extreme base; while in *Furnarius leucopus leucopus* and *Furnarius leucopus assimilis* it is always entirely horny brown. From *Furnarius leucopus assimilis*, of eastern Brazil, which it approaches in the light cinnamon-rufous color of the back, *Furnarius leucopus torridus* differs in the large amount of white on the underparts and the whitish upper mandible; furthermore, the ochraceous band on the second and succeeding primaries is much more restricted, the rufous spot on the inner

web of the outermost primary is absent or barely indicated; wings and tail are much deeper rufous, and the top of the head is sooty instead of chocolate-brown.

Of *Furnarius leucopus assimilis*¹ I have before me a good series from Bahia (the type-locality) and other specimens from Piauhy and Maranhão (Miritiba), which I am unable to separate. Five specimens from Cuyabá, while slightly pointing towards *Furnarius leucopus torridus* in the somewhat darker color of the wings and tail, and by the restriction of the ochraceous markings on the outer primaries, are clearly referable to *Furnarius leucopus assimilis* which they resemble in coloration of underparts and pileum.

(2242) *Furnarius minor* Pelzeln

Furnarius (Opetiorhynchus) minor PELZELN, Sitzungsber. Akad. Wiss., Math.-Naturw. Kl., Wien, XXXI, 1858, p. 321 (Rio Madeira, below mouth of Rio Mahissy—types in Vienna Museum).

Lower Solimões, 1 ♂.

RANGE.—Northern Brazil, in the Amazon Valley and on its tributaries, east to the Tapajóz and Monte Alegre, west to Peru.

The specimen collected by Leo Miller on the "Lower Solimões" agrees very well with examples from Santarém. The bird is of small size[¶] and has blackish brown instead of yellow legs.

(2279) *Lochmias nematura nematura* (Lichtenstein)

Myiothera nematura LICHTENSTEIN, 'Verz. Doubl. Berlin. Mus.,' 1823, p. 43 (São Paulo).

Lochmias nematura ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 111 (Chapada, Matto Grosso).

No specimens collected.

RANGE.—Southern Brazil, north to Matto Grosso (Chapada), Goyaz, and Minas Geraes. Paraguay; Uruguay; Argentina.

(2304) *Synallaxis frontalis frontalis* Pelzeln

Figure 24

Synallaxis frontalis PELZELN, Sitzungsber. Akad. Wiss., Math.-Naturw. Kl., Wien, XXXIV, 1859, p. 117—new name for *Parulus ruficeps*, ♀, of Spix (not *Sphenura ruficeps* Lichtenstein), 'Av. Bras.,' I, 1824, p. 85, Pl. LXXXVI, fig. 2 (Rio São Francisco, Prov. Bahia); idem, 'Orn. Bras.,' I, 1824, p. 35 (Cuyabá and Engenho do Gama, Matto Grosso); SCLATER, 'Cat. B. Brit. Mus.,' XV, 1890, p. 39 (part; Chapada); GRANT, Ibis, 1911, p. 128 (Villa Oliva, Puerto Pinasco, Villa Franca, Paraguay; Pan de Azúcar, Matto Grosso); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, No. 96, 1917, p. 56 (Poconé and Caceres, Matto Grosso).

¹I consider *Furnarius leucopus ceare* a synonym of *Furnarius leucopus assimilis*, though I have not seen any specimens from Quixada, Ceará.

Synallaxis azaræ (not of d'Orbigny) ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 11 (Chapada, Matto Grosso).

Paraguay: Trinidad, 1 ♂, 1 ♀; Fort Wheeler, 2 ♂; Rio Negro, 2 ♂, 1 ♀. Matto Grosso: Belvedere de Urucúm, 1 ♂, 1 ♀; Primavera, 1 ♂. Fresh birds have the bill dusky; feet greenish-gray; eye yellowish.

RANGE.—Central and eastern Brazil, from Maranhão, Pernambuco, and Bahia, south to western Minas Geraes and northern São Paulo, west to Matto Grosso (Cuyabá, Engenho do Gama, Chapada, Pan de Azucar, Poconé, Caceres, Belvedere de Urucúm, Primavera). Paraguay; northern Argentina; and (?) Uruguay.

These birds agree with a large series from Chapada. A female taken at Trinidad had a nearly fully developed egg in the oviduct.



Fig. 24. *Synallaxis frontalis frontalis* Pelzeln among the reeds, Belvedere de Urucúm, Matto Grosso, Brazil.

(2315) *Synallaxis albescens albescens* Temminck

Synallaxis albescens TEMMINCK, 'Nouv. Rec. Pl. Col.,' livr. 38, 1823, Pl. CCXXVII, g. 2 (southern Brazil = Cimeterio do Lambari, near Sorocaba, São Paulo¹); PELZELN, Sitzungsber. Akad. Wiss. Math.-Naturw. Kl. Wien, XXXIV, 1859, p. 118 (Caiçara, Poruti); idem, 'Orn. Bras.,' I, 1868, p. 36 (Caiçara, Poruti); IHERING, 'at. F. Braz.,' I, 1907, p. 231 (Matto Grosso).

No specimens collected.

RANGE.—Eastern and southern Brazil, from Maranhão, Piauí, and Pernambuco, south to western Minas Geraes (Água Suja, near Bagagem) and northern São Paulo, west to Matto Grosso (Caiçara, Poruti). Paraguay; northern Argentina.

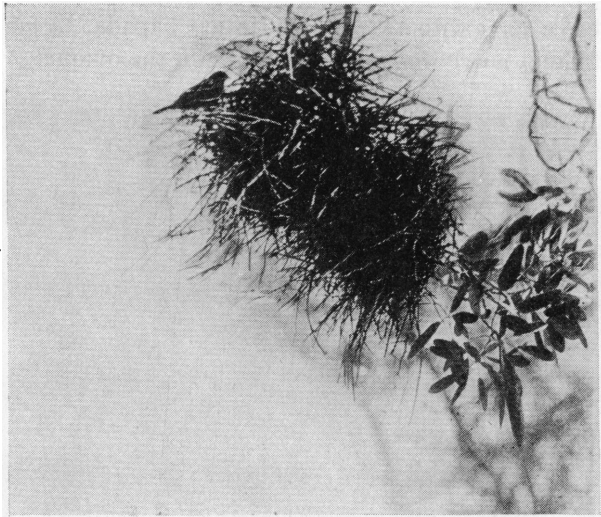
¹Hellmayr, Field Mus. Nat. Hist., Zool. Ser., XIII, part 4, 1925, p. 87.

(2318) *Synallaxis spixi hypospodia* Sclater*Synallaxis hypospodia* SCLATER, P. Z. S., 1874, p. 10 (Bahia).

Urucúm, 1 ♂, 1 ♀; Agua Blanca de Corumbá, 1 ♂; Rio São Lourenço, 1 ♂, 1 ♀.

RANGE.—Brazilian states of Bahia, Ceará, Matto Grosso, and Amazonas (Humaythá, Rio Madeira), and eastern Peru.

This appears to be the first record from Matto Grosso.

Fig. 25. Nest of *Synallaxis gujanensis albilora* Pelzeln, Descalvados, Brazil.(2322) *Synallaxis gujanensis albilora* Pelzeln

Figures 25 and 26

Synallaxis albilora PELZELN, Sitzungsber. Akad. Wiss., Math.-Naturw. Kl., Wien, XX, 1856, p. 160 (Cuyabá, Matto Grosso); idem, *op. cit.*, XXXIV, 1859, p. 120 (Cuyabá, Engenho do Gama, and Villa Maria [=São Luiz de Cáceres], Matto Grosso); idem, 'Orn. Bras.,' I, 1868, p. 37 (same localities); SCLATER, P. Z. S., 1874, p. 11 (part; Cuyabá, Matto Grosso); idem, 'Cat. B. Brit. Mus.,' XV, 1890, p. 47 (part; spec. a, Cuyabá); SALVADORI, Boll. Mus. Zool. Torino, XV, No. 378, 1900, p. 7 (Urucúm, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 231 (part; Matto Grosso and Paraguay); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 56 (Poconé, Matto Grosso).

Synallaxis gujanensis inornata (not of Pelzeln) CHAPMAN, Bull. Amer. Mus. Nat. Hist., XXXIII, 1914, p. 621, in text (Urucúm and Rio São Lourenço, Matto Grosso); LIMA, Rev. Mus. Paul., XII, (2), 1920, p. 93 (Matto Grosso).

Urucúm, 1 ♂, 2 ♀; Agua Blanca de Corumbá, 1 ♂; Descalvados, 2 ♂; Palmiras, 1 ♂, 1 ♀; Rio São Lourenço, 1 ♂.

RANGE.—Central Brazil, in state of Matto Grosso (Cuyabá, Urucúm, Rio São Lourenço, Poconé, São Luiz de Cáceres, Engenho do Gama), and northern Paraguay (Colonia Risso, Rio Apa).

Nothing was learned of the nesting habits of this species.

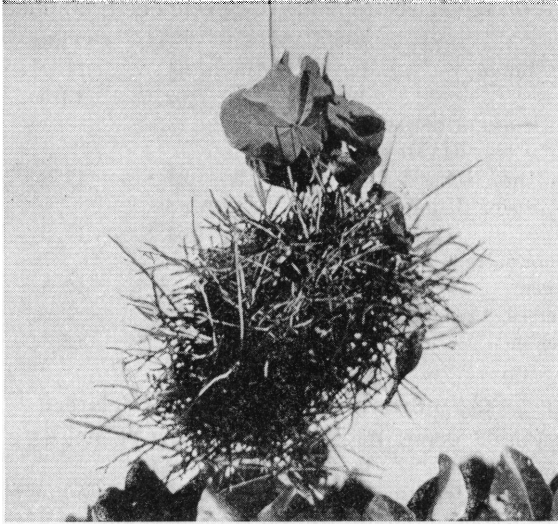


Fig. 26. Nest of *Synallaxis gujanensis albilora* Pelzeln, Descalvados, Brazil.

(2329) *Synallaxis scutata scutata* Sclater

Synallaxis scutata SCLATER, P. Z. S., 1859, p. 191 (Brazil; the type examined by Dr. Hellmayr in the British Museum is from Bahia); idem, 'Cat. B. Brit. Mus.,' XV, 1890, p. 49 (Bahia and Chapada, Brazil); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 112 (Chapada, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 232 (Bahia, Matto Grosso).

Utariaty, 1 ♂.

RANGE.—Eastern and central Brazil, south to western Minas Geraes and northern São Paulo,¹ and through the tableland of Goyaz to eastern Matto Grosso (Chapada; Utariaty, near Salto Bello; Rio Papagaio).

Among seven adults from Chapada, only one agrees with those from Bahia,² while the others and the male from Utariaty have the back more or less mixed with olive-brown. Those with the least amount of rufous above very closely approach *Synallaxis scutata whitii*, though they still

¹A male from São Jeronymo, Bay of Tieté, Avanhandava, São Paulo, Dec., 1903, E. Garbe, No. 4413, Mus. Paulista (Ihering, 'Cat. F. Braz.,' I, 1907, p. 232) is *S. s. scutata*; Ihering is mistaken in referring it to *S. s. whitii*. (See footnote (a), Hellmayr, Field Mus. Nat. Hist., Zool. Ser. XIII, part 4, p. 100.)

²Two specimens collected by R. H. Beck.

have distinct rufous edges to the lateral interscapular feathers, which is never the case in birds of northwestern Argentina and Bolivia. Two specimens from Minas Geraes are practically identical with the brown-backed specimen of our Chapada series.

Average Measurements of Specimens Examined

	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Bahia (March)	1 ♂	56.5	64	11	A. M. N. H.
" " "	1 ♀	52.5	62.5	13.5	"
" Matto Grosso, Utiarity (Jan.), 1 ♂; Chapada (May, June, Sept., Oct., Nov.), 4 ♂ 5 ♂		56.6	64.8	11.8	"
" Matto Grosso, Utiarity, Chapada	3 ♀	55.1	64.8	11.8	"
West Minas Geraes, Agua Suja, near Bagagem	1 ♂	53 ¹	2	12.5	Munich
West Minas Geraes, Agua Suja, near Bagagem	1?	57.5	2	12	"

(2330) *Synallaxis scutata whitii* Sclater

Synallaxis whitii SCLATER, Ibis, (4), V, 1881, p. 600, Pl. xvii, fig. 2 (Orán, Salta).
Urucúm, 2 ♂, 1 ♀.

RANGE.—It is an interesting fact that *Synallaxis scutata whitii* replaces its ally in the southwestern section of Matto Grosso (Urucúm), whence it ranges through eastern Bolivia (Prov. Santa Cruz) and northwestern Argentina (Orán, Prov. Salta; Ledesma, Prov. Jujuy) to the eastern base of the Andes.

On comparison with two adult males from Ledesma, Prov. of Jujuy, which may be regarded as nearly topotypical, I do not find a single character by which the Urucúm birds could be separated. They agree with those from northwest Argentina and two additional ones from Vermejo, Prov. Santa Cruz, Bolivia, in having the upperparts, except the tail-coverts, uniform olive-brown without the slightest admixture of rufous, even on the scapulars. Perhaps they average slightly smaller in the length of the tail which, however, is a very unreliable character in the genus *Synallaxis*.

Average Measurements of Specimens Examined

	SEX	WING	TAIL	CULMEN	MUSEUM
Bolivia, Dept. Santa Cruz, Vermejo	1 ♂	60.5	70	12.5	A. M. N. H.
Bolivia, Dept. Santa Cruz, Vermejo	1 ♂	61	75	13.5	"

¹Longest primary not fully grown.

²Tail moulting.

Average Measurements of Specimens Examined (*Continued*)

	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Matto Grosso, Urucúm	1 ♂	57	66.5	11	A.M.N.H.
“ “ “ Belvedere de Urucúm	1 ♂	56.5	66.5	12	“
Brazil, Matto Grosso, Belve- dere de Urucúm	1 ♀	52.5	66.5	12	“
Northwest Argentina, Prov. Jujuy, Ledesma	1 ♂	58	72	11.5	Munich
Northwest Argentina, Prov. Jujuy, Ledesma	1 ♂	59	76	10.5	“

(2349) *Synallaxis rutilans amazonica* Hellmayr

Synallaxis rutilans amazonica HELLMAYR, Nov. Zoöl., XIV, 1907, p. 14 (Itaituba, left bank of Rio Tapajóz [type]; Xeberos, Chamicuros, Chyavetas, Yurimaguas, Peru); *loc. cit.*, p. 52 (Teffé, Rio Solimões); *loc. cit.*, XVII, 1910, p. 318 (Calama, Rio Madeira; range excluding right bank of Tapajóz); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 324 (Boim and Villa Braga, left bank of Tapajóz).

Synallaxis rufogularis CHERRIE, Bull. Amer. Mus. Nat. Hist., XXXV, 1916, p. 185 (Barão Melgaço, northern Matto Grosso).

Barão Melgaço, 1 ♂; wing, 60; tail, 64; culmen, 12 mm. Calama, 1 ♀; wing, 59.5; tail, 63; culmen, 12 mm.

RANGE.—Northern Brazil, south of the Amazon, from the left bank of the Tapajóz west to eastern Peru, south to the Rio Machados (Gy-Paraná), and northern Matto Grosso (Barão Melgaço).

The bird from Barão Melgaço described by Mr. Cherrie¹ as a distinct species under the name of *Synallaxis rufogularis* is apparently merely a freak of the present race. Although it lacks the black throat-patch, so conspicuous a character in the three recognized races of *Synallaxis rutilans*, upon close examination I notice that the extreme base of the feathers of the throat is decidedly blackish though completely concealed by their rufous apical portion. The belly, instead of being olivaceous brown, is of a pale dingy gray passing into buffy gray along the median line. The specimen creates the impression of an abnormally colored bird in which the normal development of the pigmentation has been interrupted through some physiological process. It is well to remember in this connection that in the juvenal plumage of *Synallaxis rutilans rutilans*, as represented by a female from La Pricion, Rio Caura (Tring Museum), the black throat-patch is also barely indicated by dusky gray bases to the feathers.

(2350) *Synallaxis rutilans tertia* Hellmayr

Synallaxis rutilans tertia HELLMAYR, Nov. Zoöl., XIV, 1907, p. 15 (Engenho do Gama, Rio Guaporé, Matto Grosso).

¹Bull. Amer. Mus. Nat. Hist., XXXV, 1916, Art. 17, p. 185.

Synallaxis rutilans (not of Temminck) PELZELN, Sitzungsber. Akad. Wiss., Math.-Naturw. Kl., Wien, XXXIV, 1859, p. 119 (part; Engenho do Gama); idem, 'Orn. Bras.,' I, 1868, p. 36 (part; Engenho do Gama).

Rio Roosevelt, 1 ♀ ad.

RANGE.—Central Brazil, in western Matto Grosso (Engenho do Gama, Rio Guaaporé, Rio Roosevelt) and western São Paulo (Irisanga).

Specimen Examined

Engenho do Gama, ♀, wing, 60.5; tail, 58 mm.; bill¹ (Munich Museum).

The bird from the Rio Roosevelt has the rump and upper tail-coverts light rufescent brown like a topotype from Engenho do Gama, while in other respects—especially in the amount of rufous on the mantle—it is an exact duplicate of specimens from Calama, Rio Madeira.

(2333) *Certhiaxis cinnamomea russeola* (Vieillot)

Sylvia russeola VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XI, 1817, p. 217 (based on Azara, No. 233, Paraguay).

Synallaxis cinnamomea ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 122 (Corumbá).

No specimens collected.

RANGE.—Southern Brazil, from Rio de Janeiro to Rio Grande do Sul, west to Matto Grosso (Corumbá, Descalvados). Paraguay; northeastern Argentina.

Apparently a rare bird in Matto Grosso. H. H. Smith secured a couple of adults at Corumbá and the Field Museum has a single adult male taken by Geo. K. Cherrie on July 31, 1926, at Descalvados.

(2347) *Schoeniophylax phryganophila* (Vieillot)

Figures 27 and 28

Sylvia phryganophila VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XI, 1817, p. 207 (based on Azara, No. 229, Paraguay).

Synallaxis phryganophila PELZELN, Sitzungsber. Akad. Wiss., Math.-Naturw. Kl., Wien, XXXIV, 1859, p. 120 (Cuyabá and Rio das Flechas, Matto Grosso); idem, 'Orn. Bras.,' I, 1868, p. 36 (Cuyabá and Rio das Flechas); SCLATER, P. Z. S., 1874, p. 17 (Cuyabá); SALVADORI, Boll. Mus. Zool. Torino, XV, No. 378, 1900, p. 7 (Carandasinho, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 234 (Matto Grosso).

Rio São Lourenço, 1 ♂.

RANGE.—Northeastern Argentina; Uruguay; Paraguay; southwestern Brazil (São Paulo and Matto Grosso); and eastern Bolivia.

On the original expedition representatives of this fine species of spine-tail were taken at Urucúm, Rio Taquary, and from near the mouth of the Rio São Lourenço, but nothing was learned regarding the bird's habits.

¹Bill broken.



Fig. 27. *Schæniophylax phryganophila* (Vieillot), Agua Blanca de Corumbá, Matto Grosso, Brazil.

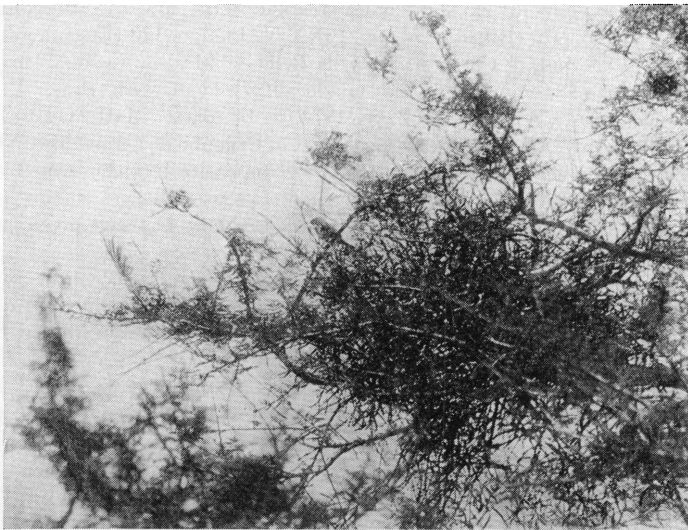


Fig. 28. Nest of *Schæniophylax phryganophila* (Vieillot), Agua Blanca de Corumbá, Matto Grosso, Brazil.

On the supplementary expedition, Mr. Cherrie found it common in the neighborhood of Puerto Pinasco where, during October, the nesting season seemed at its height. All sorts of places are chosen as nesting-sites, but probably more nests are found between the leaf stems, up close to the body of the tree, of the cabbage palm, than in any other locality. The nest, usually oven-shaped, is bulky, composed entirely of slender twigs and sticks tightly interwoven. The whole is carefully thatched to keep the nest dry. The entrance is through a long tube also composed of slender twigs that are skillfully interwoven. Frequently, this entrance-tube extends nearly horizontally from a half to three-quarters of the way around the body of the tree. A few soft, fine weed-stems are carried in and then an inner lining of little balls of native wild cotton forms the bed on which the eggs rest. The eggs, three or four in number, are either pure white or with a faint greenish or bluish wash. Two collected at Agua Blanca de Corumbá, November 10, 1916, measure 19×15 mm.

It was in a nest of this species that Mr. Cherrie discovered a nearly fully fledged young of the brown cuckoo (*Tapera nævia*)—solving the problem of the nesting-habits of that species.

(2352) *Cranioleuca vulpina vulpina* (Pelzeln)

Synallaxis vulpina PELZELN, Sitzungsber. Akad. Wiss., Math.-Naturw. Kl., Wien, XX, (1), 1856, p. 162 (Brazil); *loc. cit.*, XXXIV, 1859, p. 122 (Engenho do Gama, Villa Maria [= São Luiz de Cáceres] and [Villa Bella de] Matto Grosso, Matto Grosso; Engenho do Gama designated as the type locality); *idem*, 'Orn. Bras.,' I, 1868, p. 37 (same localities); SCLATER, P. Z. S., 1874, p. 14 (part; Matto Grosso); *idem*, 'Cat. B. Brit. Mus.,' XV, 1890, p. 52 (part; spec. *a*, Engenho do Gama, Matto Grosso).

Siptornis vulpina GRANT, Ibis, 1911, p. 129 (opposite Rabicho, near Corumbá, Matto Grosso).

Descalvados, 2 ♂, 1 ♀; Rio São Lourenço, 1 ♀ ad.; feet sage-green, mandible drab; maxilla black, and eyes yellowish gray.

RANGE.—Interior of Brazil, south of the Amazon, from the Tocantins to the Rio Madeira, south to Goyaz, Matto Grosso (São Luiz de Cáceres, Villa Bella de Matto Grosso, Engenho do Gama, Rabicho, Descalvados, Rio São Lourenço), and northern São Paulo.

Siptornis vulpina vulpina ranges from the Rio Madeira and upper Paraguay (Descalvados) in the west to the Tocantins in the east, and as far south as Barretos, Rio Grande (northern São Paulo). It is found along the banks of great rivers. In the north, the main valley of the Amazon appears to separate its range from that of *Siptornis vulpina alopecias*, since specimens obtained by Dr. Snethlage at Monte Alegre and on the Rio Maecurú and examined by Dr. Hellmayr proved to agree with the types from the Rio Branco and a series from the Orinoco

region. A third race, inhabiting the banks of the Rio São Francisco and the Rio Parnahyba, northeastern Brazil, has lately been described by the author of the present paper.

In making skins of this species one finds the head so large that it is passed through the skin of the neck only with the greatest difficulty.

At Descalvados a pair was nesting. They had selected an old abandoned nest of some sort that looked more like a bunch of driftwood than a nest. An entrance had been effected and the interior hollowed out; then the cavity was sparsely lined with bits of lichens. Only a single pure-white egg had been laid when the nest was discovered. In his paper on the birds of the Orinoco region, Mr. Cherrie described in more detail the nesting of a pair of the northern representative of the rusty-backed spine-tail. Their favorite nesting-sites are similar to that described above.

Occasionally Mr. Cherrie observed spine-tails of this species exploring old nests of the red thorn-bird (*Phacellodomus ruber*).

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Cranioleuca vulpina vulpina</i>					
Brazil, Matto Grosso, Descalvados, 2 ♂; Engenho do Gama (type), 1 ♂; Rio Madeira, 1 ♂	4 ♂	69	65.8	13	A. M. N. H. and Vienna
Brazil, Matto Grosso, Descalvados, 1 ♀; Rio São Lourenço, 1 ♀; São Luiz de Cáceres (Villa Maria), 1 ♀	3 ♀	65.2	63.7	13.5	A. M. N. H. and Vienna
<i>Cranioleuca vulpina reiseri</i>					
Piauhy, Parnaguá 2 ♂					
“ Riacho do Raiz, near União on the Parnahyba, 1 ♂	3 ♂	66.8	66.5	13.1	Vienna
Bahia, Island near Sambaiba, below Barra, 1 ♂					
Bahia, Ingazeira, Rio Preto, 1 ♂					
Bahia, Cidade da Barra, 1 ♂	3 ♂	65.8	62.1	12.6	“
<i>Cranioleuca vulpina alopecias</i>					
Venezuela, Rio Orinoco, Altagracia	1 ♂	66.5	70	12	Munich

(2416) *Phacellodomus ruber* (Vieillot)

Figures 29 to 31

Furnarius ruber VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XII, 1817, p. 118 (based on "Añumbi Roxo," Azara, No. 220, Paraguay).

Anumbius ruber PELZELN, Sitzungsber. Akad. Wiss., Math.-Naturw. Kl., Wien, XXXIV, 1859, p. 124 (soft parts); idem, 'Orn. Bras.,' I, 1868, p. 38 (Cuyabá, Villa Maria [=São Luiz de Cáceres], Matto Grosso).

Phacellodomus ruber ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 112 (Corumbá, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 236 (Paraguay; Bolivia; Goyaz; Matto Grosso; Minas Geraes).



Fig. 29. Nest of *Phacellodomus ruber* (Vieillot), Rio São Lourenço, Matto Grosso, Brazil.

Phacellodomus ruber rubicola CHERRIE, Bull. Amer. Mus. Nat. Hist., XXXV, 1916, p. 186 (Rio São Lourenço, Matto Grosso; type in American Museum examined).

Paraguay: Asunción, 1 ♂, 2 ♀; Trinidad, 1 ♂, 2 ♀ (eye orange, feet and mandible grayish green, maxilla blackish); a female taken November 10 was brooding; Puerto Pinasco, 1 ♂, 3 ♀; Rio Negro, 1 ♂. Matto Grosso: Urucúm, 1 ♀, im.; Rio São Lourenço, 1 ♂.

RANGE.—Interior of Brazil: in states of Bahia (Barra, Pedro do Ernesto near Tapeira, Rio São Francisco), Minas Geraes, Goyaz, and Matto Grosso (Cuyabá, Chapada, Corumbá, Urucúm, Rio São Lourenço, São Luiz de Cáceres). Eastern Bolivia; Paraguay; northern Argentina.

I regard the bird from the Rio São Lourenço described by Mr. Cherrie¹ (*Phacellodomus ruber rubicola*) as the extreme in individual variation. The bird from the Rio São Lourenço, though considerably more rufescent above than the rest of our Matto Grosso series, is for geographical reasons nothing more than *Phacellodomus ruber*. The large series now available proves that Ménégau and Hellmayr² were mistaken in ascribing the rufous admixture on the upperparts to immaturity, and its careful examination leads me to the conclusion that this variation is purely individual, and independent of age and sex.

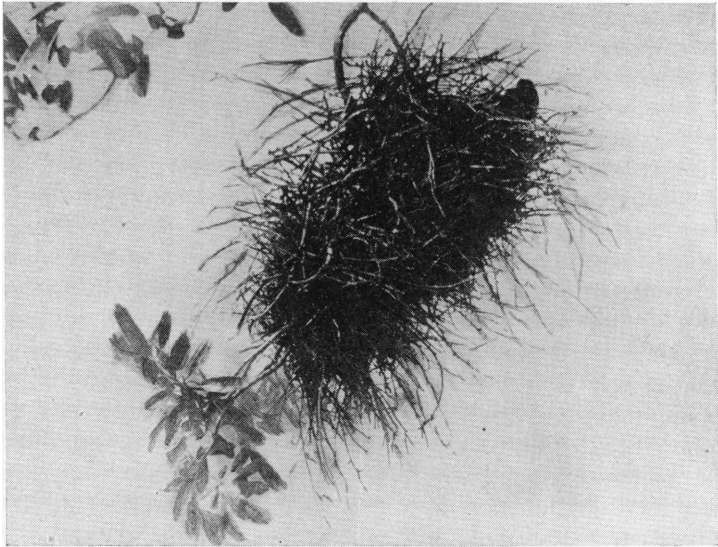


Fig. 30. Nest of *Phacellodomus ruber* (Vieillot), Rio São Lourenço, Matto Grosso, Brazil.

In the Matto Grosso series, 1 ♀, No. 19561, from Nos Puritis, and 1 ♂, No. 19562, from Cuyabá, slightly approach the São Lourenço bird, having some red feathers on the upper back.

There is only a slight difference in the series from Matto Grosso and Paraguay, the latter being less reddish earthy brown and averaging slightly shorter in the length of the culmen, but I do not regard the difference sufficient to consider it racial. If the specimens from Matto Grosso were different from the Paraguayan birds, there is an earlier

¹Bull. Amer. Mus. Nat. Hist., XXXV, 1916, p. 186.

²Passereaux trachéophones; Mém. Soc. d'Hist. Nat. Autun, XIX, 1906, p. 84.

name, *Phacellodomus rufipennis*, based on a specimen from the plains of east Bolivia, when the Matto Grosso birds would be *Phacellodomus ruber rufipennis*.

A female taken November 10, at Trinidad, was collected together with the nest and one egg.

A female in juvenile plumage, recognizable by the fluffy texture of the upperparts, taken at Corumbá, differs from the adults only in that the sides of the lower throat and upper breast are faintly barred; an effect produced by narrow dusky tips to the feathers.

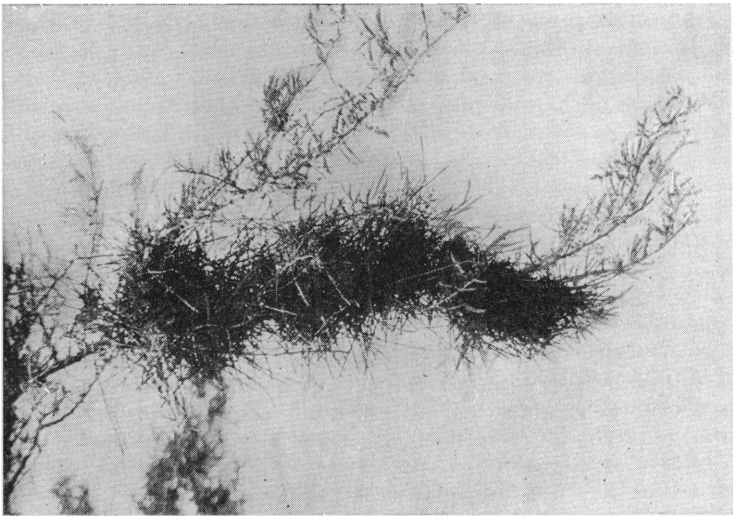


Fig. 31. Nest of *Phacellodomus ruber* (Vieillot), Rio São Lourenço, Matto Grosso, Brazil.

“On the supplementary expedition this thorn-bird was found to be abundant at Puerto Pinasco where the three specimens were collected; also a set of three fresh eggs, taken October 18.

“The eggs are elongate-ovate in shape and pure white in color, without gloss. They measure 17×26.5 , 17.5×26.5 , and 17.5×27 mm.

“At Descalvados also it was a common species, but there the nesting season did not open until the middle of December. A set of three fresh eggs collected December 27 are elongate-ovate, pure white, and measure 16×23.5 , 16×23.5 , and 16.25×23 mm.

“This species, like the red-fronted thorn-bird, constructed enormous stick nests, the foundations for such nests being placed about or near the

tips of overhanging branches. The same site is often used for two, three, or more years in succession, a new compartment being added above the old each season. The nest-cavity is usually in the center near the lower end of the structure. The passageway is sometimes long and tortuous, again it is nearly straight and only a few inches in length. The external entrance is usually near the upper end of the nest. In the allied species, the red-fronted thorn-bird, the entrance is usually down near the lower end.

"It is quite surprising to see a red thorn-bird not over eight inches long flying with nesting material in the shape of a dead stick anywhere from one to two feet in length."

Average Measurements of Specimens Examined

	SEX	WING	TAIL	CULMEN	MUSEUM
Paraguay, Asunción, 1 ♂; Trinidad, 1 ♂; Puerto Pinasco, 1 ♂; Ocampo, Prov. Santa Fé, 1 ♂	4 ♂	73.5	1	16.3	Munich and A. M. N. H.
Paraguay, Asunción, 1 ♀; Bernalcué, near Asunción, 3 ♀; Trinidad, 1 ♀; Puerto Pinasco, 2 ♀; Mocon, Chaco, 1 ♀	8 ♀	72.4	1	16.6	Munich and A. M. N. H.
Brazil, Matto Grosso, Rio São Lourenço, 1 ♂; Cuyabá, 4 ♂; Villa Maria, 1 ♂; Nos Puritis, 1 ♂	7 ♂	73.7	1	17.8	A. M. N. H. and Vienna
Brazil, Matto Grosso, Cuyabá, 5 ♀; Araguayá, 1 ♀	6 ♀	73.8	1	16.6	"

(2417a) *Phacellodomus rufifrons sincipitalis* Cabanis

Phacellodomus sincipitalis CABANIS, Journ. f. Ornith., XXXI, 1883, p. 109 (vicinity of the city of Tucumán, Argentina).

Anumbius rufifrons PELZELN, Sitzungsber. Akad. Wiss., Math.-Naturw. Kl., Wien, XXXIV, 1859, p. 125 (Arica, Cuyabá, Matto Grosso); idem, 'Orn. Bras.' I, 1868, p. 38 (Arica, Cuyabá).

Phacellodomus rufifrons ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 112 (Chapada, Matto Grosso); SCLATER, 'Cat. B. Brit. Mus.,' XV, 1890, p. 80 (part; Matto Grosso); MÉNÉGAUX AND HELLMAYR, Mém. Soc. Hist. Nat. Autun, XIX, 1906, p. 84 (part; Miranda, "Goyaz" = Matto Grosso); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 57 (Poconé, Caceres, Matto Grosso).

Paraguay: Fort Wheeler, 2 ♀. Matto Grosso: Urucúm, 3 ♂, 6 ♀; Descalvados, 1 ♂, 1 ♀. Fresh birds have the eye gray; feet plumbeous slate; maxilla black.

¹Tails imperfect; measurements not taken.

RANGE.—Eastern Bolivia; northwestern Argentina; northern Paraguay; and western Matto Grosso (Arica, Cuyabá, Chapada, Poconé, Caceres, Urucúm, Descalvados).

This series, as well as additional specimens from Matto Grosso, collected by Natterer, agrees very well with two topotypes of *Phacellodomus rufifrons sincipitalis* in the Munich Museum. Compared to six skins of true *Phacellodomus rufifrons rufifrons* from eastern Brazil (Bahia, Piauh), the western birds differ by having the rump and the flanks decidedly more fulvous and the lateral tail-feathers tinged with rufous. Since *Phacellodomus rufifrons sincipitalis* is to be maintained, the series of Matto Grosso is referred to this race. The specimens from Pernambuco belong to another race.¹

A good many years ago, Mr. Barrows described the nesting of an allied species whose habits, according to Mr. Cherrie's observations, are almost identical. They belong to a family, many of whose numbers are remarkable nest builders. I cannot do better than reproduce a part of Mr. Barrows' description, but interpolating some of Mr. Cherrie's observations.

"In nesting, the birds begin by placing a few crooked, thorny twigs among the terminal twigs of some slender branch. With those as a foundation more and more are added until there is a heap as large as a half or even a bushel basket. The completed nest, while varying greatly in size and shape, is more or less oval or cylindrical in form, twelve to sixteen inches in diameter and one to two feet or more in length. As the weight increases with added material the branch gradually bends downward so that the entrance which was originally on the side may ultimately, with the bending of the branch, come from below! The nest-cavity is only about four or five inches in diameter, nearly round, and in about the center of the nest. It is reached by a narrow passageway entering on one side. Sometimes there is a sort of an antechamber just within the mouth of the entrance tube. The twigs are so placed on the top of the structure as to form a more or less rain-proof thatch; and we observed that this part of the structure is often added to even after incubation has begun. When a nesting-site has proved satisfactory, the old nest is frequently used as foundation for a new structure. We have seen as many as four nests built one above the other; but we have never observed that more than one at a time is occupied."

¹Since separated by Hellmayr (Field Mus. Nat. Hist., Zoöl. Ser., XIII, part 4, p. 160, 1925) as *P. r. specularis*.

Average Measurements of Specimens Examined

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Phacellodomus rufifrons sincipitalis</i>					
Brazil, Matto Grosso, Uru- cúm, 3 ♂; Descalvados, 1 ♂; Cuyabá, 1 ♂	5 ♂	64.4	75.3	13.6	A. M. N. H.
Brazil, Matto Grosso, Uru- cúm, 6 ♀; Descalvados, 1 ♀; Cuyabá, 2 ♀ ¹	9 ♀	62.5	74.3	13.5	A. M. N. H. and Vienna
Paraguay, Fort Wheeler	1 ♀	62.5	69.5	13.5	A. M. N. H.
" " "	1 ♀	66.5	79	14.5	"
N. W. Argentina, Tucumán, Sta. Ana, 1 ♀; Tapia, 1 ♀; Tucumán, 2 ♀	4 ♀	65.8	80.3	15	Munich and Berlepsch Coll.
N. W. Argentina, Tucumán, Tapia	1 ♂	70	86.5	16	Berlepsch Coll.
N. W. Argentina, Tucuman, Santa Ana	1 ♂	70	78.5	16	"
<i>Phacellodomus rufifrons rufifrons</i>					
Brazil, Bahia, trade-skins	4?	65.2	75.5	13.6	Berlepsch Coll.
Brazil, Bahia, Alagoinhas	1 ♂	65	73.5	14.5	Vienna
" " "	1 ♂	65	75	14	"
" N. W. Bahia (Santa Rita, on the Rio Preto)	1 ♂	64.5		13.5	"
Brazil, Piauhy, Santo Antonio de Gilboez	1 ♂	57	69	14.5	"
Brazil, Piauhy, Santo Antonio de Gilboez	1 ♀	64	76	13.5	"
Brazil, Bahia, Alagoinhas	1 ♀	63.5	69.5	15	"
<i>Phacellodomus rufifrons specularis</i>					
Brazil, Pernambuco, Pão d'Alho, n. w. of Recife	1 ♂	64	73.5	13.5	"
Brazil, Pernambuco, Pão d'Alho, n. w. of Recife	1 ♀	62.5	75.5	13	"

(2432) *Pseudoseisura cristata unirufa* (Lafresnaye and d'Orbigny)

Anabates unirufus LAFRESNAYE AND D'ORBIGNY, 'Syn. Av.,' II, in Mag. de Zool., VIII, 1838, Cl. 2, p. 16 (Moxos, Bolivia; type in Paris Museum examined).

Homorus galathea LEVERKÜHN, Journ. f. Ornith., XXXVII, 1889, p. 106 (Cuyabá, Matto Grosso).

Anabates cristatus (not of Spix) PELZELN, Sitzungsber. Akad. Wiss., Math.-Naturw. Kl., Wien, XXXIV, 1859, p. 126 (Cuyabá, Villa Maria); idem, 'Orn. Bras.,' I, 1868, p. 39 (Cuyabá, Villa Maria [=São Luiz de Cáceres], Matto Grosso).

¹Two juv. specimens.

Homorus cristatus SCLATER, 'Cat. B. Brit. Mus.,' XV, 1890, p. 86 (part; Corumbá); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 113 (Corumbá, Matto Grosso); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 7 (Carandasinho, Matto Grosso); GRANT, Ibis, 1911, p. 134 (Passage de Bagre, Matto Grosso).

Pseudoseisura cristata unirufa HELLMAYR, Abhandl. 2. Kl. Bayr. Akad. Wiss., XXII, No. 3, 1906, p. 629 (Moxos and Matto Grosso; crit.).

Agua Blanca de Corumbá, 1 ♀; Descalvados, 1 ♂; Palmiras, 1 ♂; Rio São Lourenço, 1 ♂, 1 ♀.

RANGE.—Southwestern Brazil, in State of Matto Grosso (Cuyabá, São Luiz de Cáceres, Rio São Lourenço, Corumbá, Carandasinho, Agua Blanca de Corumbá, Descalvados, Primavera, Pasage de Bagre) and neighboring parts of eastern Bolivia.

Our specimen from Matto Grosso, as well as three others from Cuyabá and São Luiz de Cáceres in the Vienna Museum (topotypes of *Homorus galathææ* Leverkühn), agree in color and measurements with a male and a female from Trinidad, Rio Mamoré, northeastern Bolivia, which are practically topotypes of *Anabates unirufus* Lafresnaye and d'Orbigny (type from Mission de Magdalena, Llanos de Mojos). They differ from the types of *Anabates cristatus* and other examples obtained by Reiser on the Rio São Francisco and in Piauhý by being on the average smaller, slightly darker rufous above and below, and by having the feathers of the crest more extensively margined and tipped with pale gray, although the latter character, it must be admitted, is somewhat variable. The full range of this race has been given by Dr. Hellmayr in 'Revision der Spix' schen Typen Brasilianischer Vögel,' 1906, p. 629. While the above-mentioned differences appear to be connected with distinct geographic areas, I feel that the examination of a larger series of typical *Pseudoseisura cristata* is desirable.

"This bird builds an enormous stick nest, many of the sticks and twigs employed being fully two feet in length. One found at Fedegoso, November 24, was irregular in outline but might roughly be said to represent a huge powder flask, lying on its side, fully three feet in diameter, and half that much in thickness. It was located at the fork of a good-sized branch and further supported by a number of small twigs and branches, incorporated into the nest-mass that grew from the dome. The brood chamber which was nearly spherical and about eight inches in diameter, near the center of the structure, was reached by a tube, the external entrance of which was at the edge of the nest and opened directly downward. This tube followed the upper outline of the nest entering the brood chamber from above. The nest-cavity was lined with bits of bark and several pieces of cast snake skin, also throughout the entire nest-mass were interspersed many long quill feathers (from black vultures,

ibises, and hawks), some snail shells, land-crab shells, and pieces of bone.

"The eggs are a lusterless white, ovate in form. The two collected measure 19×26.5 and 19×25.5 mm., respectively."

The crested cachalote is an optimist. In order to get at the eggs Mr. Cherrie had to tear away the entire top of the nest; but Mr. Cherrie had scarcely dropped to the ground and retreated for a half a dozen yards when the parent birds who had remained in the immediate neighborhood returned. After an inspection of the wreck and ruin the intruder had wrought they did not stop to mourn; instead they immediately set to work to repair the damage, industriously carrying up the sticks and twigs he had thrown to the ground.

Average Measurements of Specimens Examined

	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Matto Grosso, Rio São Lourenço, 1 ♂; Cuyabá, 1 ♂;					A. M. N. H.
São Luiz de Cáceres, 1 ♂	3 ♂	101.1	103.5	19.5	Vienna
Brazil, Malhada, Rio São Francisco	1 ♂	102.5	1	21.5	Munich
Brazil, Malhada, Rio São Francisco	1 ♀	96.5	100.5	19.5	"
Brazil, Matto Grosso, Agua Blanca de Corumbá, 1 ♀;					
Rio São Lourenço, 1 ♀;					
Cuyabá, 1 ♀	3 ♀	95.6	102	18.6	A. M. N. H.
Brazil, Solidade, near Carnahyba, Rio São Francisco, Bahia	1 ♀	106	106.5	22	Vienna
Brazil, Riacho da Raiz, on the Parnahyba, Piauhy	1 ♀	103.5	108	21	"
Bolivia, Rio Mamoré, Trinidad	1 ♂	100.5	1	20.5	A. M. N. H.
Bolivia, Rio Mamoré, Trinidad	1 ♀	98	103.5	18	"

(2439) *Automolus rectirostris* (Wied)

Opetiorhynchus rectirostris WIED, Beitr. Naturg. Bras., III, (2), 1831, p. 679 (Campos Geraes, on the boundary line of Bahia and Minas Geraes; type in American Museum examined).

Anabates concolor PELZELN, Sitzungsber. Akad. Wiss., Math.-Naturw. Kl., Wien, XXXIV, 1859, pp. 103, 126 (Sangrador, Matto Grosso; type in Vienna Museum examined); idem, 'Orn. Bras.,' I, 1868, p. 39 (Sangrador).

No specimens collected.²

¹Tail moulting.

²Two specimens (♂ ad., ♀), collected by George K. Cherrie on July 22-23, 1926, respectively, at Piraputanga, Matto Grosso, are in the Field Museum.

RANGE.—Campos districts of eastern and central Brazil, in states of Bahia, Minas Geraes (Rio das Velhas, Lagoa Santa, Lages, near Sant' Anna dos Allegres), and Matto Grosso (Sangrador, Miranda, Piraputanga).

(2456) *Philydor rufus rufus* (Vieillot)

Dendrocopus rufus VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXVI, 1818, p. 119 ("Brésil"; Dr. Hellmayr suggests Rio de Janeiro as type locality.¹)

Philydor rufus SCLATER, 'Cat. B. Brit. Mus.,' XV, 1890, p. 97 (Chapada, Matto Grosso, Brazil); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 113 (Chapada, Matto Grosso).

No specimens collected.

RANGE.—Southern Brazil, from states of Bahia, Goyaz, and Matto Grosso (Chapada) south to São Paulo and Paraná. Paraguay; northeastern Argentina (Misiones).

(2462) *Philydor erythropterus* (Sclater)

Anabates erythropterus SCLATER, P. Z. S., XXIV, 1856, p. 27 (Bogotá).

Rio Roosevelt, mouth of the Rio Cherrie, 1 ♀; Urupá, 1 ♂.

RANGE.—Upper Amazonia, from Colombia (Bogotá collections) through eastern Ecuador (Sarayacu, Rio Napo) to Peru (Nauta, Yurimaguas, Puerto Bermudez) and western Brazil (Urupá, Rio Machados; Rio Roosevelt, mouth of the Rio Cherrie, northern Matto Grosso).

This species has never been recorded from Brazil before.

Measurements

	SEX	WING	TAIL	CULMEN	
Urupá, Rio Gy-Paraná	♂	96	77	18	
Rio Roosevelt, Rio Cherrie	♀	84.5	70	17	
Bogotá Coll.	♂	95.5	75	18.5	
“ “	Berlepsch Coll.	♂	94.5	2	19
“ “ juv.		♂	64	2	13.5
Yurimaguas, Peru	♂	92	2	19.5	

(2465) *Philydor dimidiatus* (Pelzeln)

Anabates dimidiatus PELZELN, Sitzungsber. Akad. Wiss., Math.-Naturw. Kl., Wien, XXXIV, 1859, pp. 107, 130 (Sangrador and Rio Manso, Matto Grosso; types in Vienna Museum examined); idem, 'Orn. Bras.,' I, 1868, p. 40 (same localities).

No specimens collected.

RANGE.—Central Brazil, in eastern Matto Grosso (Sangrador, Rio Manso). Endemic.

Recorded only from Matto Grosso. A nearly allied, probably con-specific form (*P. bæri*) in western Minas Geraes.

¹Hellmayr, Field Mus. Nat. Hist., Zoöl. Ser., XIII, part 4, p. 204.

²Tail moulting.

(2471a) *Philydor erythrocerus lyra* Cherrie

Philydor erythrocerus lyra CHERRIE, Bull. Amer. Mus. Nat. Hist., XXXV, 1916, p. 186 (6th of March Rapids, Rio Roosevelt, Matto Grosso).

Barão Melgaço, ♂; Rio Roosevelt, 6th of March Rapids, 1 ♀.

RANGE.—Northern Brazil, south of the Amazon, from Maranhão westwards, south to northern Matto Grosso (Rio Roosevelt) and eastern Peru.

In addition to the two specimens, I have examined a series of seven specimens from Pará and Calama on the Rio Madeira. They differ from three examples from French Guiana,¹ which had recently been compared by Dr. Hellmayr with the type of *Philydor erythrocerus* from Manáos in the Vienna Museum, by their decidedly more rufescent brown upperparts and by having the upper wing-coverts as well as the outer webs of the remiges conspicuously russet-brown instead of dull olive-brown. The underparts are on an average brighter buff.

Average Measurements of Specimens Examined

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Philydor erythrocerus erythrocerus</i>					
French Guiana, Ipousin, Approuague River	1 ♂	89	73	17	Munich
French Guiana, St. Jean du Maroni	1 ♂	87.5	80	18	"
French Guiana, Ipousin, Approuague River	1 ♀	80	66	17	"
<i>Philydor erythrocerus lyra</i>					
Brazil, Peixe-Boi, near Pará,	4 ♂	84.8	72.8	16	"
" " " "	1 ♀	90.5	81	16 ¹	"
" " " "	1 ♀	89	76	17 ¹	"
" Calama, Rio Madeira, 2 ♀; Rio Roosevelt, Matto Grosso, 1 ♀	3 ♀	81.1	72.5	16.5	A. M. N. H.

(2489) *Xenops minutus genibarbis* Illiger

Xenops genibarbis ILLIGER, 'Prodromus Syst. Mamm. et Avium,' 1811, p. 213 ("Cameté," Rio Tocantins).

Rio Roosevelt, Camp 29, 1 ♀ ad.

RANGE.—Northern Brazil, south of the Amazon, from the Rio Parnahyba, Maranhão, west to the Rio Madeira and south to northern Matto Grosso (Rio Roosevelt).

(2492) *Xenops rutilans rutilans* Temminck²

Xenops rutilans rutilans TEMMINCK, 'Nouv. Rec. Pl. Col.,' livr. 12, 1821, Pl. LXXII, fig. 2 ("Brésil"); PELZELN, 'Orn. Bras.,' I, 1868, p. 42 (Villa Maria, Engenho

¹*Philydor erythrocerus guianensis* Chubb is obviously synonymous with *Philydor erythrocerus erythrocerus* (Pelzeln), since specimens from British Guiana cannot be distinguished from those taken at Manáos.

²This name has priority over the generally accepted *X. rutilus* Lichtenstein, 1823.

do Gama, Matto Grosso); SCLATER, 'Cat. B. Brit. Mus.,' XV, 1890, p. 111 (part; Chapada, Brazil); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 113 (Chapada, Matto Grosso); SALVADORI, Boll. Mus. Zool. Torino, XV, No. 378, 1900, p. 8 (Urucúm, Matto Grosso).

Urucúm, 1 ♂, 1 ♀.

RANGE.—Brazil, from Maranhão, Piauí, Goyaz, and Matto Grosso (Villa Maria, Engenho do Gama, Chapada, Urucúm) south to Rio Grande do Sul and Paraguay.

These specimens agree with a good series from Chapada.

(2494) *Xenops tenuirostris tenuirostris* Pelzeln

Xenops tenuirostris PELZELN, Sitzungsber. Akad. Wiss., Math.-Naturw. Kl., Wien. XXXIV, 1859, pp. 112, 133 (Salto do Girão, Rio Madeira); CHAPMAN, Proc. Biol. Soc. Wash., XXXII, 1919, p. 260 (Barão Melgaço and Rio Roosevelt, Matto Grosso).

Rio Roosevelt, 6th of March Rapids, 1 ♂; Barão Melgaço, 1 ♂, 1 ♀.

RANGE.—Northern Brazil, south of the Amazon, from the Tapajóz (Apaçu, Itaituba), west to the Purús (Hyutanahán), south to northern Matto Grosso (Barão Melgaço and Rio Roosevelt) and southeastern Peru.

(2500) *Sclerurus scansor scansor* (Ménétrières)

Oxygyga scansor MÉNÉTRIÈRES, Mém. Ac. Sci. St. Pétersb., (6), III, part 2 (Sci. Nat.), 1835, p. 520, Pl. XI (Prov. Rio de Janeiro and Minas Geraes); RIDGWAY, Proc. U. S. Nat. Mus., XII, 1889, p. 22 (part; Rio Grande do Sul and Chapada, Matto Grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 113 (Abrilongo, Matto Grosso).

Sclerurus caudacutus scansor HELLMAYR, Nov. Zoöl., XIV, 1907, p. 58 (crit., diag.; Matto Grosso).

No specimens collected.

RANGE.—Southeastern Brazil, from Rio de Janeiro and Minas Geraes (Lagôa Santa) to Rio Grande do Sul, west to Matto Grosso (Abrilongo, near Chapada); Paraguay; northeastern Argentina.

(2505) *Sclerurus ruficularis ruficularis* Pelzeln

Sclerurus ruficularis PELZELN, 'Orn. Bras.,' II, 1868, pp. 87, 161 (part; Borba, Rio Madeira; type in Vienna Museum examined).

Morinho Lyra, 1 ♀, ad.

RANGE.—Northern Brazil, south of the Amazon, from Pará to the Rio Purús, south to northern Matto Grosso (Morinho Lyra).

(2517) *Glyphorhynchus spirurus castelnaudii* Des Murs

Glyphorhynchus castelnaudii DES MURS, in Castelnau, 'Expéd. Amér. Sud,' Zool. 1, Ois., livr. 18, 1856, p. 47, Pl. xv, fig. 2 (Santa Maria, lower Huallaga, Peru).

Rio Roosevelt, Camp 8, 1 ♂; Morinho Lyra, 1 ♀; Barão Melgaço, 1 ♀.

RANGE.—Upper Amazonia, from the eastern slopes of the Andes in Colombia ("Bogotá"; Caquetá region) through eastern Ecuador to Peru and western Brazil, south to northern Matto Grosso (Rio Roosevelt, Barão Melgaço, Morinho Lyra).

I refer birds from Matto Grosso to *Glyphorhynchus spirurus castelnaudii*, on account of their smaller culmen and rufescent throat, and to this form I also assign birds from northeastern Peru (Yurimaguas) and eastern Ecuador (Mapoto, Sarayacu). A large series from Bahia and Pará I believe to be *Glyphorhynchus spirurus cuneatus*, distinguishable on account of their larger bills and dusky edges to the feathers of the throat, which are but slightly tinged with buff.

Birds from western Ecuador are referable to *Glyphorhynchus spirurus sublestus* which I consider a good race.

Average Measurements of Specimens Examined

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Glyphorhynchus spirurus cuneatus</i>					
Brazil, Bahia	1 ♂	69	67.5	11	Berlepsch Coll.
" "	1 ♂	65	64.5	12.5	Berlepsch Coll.
" Ipitinga, Rio Acará	1 ♂	68	61	13.5	Munich
" " "	1 ♂	72	65	13.5	"
" Peixe-Boi, near Pará	3 ♂	70.8	65.3	13.5	"
" Bahia,	1 ♀	65	65.5	12	Berlepsch Coll.
" "	1 ♀	63	60	12.5	Berlepsch Coll.
" Peixe-Boi, near Pará	1 ♀	68	61	13	Munich
" Ipitinga, Rio Acará	1 ♀	68	65	13.5	"
<i>Glyphorhynchus spirurus castelnaudii</i>					
Brazil, Matto Grosso, Rio Roosevelt	1 ♂	65			A. M. N. H.
N. E. Peru, Iquitos	?	60	52.5	12.5	Berlepsch Coll.
<i>Glyphorhynchus spirurus albigularis</i>					
S. E. Peru, Carabaya (Yahuar-mayo)	1 ♂	70	63	13	Munich
S. E. Peru, Carabaya (Yahuar-mayo)	1 ♂	70	64	12	"
<i>Glyphorhynchus spirurus spirurus</i>					
Brazil, Rio Negro	1 ♀	67.5	63.5	11	Vienna
" "	1 ♀	64	61	11.5	"
" "	1 ♂	69	67.5	13.5	"
" Marabitanas	1 ♂	65	57.5	11.5	"
French Guiana, Roche Marie, Cayenne	1 ♂	71.5	64.5	12.5	Munich

(2519a) *Deconychura longicauda pallida* Zimmer

Deconychura longicauda pallida ZIMMER, Field Mus. Nat. Hist., Zoöl. Ser., XVII, 1929, p. 6 (Hyutanahán, Rio Purús, Brazil).

Dendrocincla longicauda PELZELN, 'Orn. Bras.,' I, 1868, pp. 42, 60 (part; Borba, Rio Madeira).

Rio Roosevelt, 6th of March Rapids, 1 ? ad.

RANGE.—Brazil, south of the Amazon, from Pará west to the Rio Solimões and Rio Purús, south to northern Matto Grosso (Rio Roosevelt); and probably northern Bolivia.

Only a single specimen collected. The relatively long tail, almost equal to the wings, together with the pale ochraceous shaft-stripes on the crown and pileum, serves to distinguish this species from its allies.

(2524) *Dendrocincla atirostris* (Lafresnaye and d'Orbigny)

Dendrocolaptes atirostris LAFRESNAYE AND D'ORBIGNY, 'Syn. Av.,' II, in Mag. de Zool., VIII, 1838, Cl. 2, p. 12 (Guarayos, Bolivia; type = juv.).

Dendrocincla minor PELZELN, 'Orn. Bras.,' I, 1868, pp. 42, 60 (São Vicente, Matto Grosso; type in Vienna Museum = juv.).

Dendrocincla fumigata (not of Lichtenstein) PELZELN, 'Orn. Bras.,' I, 1868, p. 42 (part; São Vicente, Matto Grosso).

Dendrocincla atirostris HELLMAYR, Nov. Zoöl., XIII, 1906, p. 335 (São Vicente, Matto Grosso).

No specimens collected.

RANGE.—Eastern Bolivia (Guarayos and Rio San Mateo) and western Matto Grosso (São Vicente, south of the Rio Galera).

(2529) *Sittasomus griseicapillus griseicapillus* (Vieillot)

Dendrocopus griseicapillus VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXVI, 1818, p. 119 (based on Azara, No. 244, Paraguay; Dr. Hellmayr suggests Concepción del Paraguay).¹

Sittasomus chapadensis RIDGWAY, Proc. U. S. Nat. Mus., XIV, "1891," p. 509, 1892 (Chapada, Matto Grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 113 (Chapada, Matto Grosso); SALVADORI, Boll. Mus. Zool. Torino, XV, No. 378, 1900, p. 8 (Urucúm, Matto Grosso); GRANT, Ibis, 1911, p. 134 (Pan de Azucar, Matto Grosso).

Sittasomus erythacus PELZELN, 'Orn. Bras.,' I, 1868, p. 42 (part; Pari, near Cuyabá).

Sittasomus olivaceus (not of Wied) PELZELN, 'Orn. Bras.,' I, 1868, p. 42 (Engenho do Pari, Engenho do Gama, Matto Grosso); SCLATER, 'Cat. B. Brit. Mus.,' XV, 1890, p. 119 (part; spec. n-r, Chapada).

Paraguay: Fort Wheeler, 3 ♀. Matto Grosso: Belvedere de Urucúm, 2 ♂, 3 ♀.

RANGE.—Northern Paraguay (Concepción, Colonia Risso, Fort Wheeler); southwestern Brazil, Matto Grosso (Chapada, Urucúm, Pan de Azucar, Engenho do Gama, Engenho do Pari); eastern Bolivia (Santa Cruz, Chiquitos); northern Argentina.

¹Hellmayr, Field Mus. Nat. Hist., Zoöl. Ser., XIII, part 4, p. 356.



Dendrocincla atrirostris (Lafresnaye and d'Orbigny), ♂, ♀, Brazil, Western Matto Grosso, São Vicente, south of the Rio Galera.

Five specimens from Urucúm, representing both sexes and immature birds, agree with the type of *S. chapadensis* and other Chapada skins as to color, but the bill is smaller, averaging only 12.5 to 13 mm.

(2530) ***Sittasomus griseicapillus amazonus*** Lafresnaye

Sittasomus amazonus LAFRESNAYE, Rev. Mag. de Zool., (2), II, 1850, p. 590 (Upper Amazon, Peru).

Utariaty, 1 ♂, 1 ♀; Monte Cristo, 1 ♂; Vilhena, 1 ♂; Inferno Rapids, 1 ♀.

RANGE.—Amazonian subregion, from British Guiana and the Tocantins to the eastern slope of the Andes in Ecuador and Peru, south to northern Matto Grosso, (Utariaty, Monte Cristo, Vilhena, Inferno Rapids), and the sources of the Rio Beni in northern Bolivia.

A specimen in the museum collection from Chapada is intermediate in both color and size between *S. g. griseicapillus* and *S. g. amazonus*. It is an intergrade.

(2538) ***Xiphorhynchus guttatus d'orbignyianus*** (Lafresnaye)

Nasica Dorbignyianus LAFRESNAYE, Rev. Mag. de Zool., (2), II, 1850, p. 420 (Guarayos and Chiquitos, Bolivia).

Dendronis rostrispallens (not of Des Murs) PELZELN, 'Orn. Bras.,' I, 1868, p. 45 (part; Villa Maria [= São Luiz de Cáceres], Engenho do Gama, Das Pedras, Sangrador, and Alecrim, Matto Grosso).

Dendronis d'orbignyianus ELLIOT, Auk, VII, 1890, p. 182 (Guarayos and Chiquitos, Bolivia; Matto Grosso, Brazil); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 123 (Chapada, Matto Grosso).

Xiphorhynchus guttatus dorbignyeana LIMA, Rev. Mus. Paul., XII, (2), 1920, p. 93 (Matto Grosso).

Urucúm, 1 ♀, ad.; Belvedere de Urucúm, 1 ♀ ad.; 1 ♀ im.; Tapirapoan, 1 ♂; Descalvados, 1 ♂ ad.

RANGE.—Interior of Brazil (Matto Grosso and Goyaz); Bolivia, north and east of the Andes.

On comparing the above specimens with a large series from eastern Bolivia (topotypes of *Xiphorhynchus guttatus d'orbignyianus*), I find that the majority of skins from both regions bear out the characters assigned to this race in having the light stripes on the foreneck and the buffy markings on the chest not at all or barely edged with dusky.

Two specimens from Matto Grosso, No. 127153, ♂ (Tapirapoan), and No. 127776, ♀ (Belvedere de Urucúm), and another from Bolivia, No. 137373 (Todos Santos), present, however, more or less distinct blackish edges to the feathers of the foreneck and chest, thus pointing toward *Xiphorhynchus guttatus guttatoides*. There can be no doubt whatever that this is an individual character. Thus, *Xiphorhynchus guttatus rima-*

rum Cherrie¹ (mouth of Rio San Antonio on Rio Espirito Santo, Bolivia) becomes a synonym of *Xiphorhynchus guttatus d'orbignyianus*.

(2539) ***Xiphorhynchus guttatus guttatoides*** (Lafresnaye)

Nasica guttatoides LAFRESNAYE, Rev. Mag. de Zool., (2), II, 1850, p. 387 (Loreto, Rio Marañón, northeastern Peru, and Colombia [=Bogotá] = juv.).

Rio Roosevelt, 6th of March Rapids, 1 ♂ ad.; feet slate-gray. Barão Melgaço, 1 ♀.

RANGE.—Upper Amazonia, from southeastern Colombia, southern Venezuela, and eastern Ecuador to Peru and western Brazil, east to the Rio Madeira, south to northern Matto Grosso (Rio Roosevelt).

The specimen from Barão Melgaço, as well as several others from the upper Rio Madeira, agrees with a series from Rio Marañón (Pebas) and from Yahuar Mayo (Munich Museum), while the male from the Rio Roosevelt approaches *Xiphorhynchus guttatus eytoni* on account of its blackish maxilla.

(2552) ***Xiphorhynchus elegans*** (Pelzeln)

Dendronis elegans PELZELN, 'Orn. Bras.,' I, 1868, pp. 45, 63 (part; Engenho do Gama, Matto Grosso); SCLATER, 'Cat. B. Brit. Mus.,' XV, 1890, p. 137 (Engenho do Gama); ELLIOT, Auk, VII, 1890, p. 177 (part; Engenho do Gama; ex Pelzeln).

Rio Roosevelt, 6th of March Rapids, 2 ♀.

RANGE.—Central Brazil, south of the Amazon, from the Rio Tapajóz to the Rio Madeira (Calama), south to western Matto Grosso (Engenho do Gama, Rio Guaporé).

Both specimens show subapical spots on the lesser and median wing-coverts, and one shows spots on the greater coverts. This species is found in the region between the Rio Madeira and the Rio Tapajóz.

The aberrant specimen described by Pelzeln ('Orn. Bras.,' I, 1868, p. 63) is in the American Museum collection. It has no subapical spots on the wing-coverts, and is most likely *Xiphorhynchus insignis* Hellmayr. The specimen bears the original field label "No. 731" and the locality "Manaqueri."

Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Rio Roosevelt	♀	90	81.5	29.5	A. M. N. H.
Maroins, Rio Machados	♀	95	85	30	Munich
" "	♀	85	78.5	27.5	"
" "	♂	98.5	78.5	31.5	"

(2557) ***Xiphorhynchus obsoletus obsoletus*** (Lichtenstein)

Dendrocolaptes obsoletus LICHTENSTEIN, Abhandl. Berliner Ak. Wiss., for 1818-19, p. 203, 1820; idem, for 1820-21, p. 265, 1821 ("in Brasiliæ provincia Pará").²

¹Bull. Amer. Mus. Nat. Hist., XXXV, 1916, p. 391.

²There is reason to believe that the type came from Cameté, Rio Tocantins. (Information given the author by Dr. Hellmayr.)

Dendroplex similis PELZELN, 'Orn. Bras.' I, 1868, p. 46 (Engenho do Gama, Matto Grosso).

No specimens collected.

RANGE.—French and British Guiana; southern Venezuela; northern Brazil, from the Tocantins to the Rio Negro and Solimões, south to western Matto Grosso (Engenho do Gama, Rio Guaporé).

(2560) *Dendroplex picus kienerii* (Des Murs)

Dendroornis kienerii DES MURS, in Castelnau, 'Expéd. Amér. Sud,' Zool., I, Ois., livr. 18, 1856, p. 45, Pl. XIV, fig. 1 (Ega, Rio Solimões).

Dendroplex picus PELZELN, 'Orn. Bras.' I, 1868, p. 46 (part; Cuyabá, Villa Maria [= São Luiz de Cáceres], Caiçara, Engenho do Gama, Matto Grosso).

Descalvados, 1 ♂, 1 ♀; ♀ breeding on December 5; Tapirapoan, 2 ♂, 1 im. ?; Utiarity, 1 ♀; lower Solimões.

RANGE.—Western Brazil, from the Rio Madeira (Borba, Calama) westward to the Solimões, south to Matto Grosso (Cuyabá, São Luiz de Cáceres, Caiçara, Villa Bella de Matto Grosso, Rio Guaporé, Tapirapoan, Utiarity, Descalvados, Engenho do Gama); eastern Bolivia; eastern Peru.

The various races of *Dendroplex picus* appear to be very ill-defined. All that can be said is that the birds from Upper Amazonia and Matto Grosso generally incline to a more rufous shade of the underparts and sometimes attain dimensions in the length of the wing and bill that are never reached by typical *Dendroplex picus picus*. However, in the range indicated above, specimens may be found that do not differ at all from Cayenne or Guiana skins. Thus, No. 127154 (Tapirapoan) and No. 127782 (Utiarity) can be exactly matched in color and size by specimens from French Guiana and other northern localities.

Specimens from eastern Brazil, Maranhão (Miritiba) and Bahia (trade-skins), as a rule, are slightly more rufous on the upper back; however, a series from the Island of Mexiana shows so large an amount of variation in that respect that it appears to be impossible to maintain *Dendroplex picus bahiæ* Bangs and Penard¹ as distinct.

Average Measurements of Specimens Examined

	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Matto Grosso, Tapirapoan, 3 ♂; Descalvados, 1 ♂; lower Solimões, 1 ♂	5 ♂	98.1	79.7	24.6	A. M. N. H.
Brazil, Matto Grosso, Descalvados, 1 ♀; Utiarity, 1 ♀; Calama, ^{2,3} Rio Madeira, 2 ♀	4 ♀	103.3	91.7	25.6	A. M. N. H. Munich

¹Bull. Mus. Comp. Zool., LXIV, No. 4, 1921, p. 369.

²One specimen has the tail considerably longer than measurements given by Bangs and Penard.

³One, though sexed as female, is probably a male.

Average Measurements of Specimens (Continued)

	SEX	WING	TAIL	CULMEN	MUSEUM
French Guiana, Cayenne	1 ♂	99.5	81	26	Munich
“ “ “	1 ♀	100	1	28.5	“
“ “ “	1 ♀	88.5	84	25	“
British Guiana	1?	95	78	26	“
Brazil, near Pará	1 ♂	100	95	28.5	“
“ “	1 ♂	93	88.5	27	“
“ Ipitinga, Rio Acará	1 ♂	98	92.5	28.5	“
“ Maranhão, Miritiba	1 ♂	103	89	27.5	“
“ “ “	1 ♂	93	95	25	“
“ “ “	1 ♀	102	96.5	30	“
“ “ “	1 ♀	102.5	1	29.5	“
“ Ipitinga, Rio Acará	1 ♀	99	94	30	“
Mexiana Island, Fazenda Nazareth	4 ♂	103	93.7	28.3	“
Mexiana Island, Fazenda Nazareth	3 ♀	100.5	93.2	28.8	“
Marajó Island, Natal	11 ♂	86.4	88.8	28.3	“
“ “ “	1 ♀	104.5	1	31	“
“ “ “	1 ♀ im.	93	86.5	28	“
Bahia Collection (trade-skins)	4 ♂	98.5	92.5	25.5	“

(2580a) *Xiphocolaptes major castaneus* Ridgway

Xiphocolaptes major castaneus RIDGWAY, Proc. U. S. Nat. Mus., XII, 1889 (1890), p. 16 (Piedra Blanca, Bolivia).

Xiphocolaptes major saturatus (not of Ridgway, 1890) CHERRIE, Bull. Amer. Mus. Nat. Hist., XXXV, 1916, p. 187 (Urucúm, near Corumbá, Matto Grosso).

Xiphocolaptes major obscurus TODD, Proc. Biol. Soc. Wash., XXX, 1917, p. 5; new name for *X. major saturatus* Cherrie, preoccupied.

Dendrocolaptes major LAFRESNAYE, Rev. et Mag. de Zool., (2), II, 1850, p. 103 (part; Rio Mandigo, Matto Grosso).

Xiphocolaptes major PELZELN, 'Orn. Bras.,' I, 1868, p. 43 (Cuyabá, Engenho do Gama, Caiçara, Barra do Jaurú, and Retiro, Matto Grosso).

Xiphocolaptes castaneus SALAVDORI, Bull. Mus. Zool. Torino, XV, No. 378, 1900, p. 8 (Urucúm, Matto Grosso).

Urucúm, 2 ♂, 2 ♀, 1 (?).

RANGE.—Western Brazil (Matto Grosso, Urucúm, Rio Mandigo, Cuyabá, Engenho do Gama, Caiçara, Barra do Jaurú, Retiro), eastern Bolivia and neighboring parts of the Argentine provinces of Jujuy and Salta.

I feel sure that *Xiphocolaptes major saturatus* Cherrie² and *Xiphocolaptes obscurus* Todd³ are not separable from *Xiphocolaptes major castaneus* Ridgway.

¹Tail moulting.

²Bull. Amer. Mus. Nat. Hist., XXXV, 1916, p. 187.

³Proc. Biol. Soc. Wash., XXX, 1917, p. 5.

I have large series from Paraguay (the type-locality of *X. major major*) and Matto Grosso. These series show extreme individual variation in the color of the rusty red above, in the similar color below, in the color of the throat, ranging from dirty white to russet-brown, in the shaft-stripes of the breast, which are sometimes narrow and sometimes broad, in the more or less developed cross-bands of the abdomen, and in the pale horn-color of the culmen.

The only important character which distinguishes the Matto Grosso from the Paraguay race is the darker color of the head and nape.¹

Four specimens from Urucúm, Nos. 127784-87 (including the type of *X. m. saturatus* Cherrie), are more deeply chestnut both above and below than the rest of the Matto Grosso series. The specimen from Piedra Blanca, No. 33648, ♀ ad., is paler below than the Urucúm birds, but agrees in the color above. Birds in juvenal plumage have the feathers of the forepart of the crown edged with blackish and the maxilla for the greater part blackish and much shorter.

I regret that I have not sufficient material from Argentina to come to any conclusions regarding races found in this region.

Average Measurements of Specimens Examined

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Xiphocolaptes major major</i>					
Paraguay, Concepción	juv. 1 ♂	145	120.5	45.5	Munich
" Bernalcué, near Asunción	1 ♂	150.5	116	50.5	"
Paraguay, Fort Wheeler, 2 ♀					A. M. N. H.;
Paraguay, Bernalcué, 4 ♀	6 ♀	136	118.5	54.4	Munich
<i>Xiphocolaptes major castaneus</i>					
Brazil, Matto Grosso, Urucúm, 1 ♂					A. M. N. H.,
Brazil, Matto Grosso, Retiro, vicinity of Caiçara, 2 ♂					
Brazil, Matto Grosso, Barra do Rio Jaurú, 1 ♂					
Brazil, Matto Grosso, Caiçara, near São Luiz de Cáceres, 2 ♂	6 ♂	148.2	108.6	52.5	Vienna
Brazil, Matto Grosso, Engen- ho do Pari, two days from Cuyabá, 1 ♀					
Brazil, Matto Grosso, Cuyabá, 1 ♀					

¹With one exception, an adult ♂ from Retiro, Matto Grosso, that has the head almost as light as the Paraguayan birds.

Average Measurements of Specimens Examined (*Continued*)

	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Matto Grosso, Urucúm, 2 ♀					
Bolivia, Piedra Blanca, 1 ♀	5 ♀	141.4	114.2	52.4	A. M. N. H.
<i>Xiphocolaptes major major</i> Argentina, Avia Terai	1 ♂	156	113	56	A. M. N. H.
“ General Pinedo, 1 ♀					
Argentina, Tucumán, 2 ♀	3 ♀	142.8	115.2	54.8	“

(2596) *Lepidocolaptes fuscicapillus fuscicapillus* (Pelzeln)

Picolaptes fuscicapillus PELZELN, 'Orn. Bras.,' I, 1868, pp. 44, 63 (Engenho do Cap. Gama, Rio Guaporé, Matto Grosso); SCLATER, 'Cat. B. Brit. Mus.,' XV, 1890, p. 154 (Engenho do Gama).

No specimens collected.

RANGE.—Upper Amazonia, from eastern Ecuador through Peru to eastern Bolivia and western Matto Grosso (Engenho do Gama, Rio Guaporé).

(2596a) *Lepidocolaptes fuscicapillus madeiræ* (Chapman)

Thripobrotus layardi madeiræ CHAPMAN, Proc. Biol. Soc. Wash., XXXII, 1919, p. 261 (Porto Velho, Rio Madeira [type] and Barão Melgaço, Rio Machados).

Barão Melgaço, 1 ♀, im.

RANGE.—Northern Brazil, south of the Amazon, from the Tapajóz to the Rio Madeira (Porto Velho, Barão Melgaço, Rio Machados) and Purús (Arimã).

(2599) *Lepidocolaptes angustirostris bivittatus* (Lichtenstein)

Dendrocolaptes bivittatus LICHTENSTEIN, Abh. Akad. Wiss. Berlin, for 1820–21, pp. 258, 266, Pl. II, fig. 2, 1822 ("in Provincia São Paulo").

Picolaptes bivittatus PELZELN, 'Orn. Bras.,' I, 1868, p. 44 (Caiçara, Cuyabá, Matto Grosso); SCLATER, 'Cat. B. Brit. Mus.,' XV, 1890, p. 155 (part; spec. b–j, Corumbá, Matto Grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 114 (Corumbá, Chapada); SALVADORI, Boll. Mus. Zool. Torino, X, No. 208, 1895, p. 13 (Corumbá); XV, No. 378, 1900, p. 8 (Urucúm,); IHERING, 'Cat. F. Braz.,' I, 1907, p. 253 (Porto da Faya, Matto Grosso); GRANT, Ibis, 1911, p. 135 (Riacho Paraguay, Matto Grosso).

Urucúm, 5 ♂, 2 ♀; Palmiras, 1 ♂, 1 ♀.

RANGE.—Plains of eastern Bolivia, and the central Brazilian plateau in states of São Paulo, Matto Grosso (Corumbá, Caiçara, Cuyabá, Chapada, Urucúm, Porto da Faya, Palmiras), Minas Geraes, and Goyaz.¹

I have seen only one specimen from the type-locality (São Paulo), a January bird. The plumage seems less worn than that of the specimens from Urucúm. It is larger in the length of the culmen and wings, and

¹Specimens from Matto Grosso and Bolivia are identical with a series of topotypes from São Paulo.

paler or more buffy below. In three specimens from Goyaz (Leopoldina, Jaraguá), Berlin Museum, the color of the lowerparts is buffy, while in two specimens from Goyaz (Esperança), in the Munich Museum, the color of the lowerparts is dark grayish, agreeing with the birds from Matto Grosso. I, therefore, believe that this color difference is due partly to wear, partly to individual variation. I refer our specimens to *Picolaptes bivittatus bivittatus*.

Average Measurements of Specimens Examined

	SEX	WING	TAIL	CULMEN	MUSEUM
Goyaz, Esperança (Baer Coll.)	1 ♂	97	78.5	30	Munich
" " " "	1 ♂	92	77.5	30.5	"
Brazil, Matto Grosso, Belvedere de Urucúm, 1 ♂ ¹					A. M. N. H.
Brazil, Matto Grosso, Urucúm, 4 ♂ ²					"
Brazil, Matto Grosso, Palmiras, 1 ♂ ¹	6 ♂	94.2	76	28.3	"
Brazil, Matto Grosso, Urucúm, 2 ♀ ¹					"
Brazil, Matto Grosso, Descavaldos, 1 ♀					"
Brazil, Matto Grosso, Palmiras, 1 ♀					"
Brazil, Matto Grosso, Cuyabá, 1 ♀	5 ♀	93.5	71.2	30	Berlin
Minas Geraes, Agua Suja, near Bagagem	1 ♂	96.5	81.5	32.5	Munich
Minas Geraes, Agua Suja, near Bagagem	1 ♂	98.5	80.5	32	"
Goyaz, Esperança, 1 ♀; Araguayá, Leopoldina, 1 ♀; Jaraguá, 1 ♀	3 ♀	94.6	77.8	29.4	Berlin

(2608) *Campylorhamphus trochilirostris lafresnayanus* (d'Orbigny)

Dendrocolaptes lafresnayanus D'ORBIGNY, 'Voy. Amér. Mérid.,' Ois., 1847, p. 368, Pl. LIII, fig. 2 (islands of the Paraná, near Goya, Prov. Corrientes, and Chiquitos, Bolivia).³

Xiphorhynchus lafresnayanus PELZELN, 'Orn. Bras.,' I, 1868, p. 44 (Cuyabá).

Xiphorhynchus rufo-dorsalis CHAPMAN, Bull. Amer. Mus. Nat. Hist., II, 1889, p. 160 (Corumbá, Matto Grosso); ALLEN, *loc. cit.*, V, 1893, p. 114 (Corumbá); SAL-

¹One is juv.

²Two are juv.

³Although d'Orbigny states that he has also met with the species on the islands of the Rio Paraná, near Goya, the marked type in the Paris Museum is, as I am informed by Dr. Hellmayr, from Chiquitos, eastern Bolivia, which is therefore to be regarded as the type-locality of *Dendrocolaptes lafresnayanus*. Specimens from Matto Grosso being identical with those from Bolivia, *X. rufo-dorsalis* (Chapman) becomes a synonym.

VADORI, Boll. Mus. Zool. Torino, XV, No. 378, 1900, p. 8 (Urucúm, Corumbá, and Carandasinho, Matto Grosso).

Xiphorhynchus trochilirostris (not of Lichtenstein) GRANT, Ibis, 1911, p. 135 (Riacho Paraguay; and opposite Rabicho, near Corumbá, Matto Grosso).

Campylorhamphus trochilirostris lafresnayanus HELLMAYR, Nov. Zoöl., XVII, 1910, p. 333 (Chiquitos, Bolivia; Matto Grosso; Argentina (Goya, Ocampo); LIMA, Rev. Mus. Paul., XII, (2), 1920, p. 94 (western Matto Grosso).

Paraguay: Fort Wheeler, 2 ♂; No. 149552, greenish gray feet. Matto Grosso: Urucúm, 1 ♀; Descalvados, 2 ♂; Palmiras, 1 ? im. Collected by L. E. Miller.

RANGE.—Plains of northern and eastern Bolivia; western Matto Grosso (Cuyabá Corumbá, Urucúm, Descalvados, Palmiras, Carandasinho); Paraguay (Villa Concepción, Fort Wheeler, and Fortin Donovan, Paraguayan Chaco); northern Argentina (Prov. Santa Fé, Corrientes, and Territorio del Chaco).

Parts of spiders and some tiny bones were in the stomach of the No. 149552, male. Stomach of No. 149554 contained beetles.

The species was not rare about Descalvados. The specimen from Palmiras, which, judging from the loose texture of its plumage, appears to be immature, differs from the adult by dusky blackish bill with a reddish-brown shade distally.

Average Measurements of Specimens Examined

	SEX	WING	TAIL	CULMEN	MUSEUM
Paraguay, Fort Wheeler	1 ♂	108.5	96	78.5	A. M. N. H.
“ “ “	1 ♂	106	89.5	77.5	“
Brazil, Matto Grosso, Descalvados	1 ♂	114.5	91.5	69	“
Brazil, Matto Grosso, Descalvados	1 ♂	115	96	77.5	“
Brazil, Matto Grosso, Urucúm	1 ♀	100.5	85	71.5	“
Brazil, Matto Grosso, Palmiras	1 ?	106.5	95	63.5	“
Argentina, Puerto Bermejo, 1 ♂					Munich
Argentina, Ocampo (Prov. Santa Fé), 3 ♂	4 ♂	113.5	105.6	95.1	Tring
Argentina, Ocampo (Prov. Santa Fé)	1 ♀	106	96	95	“
Argentina, Ocampo (Prov. Santa Fé)	1 ♀	100.5	85	71.5	“

On account of their large size, especially the decidedly longer bill, the Argentina birds may be separable.

(2613) *Dendrocolaptes platyrostris intermedius* Berlepsch

Dendrocolaptes intermedius BERLEPSCH, *Ibis*, (5), I, 1883, p. 141 (Bahia).

Dendrocolaptes picumnus SCLATER, 'Cat. B. Brit. Mus.,' XV, 1890, p. 170 (part; spec. e, Chapada, Matto Grosso); ALLEN, *Bull. Amer. Mus. Nat. Hist.*, V, 1893, p. 114 (Chapada, Matto Grosso).

No specimens collected.

RANGE.—Central and northeastern Brazil, in states of Bahia, Ceará, Piahy, Matto Grosso (Chapada) and Goyaz, south to the Rio Paranyba.

(2614) *Dendrocolaptes pallescens* Pelzeln

Dendrocolaptes pallescens PELZELN, 'Orn. Bras.,' I, 1868, pp. 43, 61 (Estiva and Engenho do Gama, Matto Grosso); SALVADORI, *Boll. Mus. Zool. Torino*, XV, 1900, No. 378, p. 8 (Urucúm, Matto Grosso).

Paraguay: Fort Wheeler, 1 ♂, 2 ♀. Matto Grosso: Urucúm, 2 ♂, 4 ♀.

RANGE.—Western Matto Grosso (Estiva, Engenho do Gama, Urucúm), eastern Bolivia, and northwestern Argentina.

It was noted in the semi-open country as well as in the thick forest.

(2623) *Dendrocolaptes certhia concolor* Pelzeln

Dendrocolaptes concolor PELZELN, 'Orn. Bras.,' I, 1868, pp. 43, 62 (Villa Bella de) Matto Grosso, Salto do Girão and Borba, Rio Madeira; Dr. Hellmayr designates Borba as type-locality.¹

No specimens collected.

RANGE.—Northern Brazil, south of the Amazon, from the Rio Madeira and its head-waters (Rio Guaporé, near Villa Bella de Matto Grosso) east to the Tapajóz.

(2639) *Xolmis cinerea* (Vieillot)²

Tyrannus cinereus VIEILLOT, 'Anal. Nouv. Ornith. Éléme.,' 1816, p. 68 ("l'Amérique méridionale" = Rio de Janeiro, Brazil).³

Tenioptera nengeta PELZELN, 'Orn. Bras.,' II, 1868, p. 97 (Mattodentro, Ypanema, Portinho); REINHARDT, *Vidensk. Medd. Naturh. Foren. Kjobenhavn*, 1870, p. 359 (Lagôa Santa, Minas Geraes); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 11 (Brazil; Bolivia; Uruguay); ALLEN, *Bull. Amer. Mus. Nat. Hist.*, IV, 1892, p. 331 (Chapada); SALVADORI, *Boll. Mus. Torino*, XII, 1897, No. 292, p. 11 (Caiza, Bolivia); IHERING, 'Cat. F. Braz.,' I, 1907, p. 256 (Matto Grosso); GRANT, *Ibis*, 1911, p. 110 (Riacho Ancho; Los Yngleses, Ajó, Argentina).

RANGE.—Campos of Brazil, from Marajó and the Iriri (affluent of the Xingú) south to Rio Grande do Sul; São Paulo (Mattodentro, Ypanema); Rio de Janeiro; Bahia; Minas Geraes (Lagôa Santa); Matto Grosso (Chapada). Argentina (Los Yngleses, Ajó, Riacho Ancho); Paraguay; eastern Bolivia (Caiza); Uruguay.

(2641) *Xolmis velata* (Lichtenstein)

Muscicapa velata LICHTENSTEIN, 'Verz. Doubl. Berlin Mus.,' 1823, p. 54 ("São Paulo").

Tenioptera velata PELZELN, 'Orn. Bras.,' II, 1868, p. 97 (Cuyabá and Cidade de Matto Grosso); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 12 (Brazil; Bolivia);

¹Hellmayr, *Field Mus. Nat. Hist.*, Zoöl. Ser., XIII, part 4, p. 259.

²Equal to *nengeta*, auctorum (not of Linn.).

³Information received from Dr. Hellmayr.

ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 332 (Cachoeira, Chapada); IHERING, 'Cat. F. Braz.,' I, 1790, p. 257 (Porto da Faya, Matto Grosso).

Rio São Lourenço, 1 ♀; Santa Rosa, 1 ♀ (im. ?).

RANGE.—Brazil, from Marajó and Mexiana and the north bank of the lower Amazon, south to Minas Geraes, São Paulo, and Matto Grosso (Rio São Lourenço, Santa Rosa, Cachoeira, Chapada); and Bolivia (Buenavista, Dept. Santa Cruz).

(2685) *Ochthornis littoralis* (Pelzeln)

Elainea littoralis PELZELN, 'Orn. Bras.,' II, 1868, pp. 108, 180 (Rio Mamoré, Cachoeira da Bananeira and Borba, Rio Madeira; types in Vienna Museum examined).

Ochthornis littoralis SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 31 (part; spec. g, Rio Javari, Upper Amazonia); IHERING, 'Cat. F. Braz.,' I, 1907, p. 257 (Matto Grosso).

Ochthornis murina ALLEN, Bull. Amer. Mus. Nat. Hist., II, 1889, p. 85 (falls of the Madeira, Bolivia).

Rio Roosevelt, Camp 15, 1 ♀.

RANGE.—French and British Guiana; Amazonia, south to the Rio Roosevelt, Matto Grosso; Colombia; eastern Ecuador; Peru; and northern Bolivia.

This species was abundant along the upper reaches of the Rio Roosevelt. They were usually seen in pairs perched close above the water on over-hanging limbs or in the low bushes at the water's edge.

(2687) *Fluvicola pica albiventer* (Spix)

Muscicapa albiventer SPIX, 'Av. Bras.,' II, 1825, p. 21, Pl. xxx, fig. 1 ("in campis Brasiliæ").

Fluvicola albiventris PELZELN, 'Orn. Bras.,' II, 1868, p. 97 (Engenho do Gama); ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 332 (Corumbá); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 6 (Corumbá, Carandasinho); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 57 (Caceres).

Fluvicola albiventer IHERING, 'Cat. F. Braz.,' I, 1907, p. 258 (Matto Grosso).

Paraguay: Puerto Pinasco, 1 ♀. Matto Grosso: Urucúm, 1 ♂, 1 ♀; Agua Blanca de Corumbá, 1 ♂.

RANGE.—Brazil, from the Amazon and the Rio Madeira south to Goyaz, Minas Geraes and Matto Grosso (Urucúm, Agua Blanca de Corumbá, Engenho do Gama, Caceres, Carandasinho); Paraguay (Colonia Rizzo, Puerto Pinasco); eastern Bolivia (Chiquitos, Caiza); northern Argentina.

"Not uncommon at Urucúm, frequenting the banks of water-courses.

"On the second expedition it was noted as abundant about Agua Blanca de Corumbá. Here it was found in the low scrubby growth about the edges of the lagoons. Specimens collected in late October indicated that the breeding season was at hand and early the following month we began to find nests. It is extraordinary how many nests one may find after one has learned where to look for them. We have had a speaking acquaintance with this little water-tyrant for a good many years but

no intimate knowledge of its home-life until on the last expedition. About Agua Blanca we found many nests. The style of architecture is similar to that of the honey-creeper (*Cæreba luteola*); that is, more or less flask- or retort-shaped.

"All of the nests that we found were placed in small thorny palms at heights varying from two to eight feet from the ground. The neck, which is also the entrance to the retort-shaped nest, is bent or hooked over a leaf stem, while the body of the nest is supported by long, slender needle-like thorns both on the sides and from below. The nest structure is a flimsy, frail affair, built of dried grasses and palm fibers. In some cases it is so thin and loosely woven that the contents may be seen, imperfectly, from the outside; and no doubt the brooding bird is able to see approaching danger and escape surprise attacks. The entrance to some of the nests was so completely surrounded by long needle-like thorns that one could not but marvel at the agility of the birds when they would dart in or out.

"A nest collected November 10 was only about four feet from the ground. It was of usual construction and location and contained two fresh eggs. That number seems to be the normal clutch. The eggs are ovate in form and measure 14×18 and 13.5×18 mm. They are white, marked with scattering dots and irregularly shaped spots of liver-brown, congregated chiefly in a band about the larger end."

(2690) *Arundinicola leucocephala* (Linnæus)

Figure 32

Pipra leucocephala LINNÆUS, 'Mus. Adolphi Friderici,' II, Prodr., 1764, p. 33 (locality not indicated); idem, 'Syst. Nat.,' 12th Ed., I, 1766, p. 340 (Surinam).

Arundinicola leucocephala PELZELN, 'Orn. Bras.,' II, 1868, p. 98 (Cuyabá); ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 332 (Corumbá); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 6 (Corumbá; Carandasinho); IHERING, 'Cat. F. Braz.,' I, 1907, p. 258 (Matto Grosso; Paraguay); GRANT, Ibis, 1911, p. 111 (Paraguay, Monte Alto; Bolivia, Alto Paraguay); MÉNÉGAUX, 'Rev. Franc. d'Orn.,' V, 1917, p. 57 (Caceres).

Paraguay: Fort Wheeler, 1 ♂. Matto Grosso: Agua Blanca de Corumbá, 1 ♂; Palmiras, 2 ♂; Solimões, Amazonas, 1 ♂. Collected by Leo E. Miller.

RANGE.—Venezuela; Trinidad; Colombia; French, Dutch and British Guiana; Brazil, from the Rio Branco south to São Paulo and Matto Grosso (Corumbá, Caceres, Carandasinho, Palmiras); Paraguay (Monte Alto, Fort Wheeler); eastern Bolivia, and northeastern Argentina (Corrientes).

This species was observed at many other points on the journey, the black body with pure white head making it conspicuous.

In males of this species, the two outer primaries are abnormal. The outermost one is lanceolate, only about half the length of the next, and

with the outer web exceedingly narrow. The next quill is long (longer than the third, but shorter than the fourth), very narrow and without any sign of an outer web for its distal three-fourths.



Fig. 32. *Arundinicola leucocephala* (Linnæus), Fedegoso, Brazil.

(2691) *Alectrurus tricolor* (Vieillot)

Gallita tricolor VIEILLOT, 'Anal. Nouv. Orn. Éléme.,' 1816, p. 68 ("l'Amérique méridionale" = Paraguay).

Alectrurus tricolor VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XII, 1817, p. 408 (based on Azara, No. 225, Paraguay); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 39 (Brazil); ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 332 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 259 (Matto Grosso; Paraguay).

No specimens collected.

RANGE.—Campo districts of southern Brazil, in states of São Paulo, Minas Geraes, Matto Grosso (Chapada), and Paraná; Argentina; Uruguay; Paraguay; eastern Bolivia (Moxos).

(2692) *Yetapa risora* (Vieillot)

Muscicapa risora VIEILLOT (AND OUDART), 'Galerie Ois.,' I, (2), 1824, p. 209, Pl. CXXXI (= ♂; "Brésil").

Alecturus guirayetapa PELZELN, 'Orn. Bras.,' II, 1868, p. 98 (Pansecco, Matto Grosso).

No specimens collected.

RANGE.—Uruguay; Paraguay; adjoining parts of southern Brazil, in states of Matto Grosso (Pansecco) and Rio Grande do Sul; northern Argentina.

(2693) *Gubernetes yetapa* (Vieillot)

Muscicapa yetapa VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXI, 1818, p. 460 (Paraguay; ex Azara, No. 75).

Cybernetes yetapa PELZELN, 'Orn. Bras.,' II, 1868, p. 99 (Pansecco; Matto Grosso, etc.); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 40 (Brazil; Paraguay; Bolivia; Argentina).

Gubernetes yetapa HELLMAYR, 'Revis. Spix,' 1906, p. 647; IHERING, 'Cat. F. Braz.,' I, 1907, p. 259 (Matto Grosso).

RANGE.—Northern Argentina (Misiones, Chaco); Paraguay; Bolivia (Chiquitos); southern Brazil, in states of São Paulo, Rio de Janeiro, Bahia, Minas Geraes, Goyaz, and Matto Grosso (Pansecco).

(2694) *Satrapa*¹ *icterophrys* (Vieillot)

Muscicapa icterophrys VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXI, 1817, p. 458 (based on Azara, No. 183; Paraguay).

Sisopygis icterophrys PELZELN, 'Orn. Bras.,' II, 1868, p. 98 (Cuyabá, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 260 (Matto Grosso).

Agua Blanca de Corumbá, 1 ♂, 2 ♀; Rio São Lourenço, 1 ♀.

RANGE.—Brazil, from Piauhuy south to Rio Grande do Sul and Matto Grosso (Corumbá, Cuyabá, Rio São Lourenço); Bolivia (Chiquitos); Paraguay; Uruguay; Argentina; (?) Venezuela.

The species was not common at Agua Blanca de Corumbá and on the Rio São Lourenço. This tyrant flycatcher frequented thickets bordering the heavy timber and seemed very shy. One of the females taken at Agua Blanca was a laying bird, but the nest was not found.

These specimens appear to agree with others I have seen from Bahia, Minas Geraes, Rio de Janeiro, Argentina, and Bolivia. Topotypical material from Paraguay is not available for comparison. *Sisopygis hellmayri* Chubb is simply the juvenal plumage, adults from Bolivia being in no way distinguishable from *Satrapa icterophrys*, of Brazil and Argentina.

Measurements

	SEX	WING	TAIL	CULMEN
Rio de Janeiro, Manguinhos	♂	87	77	14
Minas Geraes, Agua Suja	♀	82	68.5	13
" " " "	♀	84	2	13
Bahia Coll.	♀	87.5	75	12.5
Agua Blanca de Corumbá	♀	78.5	72	13
" " " "	♀	81.5	76.5	11.5

¹*Satrapa* STRICKLAND, Ann. and Mag. Nat. Hist., XIII, 1844, p. 414 (type by orig. desig., *Muscicapa icterophrys*).

²Tail moulting.

(2696) *Knipolegus lophotes* (Boie)

Muscicapalophotes BOIE¹ (ex Temminck MS.), Isis, XXI, 1828, p. 317. New name for *Muscicapagaleata* SPIX, 'Av. Bras.,' II, 1825, p. 20, Pl. xxvii (São Paulo).

Knipolegus comatus ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 332 (Chapada).

Knipolegus comatus IHERING, 'Cat. F. Braz.,' I, 1907, p. 260 (Matto Grosso).

No specimens collected.

RANGE.—Southern Brazil: Rio Grande do Sul; Goyaz; São Paulo; Rio de Janeiro; Minas Geraes; Matto Grosso (Chapada). Uruguay.

(2703) *Knipolegus cyanirostris* (Vieillot)

Muscicapacyanirostris VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXI, 1818, p. 447 (Paraguay; based on Azara, No. 181; = ♂ ad.).

Knipolegus cyanirostris HELLMAYR, Field Mus. Nat. Hist., Zoöl. Ser., XIII, part 5, 1927, p. 72 (Urucúm de Corumbá, Matto Grosso).

No specimens collected.

RANGE.—Southeastern Brazil, from Minas Geraes (Lagôa Santa) and Espirito Santo (Victoria) to Rio Grande do Sul and Matto Grosso.² Uruguay; Paraguay; eastern Argentina.

(2709) *Entotriccus striaticeps* (Lafresnaye and d'Orbigny)

Muscisaxicola striaticeps LAFRESNAYE AND D'ORBIGNY, 'Syn. Av.,' I, in Mag. Zool., VII, 1837, Cl. 2, p. 66 ("La Paz" [= Chiquitos], Bolivia; the type is marked "Chiquitos"; = ♀).

Knipolegus cinereus SCLATER, P. Z. S., 1870, p. 58 (Corumbá, Matto Grosso; = ♂). No specimens collected.

RANGE.—Eastern Bolivia (Chiquitos, Santa Cruz, San Miguel); Brazil (Matto Grosso, Corumbá); Argentina (Córdoba, Salta, Tucumán, Jujuy, Chaco, Formosa, Santiago del Estero); Paraguay (Asunción, Sapucay).

(2713) *Colonia colonus colonus* (Vieillot)

Muscicapacolonus VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXI, 1819, p. 448 (Paraguay; based on Azara, No. 180).

Copurus colonus PELZELN, 'Orn. Bras.,' II, 1868, p. 100 (Engenho do Gama); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 50 (spec. a-1; Rio, São Paulo, Rio Grande do Sul); ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 332 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 262 (Matto Grosso).

Tapirapoan, 1 ♂.

RANGE.—Southern Brazil, in states of Bahia, Rio de Janeiro, São Paulo, Paraná, Goyaz, Minas Geraes (Vargem Alegre), Matto Grosso (Engenho do Gama, Chapada, Tapirapoan), and Santa Catharina. Paraguay. and Argentina (Misiones).

¹While a *nomen nudum* in Isis, 1826, (1), p. 973, *Muscicapalophotes* is validly proposed in Isis XXI, 1828, p. 317, as Dr. Hellmayr has discovered since the flycatcher volume (Field Mus. Nat. Hist. Pub., Zoöl. Ser., XIII, part 5, 1927) was published.

²The only record from Matto Grosso is quoted above.

³Wetmore and Peters, Proc. Biol. Soc. Wash., XXXVI, 1923, p. 144.

The long-tailed tyrant was observed on various occasions, but only one specimen was collected.

(2716) *Machetornis rixosa rixosa* (Vieillot)

Tyrannus rixosus VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXXV, 1819, p. 85 (Paraguay; based on Azara, No. 197).

Machetornis rixosa PELZELN, 'Orn. Bras.,' II, 1868, p. 100 (Cuyabá and [Villa Bella de] Matto Grosso); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 52 (spec. a, c, d, f, h; Bahia, Paraguay, Bolivia); IHERING 'Cat. F. Braz.,' I, 1907, p. 262 (Matto Grosso); GRANT, *Ibis*, 1911, p. 114 (Villa Franca, Monte Alto, Colonia Risso, Paraguay).

Paraguay: Trinidad, 1 ♂; Puerto Pinasco, 1 ♂. Matto Grosso: Rio São Lourenço, 1 ♀; Urucúm, 1 ♂, 2 ♀.

RANGE.—Paraguay (Trinidad, Puerto Pinasco, Villa Franca, Monte Alto, Colonia Risso); Bolivia; Brazil, in states of Rio Grande do Sul, Santa Catharina, Matto Grosso (Cuyabá, Urucúm, Rio São Lourenço), São Paulo, Rio de Janeiro, Minas Geraes, Bahia, Piauh, and Maranhão.

I see no difference between birds from Paraguay, Matto Grosso and the Rio Mamoré, Bolivia. The northern race *Machetornis rixosa flavigularis* TODD, of Venezuela and north Colombia, merely differs in that the throat is nearly as bright yellow as the underparts.

	Measurements				
	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Machetornis rixosa rixosa</i>					
Matto Grosso, Urucúm	1 ♂	93.5	83.5	18.5	A. M. N. H.
" " "	1 ♂	91.5	81	19	"
" " Rio São Lourenço	♀	88.5	77	16.5	"
Matto Grosso, Urucúm	♀	90.5	80.5	18	"
Paraguay, Concepción, (1 ♂)					Munich
" Bernalcué, near Asunción (1 ♂)					"
Paraguay, Bernalcué, near Asunción (1 ♂)	3 ♂	92.5	85.5	17.6	"
Bolivia, Rio Mamoré	♂	90.5	84	17	A. M. N. H.
" " "	♀	87.5	78.5	19	"
" " "	♀	86.5	79.5	18	"
<i>Machetornis rixosa flavigularis</i>					
N. Venezuela, Rio Maméira, near Caracas	♂	91.5	81.5	17	Munich

"A female taken at Urucúm, December 7, was laying. One egg was found in the oviduct, another would probably have entered within

twenty-four hours, and two had been expelled, indicating that four eggs would have constituted the clutch.

"This tyrant was abundant at Agua Blanca de Corumbá in early November. It was nesting at that time. Perhaps one should have said breeding at that time, for it does not build a nest, but instead occupies the abandoned nest of some other species. At Agua Blanca, eggs were found in the outer chamber of old nests of *Phacellodomus* (see description of nest of *Phacellodomus*, p. 238). The eggs are ovate in form, and buff-cream in color, heavily and quite uniformly marked all over with dots, spots, and blotches of varying shades of brown from bay to chestnut. Many of the markings are superimposed upon one another, the outer ones being deep chestnut. About the larger end the markings are so crowded upon one another as to almost completely hide the ground color. There is a decided resemblance between eggs of this species and those of species of *Myiarchus*.

"Two eggs, of a set of three, from Agua Blanca de Corumbá, Matto Grosso, collected November 6, measure 22.5×17 mm. and 25×17.5 mm.

"Brooding females were very wary. They would slip out of the nest very quietly and disappear in the nearest thicket. The birds in juvenal plumage have the upper wing, tail-coverts, remiges and rectrices more broadly edged with brighter rufous. The head is dusky grayish, the crown feathers not elongated; and there is not any sign of a concealed crown-patch."

(2735) ***Muscisaxicola fluviatilis*** Sclater and Salvin

Muscisaxicola fluviatilis SCLATER AND SALVIN, P. Z. S. Lond., 1866, p. 187 (lower Ucayali, Peru); HELLMAYR, Nov. Zoöl., XVII, 1910, p. 285 (Maroins, Rio Machados). No specimens collected.

RANGE.—Western Brazil, from the Rio Purús south to the confines of Matto Grosso (Rio Machados). Northern Bolivia; eastern Peru.

An adult male secured by W. Hoffmanns on June 9, 1908, at Maroins, Rio Machados, is the only record of this species from Matto Grosso.

(2744) ***Platyrrhynchus senex nattereri*** (Hartert and Hellmayr)

Platyrrhynchus nattereri HARTERT AND HELLMAYR, Bull. Brit. Orn. Club, XII, 1902, p. 63 (Salto do Girão, Rio Madeira).

Platyrrhynchus rostratus (not of Latham) PELZELN, 'Orn. Bras.,' II, 1868, p. 100 (Salto do Girão).

Platyrrhynchus senex nattereri HELLMAYR, Nov. Zoöl., XVII, 1910, p. 285 (Calama, Rio Madeira and Maroins, Rio Machados; crit.).

No specimens collected.

RANGE.—Central Brazil, on the right bank of the Rio Madeira (Calama, Salto do Girão) and its tributary, the Rio Machados.¹

(2748) *Platyrhynchus mystaceus bifasciatus* (Allen)²

Platyrhynchus bifasciatus ALLEN, Bull. Amer. Mus. Nat. Hist., II, 1889, p. 114 (Chapada, Matto Grosso, Brazil); IV, 1892, p. 332 (Chapada); IHERING, F. 'Cat. Braz.,' I, 1907, p. 263 (Matto Grosso).

Urucúm, 1 ♀.

RANGE.—Southwestern Brazil, in state of Matto Grosso (Chapada and Urucúm).

This is an endemic form, peculiar to Matto Grosso.

(2753) *Rhynchocyclus olivaceus olivaceus* (Temminck)

Platyrhynchus olivaceus TEMMINCK, 'Nouv. Rec. Pl. Col.,' livr. 2, 1820, Pl. XII, fig. 1 (Bahia).³

Rhynchocyclus olivaceus PELZELN, 'Orn. Bras.,' II, 1868, p. 109 (Registo do Sai, Rio de Janeiro); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 165 (Bahia, Brazil).

Barão Melgaço, 1 ♀; collected by Leo E. Miller.

RANGE.—Eastern Brazil, from Rio de Janeiro to Bahia and Maranhão (Tury-assú), and along the south bank of the Amazon west to the Rio Madeira, south to northern Matto Grosso (Barão Melgaço). Bolivia (Rio Chaparé); eastern Peru; etc.

I see no difference either in size or in coloration of the wing-coverts between typical *olivaceus* of eastern Brazil and the so-called *guianensis* from the Guianas and Amazonia, and I therefore consider *Rhynchocyclus olivaceus guianensis* a very unsatisfactory race, hardly worthy of recognition.

Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Rhynchocyclus olivaceus</i> "guianensis"					
Venezuela, Caura	♂	73.5	58.5	12.5	Munich
N. Brazil, Peixe-Boi, Pará	♂	74.5	65	13.5	"
Bolivia, Dept. Cochabamba, Rio Chaparé	♂	75	65.5	13	A. M. N. H.
French Guiana, St. Laurent du Maroni	♀	71.5	59	13.5	Munich
Bolivia, Rio Chaparé	♀	67	53.5	13.5	A. M. N. H.
Matto Grosso, Barão Melgaço	♀	73	58	13.5	"
<i>Rhynchocyclus olivaceus olivaceus</i>					
Rio de Janeiro	♀	71.5	66.5	12	Munich
" " "	? ad.	72	64	13.5	"
" " " Registo do Sai	♂	79	66	13.5	Vienna
Bahia	♂	73	64.5	14	"
"	♂	79	69.5	13.5	"
"	♀	73	62	13	"
"	♀	76	64.5	14	"

¹The above subspecies may well be included in this volume as the Rio Machados forms the boundary between the states of Amazonas and Matto Grosso.

²Type in The American Museum of Natural History.

³Hellmayr, Nov. Zoöl., XVII, 1910, p. 295.

(2758) *Tolmomyias sulphurescens sulphurescens* (Spix)

Platyrhynchus sulphurescens SPIX, 'Av. Bras.,' II, 1825, p. 10, Pl. XII, fig. 1, part; "♂" (hab. part. Provinciae Rio Janeiro et Piahy); I accept Rio de Janeiro as type-locality.

Rhynchocyclus sulphurescens PELZELN, 'Orn. Bras.,' II, 1868, p. 109 (Engenho do Gama); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 168 (part; spec. a, b, c, d, Brazil, Lagôa Santa, southeastern Brazil); ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 337 (Chapada Matto Grosso); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 6 (Urucúm, Matto Grosso); GRANT, Ibis, 1911, p. 119 (Puerto San Juan, Curuzú Chica, Paraguay); IHERING, 'Cat. F. Braz.,' I, 1907, p. 264 (Matto Grosso).

Rhynchocyclus assimilis (not of Pelzeln) PELZELN, 'Orn. Bras.,' II, 1868, p. 110 (part; Engenho do Gama and São Vicente, Matto Grosso).

Paraguay: Trinidad, 3 ♂; Fort Wheeler, 3 ♂. Matto Grosso: Descalvados, 2 ♂; Urucúm, 5 ♂, 1 ♀; Tapirapoan, 1 ♀. In life the eye is gray; feet gray; maxilla black; mandible pale.

RANGE.—Southern and eastern Brazil, south to Santa Catharina, west to Matto Grosso (Chapada, Engenho do Gama, São Vicente, Urucúm, Descalvados, Tapirapoan), north to Piahy and central Maranhão. Paraguay (Trinidad, Fort Wheeler, Puerto San Juan, Curuzú Chica); Argentina (Tucumán, Jujuy); eastern Bolivia.

This species was common at the localities where it was collected. At Descalvados and Tapirapoan, breeding birds were taken and several nests seen; that is, during December and January. This flycatcher has a note similar to that of the North American wood pewee.

Birds from the above localities average slightly smaller when compared with two specimens, one from Castro, Paraná (♂), the other from Therezopolis, Organ Mts., Brazil (♀), especially in the length of the tail. I have no toptotypical material of *Tolmomyias sulphurescens sulphurescens*; however, a large series from Matto Grosso, which I refer to that race, compared with three examples from Vermejo, Santa Cruz, Bolivia (type-locality of *Tolmomyias sulphurescens pallescens*), leads me to believe with Mr. Cory (Proc. Biol. Soc. Wash., XXXII, p. 217) that *Tolmomyias sulphurescens pallescens* is indistinguishable from *Tolmomyias sulphurescens sulphurescens*.

On the other hand, I unhesitatingly refer examples from Todos Santos (Dept. of Cochabamba), Bolivia (3500 feet altitude), to *T. sulphurescens assimilis*.

Of the specimens of *T. sulphurescens* collected in Matto Grosso, all from the region having drainage to the Paraguay proved to be *T. sulphurescens sulphurescens*, while those from the region within Amazonian drainage were *T. sulphurescens assimilis*.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Paraguay, Trinidad, 2 ♂;					
Fort Wheeler, 3 ♂	5 ♂	66.1	59.3	10.4	A. M. N. H.
Paraguay, Trinidad	1 ♀	62	55	11	"
Brazil, Matto Grosso, Urucúm, 5 ♂; Descalvados, 2 ♂;					
Chapada, 2 ♂	9 ♂	64.1	57.5	10.7	"
Brazil, Matto Grosso, Uru- cúm, 1 ♀; Tapirapoan, 1					
♀; Chapada, 4 ♀	6 ♀	63.3	56	11	"
Bolivia, Dept. Santa Cruz, Vermejo	3 ♂	67.1	60.3	11	"
Brazil, Paraná, Castro	1 ♂	67	59	12	"
" " "	1 ♀	63	60	11.5	"
" Therezopolis, Organ Mts.	1 ♀	68	60	12	"

(2759) *Tolmomyias sulphurescens assimilis* (Pelzeln)

Rhynchocyclus assimilis PELZELN, 'Orn. Bras.,' II, 1868, pp. 110, 181 (part; Borba, Rio Madeira; types examined in Vienna Museum).

Rhynchocyclus sulphurescens SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 168 (part; spec. e, r-u, Rio Madeira and eastern Peru); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 394 (part; Rio Tocantins, Rio Curuá, Rio Tapajóz).

Rio Roosevelt, Camp 8, 1 ♂; mouth of the Rio Cherrie, 1 ♀; Barão Melgaço, 1 ♂, 2 ♀ (coll. by Leo Miller); Monte Cristo, 1 ♂ (coll. by Leo Miller).

RANGE.—North Brazil, south of the Amazon, east to northern Maranhão, south to northern Matto Grosso (Rio Roosevelt, Rio Cherrie, Barão Melgaço, Monte Cristo), and northern slope of the Bolivian Andes.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Bolivia, Todos Santos	1 ♂	62.5	53.5	11	A. M. N. H.
" " "	4 ♀	62.3	52.2	11.8	"
Brazil, Matto Grosso, Barão Melgaço, 1 ♂;					
Rio Roosevelt, 2 ♂	3 ♂	67.3	60	12.1	"
Brazil, Barão Melgaço	1 ♀	63	59	13	"

(2770a) *Tolmomyias flaviventris*¹ subspecies

Tapirapoan, 1 ♀.

It is impossible to refer this single specimen to either of the two recognized Brazilian races. It might be a dark example of *Tolmomyias flaviventris borbæ*, or a pale-colored one of *Tolmomyias flaviventris flaviventris*.² The

¹Type in The American Museum of Natural History.

²There is no literature from Matto Grosso.

specimen from Tapirapoan differs from the darkest specimen from Borba (No. 15819, Natterer Coll., Vienna Museum) in the deeper ochraceous superciliary stripe; it agrees, however, in the intense ochraceous color of the throat and breast. Other specimens from Borba, including the types in the Vienna Museum, are much paler below, being nearly pale olive-yellow on the breast. It remains to be ascertained by a series from Matto Grosso to which race to refer the bird from Tapirapoan.

A series from Trinidad (*Rhynchocyclus flaviventer collingwoodi* Chubb) and others from northern Venezuela I believe to be inseparable from Santa Marta specimens. *R. f. collingwoodi* thus becomes a synonym of *T. flaviventris aurulentus* (Todd).

Average Measurements					
	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Tolmomyias flaviventris</i> subspecies					
Brazil, Matto Grosso, Tapirapoan	1 ♀	57.5	53	10.5	A. M. N. H.
<i>Tolmomyias flaviventris borbae</i>					
Brazil, Borba, Rio Madeira, No. 15819	1 ♀	57	46.5	11.5	Natterer Coll. Vienna
Brazil, Borba, Rio Madeira (type, No. 15820)	1 ♀	55.5	46.5	12	"
Brazil, Borba, Rio Madeira (inc. type, No. 15817)	3 ♂	58	46.6	12	"
<i>Tolmomyias flaviventris is flaviventris</i>					
Brazil, Piauhy, Pedrinha Lake, Parnaguá, 1 ♂; Buriti, near Parnaguá, 1 ♂; Parnaguá, 1 ♂	3 ♂	60	53	10.5	Reiser Coll. Vienna
Brazil, Piauhy, Parnaguá	1 ♀	58.5	53	11	Reiser Coll. Vienna
" " Pintados, on the Parnahyba	1 ♀	60	51	11.5	Reiser Coll. Vienna
Brazil, Rio de Janeiro, Manginhos	1 ♀	58	54	10.5	Munich
<i>Tolmomyias flaviventris aurulentus</i>					
Island of Trinidad, Caparo	4 ♂	58.2	54.1	10.7	"
Island of Marajó, Tuyuyú	1 ♂	55.5	50	10	"
Brazil, Forte do Rio Branco	3 ♂	56.6	47.8	10.8	Vienna
Venezuela, Cristóbal Colón	1 ♂	61.5	56.5	10.5	A. M. N. H.

Average Measurements (*Continued*)

	SEX	WING	TAIL	CULMEN	MUSEUM
Venezuela, Las Trincheras	1 ♂	55.5	1	10	A. M. N. H.
" "	1 ♀	56.5	1	10	"
" Tucacas	1 ♀	55.5	52	9.5	"
" Cristóbal Colón	1 ♀	48.5	54	10	"

(2771) *Ramphotrigo ruficauda* (Spix)

Platyrrhynchus ruficauda SPIX, 'Av. Bras.,' II, 1825, p. 9, Pl. XI, fig. 1 ("in sylvis fluminis Amazonum"; type in Munich Museum examined).

Rhynchocyclus ruficauda PELZELN, 'Orn. Bras.,' II 1868, p. 110 (Villa Maria [= São Luiz de Cáceres], Matto Grosso); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 172 (Amazonia and Guiana).

Ramphotrigo ruficauda IHERING, 'Cat. F. Braz.,' I, 1907, p. 265 (Matto Grosso). No specimens collected.

RANGE.—Northern Brazil, east to Pará, south to western Matto Grosso (São Luiz de Cáceres); French, Dutch, and British Guiana; southern Venezuela; eastern Peru.

(2774) *Todirostrum cinereum colorem* Ridgway²

Figure 33

Todirostrum cinereum colorem RIDGWAY, Proc. Biol. Soc. Wash., XIX, 1906, p. 115 (Corumbá, Matto Grosso); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 57 (Cáceres).

Todirostrum cinereum PELZELN, 'Orn. Bras.,' II, 1868, p. 100 (Cuyabá, Caiçara, São Vicente); ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 332 (Chapada, Corumbá); IHERING, 'Cat. F. Braz.,' I, 1907, p. 265 (Matto Grosso); GRANT, Ibis, 1911, p. 115 (Rabicho, Matto Grosso).

Rio São Lourenço, 1 ♂; Fazenda do São João, 1 ♂.

RANGE.—Interior of Brazil: Matto Grosso (Rio São Lourenço, Fazenda do São João, Corumbá, Cáceres, São Vicente, Caiçara, Rabicho), Minas Geraes (Água Suja), northern São Paulo (Rio Paraná), Goyaz. Eastern Bolivia (Mojos; Cabo Emma, Rio Paraguay).

"This species was common at almost all points visited in Matto Grosso. Many were seen to be nesting at Água Blanca de Corumbá and in the neighborhood of Descalvados during November and December. A set of three eggs in which incubation had begun, together with the nest, was collected at the former place, November 5. They are white, sparsely and irregularly dotted with wood-brown, and ovate in form, measuring 14×17.5, 14.25×17.3, and 14.5×17.8 mm., respectively. The nest is the typical fusiform structure a foot in length, composed of soft grasses and other vegetable fibers neatly interwoven. It was suspended from the tip of an overhanging branch. The entrance to the

¹Tail moulting.

²Type in The American Museum of Natural History.

nest-cavity, which is slightly above the center of the structure, is neatly arched over, like a dormer window. Nests of the tody-tyrant are usually placed in some shady, secluded nook at the edge of the thicket."



Fig. 33. Nest of *Todirostrum cinereum coloreum* Ridgway, Descalvados, Matto Grosso, Brazil.

(2793) ***Todirostrum latirostre latirostre*** (Pelzeln)

Euscarthmus latirostris PELZELN, 'Orn. Bras.,' II, 1868, pp. 101, 173 (Borba); BERLEPSCH AND LEVERKÜHN, Ornith., VI, 1890, p. 11 (Cuyabá).

Euscarthmus ochropterus ALLEN, Bull. Amer. Mus. Nat. Hist., II, 1889, p. 143 (Chapada, Matto Grosso); idem, IV, 1892, p. 333 (Chapada).

Agua Blanca de Corumbá, 1 ♂, 1 ♀; Descalvados, 1 ♂, 1 ♀; Rio São Lourenço 2 ♂, 1 ♀; Siete de Septiembre, 1 ♀; Utiarity, 1 ♀; Rio Roosevelt, 1 ♀.

RANGE.—Interior of Brazil, from the Tapajóz (Santarém) and Solimões (Teffé) south through Amazonia to Matto Grosso and northern São Paulo (Tieté region). Eastern Bolivia; southeastern Peru.

"This species was not uncommon throughout most of Matto Grosso, and was noted as abundant about our first camp on the Rio Roosevelt."

(2802) ***Euscarthmornis striaticollis striaticollis*** (Lafresnaye)

Todirostrum striaticolle LAFRESNAYE, Rev. et Mag. de Zool., (2), V, 1853, p. 58 (Bahia).

Euscarthmus striaticollis PELZELN, 'Orn. Bras.,' II, 1868, p. 101 (Villa Maria, [Villa Bella de] Matto Grosso); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 83 (Villa

Maria; spec. b); ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 333 (Chapada); IHERING, 'Cat. F. Braz.' I, 1907, p. 269 (Matto Grosso).

Euscarthmus striaticollis striaticollis HELLMAYR, Nov. Zoöl., XVII, 1910, p. 290 (part; Bahia, Goyaz, and Matto Grosso).

Descalvados, 2 ♂, 1 ♀; adult male had the bill blackish; feet drab; eye pale yellow; Campos Novos, 1 ♀; feet in the fresh specimens were reddish purple in color.

RANGE.—Eastern and central Brazil, in states of Maranhão, Piahy, Bahia, Goyaz, and Matto Grosso (Chapada, Villa Maria, Descalvados, Campos Novos).

Specimens from Goyaz and Matto Grosso have the crown light brownish-olive like those from eastern Brazil.

(2805) *Euscarthmornis margaritaceiventer margaritaceiventer* (Lafresnaye and d'Orbigny)

Todirostrum margaritaceiventer LAFRESNAYE AND D'ORBIGNY, 'Syn. Av.,' I, in Mag. de Zool., VII, 1837, Cl. 2, p. 46 (Chiquitos, Bolivia).

Euscarthmus margaritaceiventer PELZELN, 'Orn. Bras.,' II, 1868, p. 101 (Cuyabá, Barra do Rio Jaurú, Cidade de Matto Grosso, Rio Guaporé); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 6 (Urucúm, Corumbá); IHERING, 'Cat. F. Braz.,' I, 1907, p. 268 (Matto Grosso); GRANT, Ibis, 1911, p. 115 (Pan de Azucar, Matto Grosso; Puerto Pinasco, Cabo Emma, Puerto Maria, near Villa Franca, Paraguay).

Euscarthmus pelzelni SCLATER AND SALVIN, Ibis, (4), V, 1881, p. 268 (Cuyabá); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 80 (Cuyabá; spec. a); ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 333 (Chapada).

Euscarthmus [margaritaceiventer] margaritaceiventer MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 57 (Caceres).

Paraguay: Puerto Pinasco, 1 ♀; Fort Wheeler, 1 ♂, 2 ♀; Rio Negro, 1 ♀. Matto Grosso: Urucúm, 1 ♂, 2 ♀; Descalvados, 1 ♀; Palmiras, 1 ♂; Rio São Lourenço, 1 ♂. In life the eye is straw-yellow; bill dusky brownish; feet dusky purplish brown.

RANGE.—Southwestern Brazil, in states of Matto Grosso (Chapada, Cuyabá, Urucúm, Corumbá, Descalvados, Palmiras, Rio São Lourenço, Pan de Azucar, Goyaz, and São Paulo (Paraná-Tieté region). Paraguay (Puerto Pinasco, Fort Wheeler, Cabo Emma, Puerto Maria, near Villa Franca); Bolivia (Chiquitos); northern Argentina; southern Peru.

One of the commonest of the small flycatchers observed in the forested sections of the semi-open country visited in the Paraguayan Chaco, and in Matto Grosso.

(2807) *Euscarthmornis nattereri* (Hellmayr)

Euscarthmus nattereri HELLMAYR, Verh. Zool. Bot. Gesell. Wien, LIII, 1903, p. 204 (Rio Paraná, São Paulo); IHERING, 'Cat. F. Braz.,' I, 1907, p. 268 (São Paulo and Matto Grosso).

Euscarthmus fumifrons (not *Todirostrum fumifrons* of Hartlaub) PELZELN, 'Orn. Bras.,' II, 1868, p. 101 (Paraná, Cuyabá, Engenho do Gama); IHERING, Rev. Mus. Paul., III, 1898, p. 184 (região Amazonica [errore!] e do Matto Grosso).

No specimens collected.

RANGE.—Interior of Brazil, in states of São Paulo (Rio Paraná) and Matto Grosso (Cuyabá, Engenho do Gama).

(2816) ***Snethlagea minor*** (Snethlage)

Euscarthmus zosterops minor SNETHLAGE, Orn. Monatsber., XV, 1907, p. 193 (part; Arumatheua, Tocantins).

Euscarthmus zosterops (not of Pelzeln) PELZELN, 'Orn. Bras.,' II, 1868, p. 102 (Borba); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 79 (Borba); IHERING, 'Cat. F. Braz.,' I, 1907, p. 267 (part; Borba).

Utiarity, 1 ♀.

RANGE.—Northern Brazil, south of the Amazon, from the Tocantins to the Rio Madeira (Borba, Calama), south to the Machados (Maroins) and Matto Grosso (Utiarity).

The species was not before represented in the American Museum collection.

(2827) ***Perissotriccus ecaudatus*** (Lafresnaye and d'Orbigny)

Todirostrum ecaudatum LAFRESNAYE AND D'ORBIGNY, 'Syn. Av.,' I, in Mag. de Zool., VII, 1837, Cl. 2, p. 47 (Yuracares, Bolivia); D'ORBIGNY, 'Voy. Amér. Mérid.,' Ois., 1839, p. 316, Pl. XXXIII, figs. 1, 2 (Yuracares).

Orchilus ecaudatus PELZELN, 'Orn. Bras.,' II, 1868, p. 102 (Engenho do Gama, Matto Grosso, Salto do Girão, Rio Madeira); IHERING, 'Cat. F. Braz.,' I, 1907, p. 270 (Matto Grosso).

No specimens collected.

RANGE.—Amazonia, from Pará west to eastern Peru, south to northern Bolivia and western Matto Grosso (Engenho do Gama, Rio Guaporé). Trinidad; Venezuela; British Guiana.

(2843) ***Euscarthmus meloryphus meloryphus*** Wied¹

Euscarthmus meloryphus WIED, Beitr. Naturg. Bras., III, (2), 1831, p. 947 (Campo Geral, boundary line of Minas Geraes and Bahia).

Hapalocercus meloryphus PELZELN, 'Orn. Bras.,' II, 1868, p. 103 (Engenho do Gama); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 93 (spec. b, c, d, f; Bahia, Brazil); ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 333 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 273 (Matto Grosso).

RANGE.—Brazil, from São Paulo and Matto Grosso north to Bahia, Piauhy, and Maranhão. Venezuela; Colombia; eastern Bolivia; Paraguay; northern Argentina.

(2848) ***Pseudocolopteryx sclateri*** (Oustalet)

Anaeretes sclateri OUSTALET, 'Nouv. Arch. Mus. Hist. Nat.,' (3), IV, 1892, p. 217 ("Chili," errore; Dr. Hellmayr suggests Prov. Buenos Aires, Argentina, as type-locality.)

Hapalocercus flaviventris PELZELN, 'Orn. Bras.,' II, 1868, p. 103 (Pansecco, Matto Grosso).

¹Type in The American Museum of Natural History.

Hapalocercus hollandi HELLMAYR, Verh. Zool. Bot. Ges. Wien, LIII, 1903, p. 204 (Pansecco; crit.); IHERING, 'Cat. F. Braz.,' I, 1907, p. 273 (Matto Grosso).

No specimens collected.

RANGE.—Brazil, Matto Grosso (Pansecco). Eastern Argentina; Paraguay; British Guiana; Trinidad.

A couple of adults collected by J. Natterer on June 27, 1826, at Pansecco, are the only specimens of this interesting bird recorded from Matto Grosso.

(2852) *Habrura pectoralis pectoralis* (Vieillot)

Sylvia pectoralis VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XI, 1817, p. 210 (based on Azara, No. 165, Paraguay).

Hapalocercus pectoralis PELZELN, 'Orn. Bras.,' II, 1868, p. 103 (Cuyabá).

Habrura pectoralis SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 96 (Cuyabá); ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 333 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 274 (Matto Grosso).

No specimens collected.

RANGE.—Northern Argentina; Uruguay; Paraguay; eastern Bolivia; south-western Brazil, in state of Matto Grosso (Cuyabá, Chapada) and northern São Paulo (Calzão do Couro).

(2855) *Culicivora caudacuta* (Vieillot)

Muscicapa caudacuta VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXI, 1818, p. 455 (based on Azara, No. 277; Paraguay).

Muscicapa stenura TEMMINCK, 'Nouv. Rec.,' Pl. Col.,' livr. 28, 1822, Pl. CLXVII, fig. 3 ("Brésil" = Prov. São Paulo; coll. Natterer).

Culicivora stenura ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 333 (Chapada, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 274 (Matto Grosso).

No specimens collected.

RANGE.—Southern Brazil, in states of Paraná, São Paulo, and Matto Grosso (Chapada). Paraguay; eastern Bolivia (Dept. Santa Cruz); northeastern Argentina (Santa Fé and Misiones).

(2866) *Stigmatura budytoides napensis* Chapman

Stigmatura budytoides napensis CHAPMAN, Amer. Mus. Novit., No. 231, 1926, p. 3 (junction of Curaray and Napo rivers, eastern Ecuador).

Stigmatura budytoides (not of Lafresnaye and d'Orbigny) PELZELN, 'Orn. Bras.,' II, 1868, p. 104 (Barra do Rio Juary, Rio Madeira, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 275 (Matto Grosso).

No specimens collected.

RANGE.—Brazil, in states of Amazonas (Rio Juruá, Rio Madeira) and Pará (Rio Tapajóz); also in eastern Peru and eastern Ecuador.

(2869) *Serpophaga munda* Berlepsch

Serpophaga munda BERLEPSCH, Orn. Monatsber., I, 1893, p. 12 (Samaipata, Valle Grande, and Olgin, Dept. Santa Cruz, Bolivia).

Serpophaga subcristata PELZELN, 'Orn. Bras.,' II, 1868, p. 103 (part; Estiva, Matto Grosso).

Serpophaga munda HELLMAYR, Field Mus. Nat. Hist., Zoöl. Ser., XIII, part 5, 1927, p. 384 (Urucúm de Corumbá).

No specimens collected.

RANGE.—Northern Argentina, from Mendoza, Córdoba, and Santa Fé northward; eastern Bolivia; western Matto Grosso (Estiva, Urucúm).

Natterer obtained a single female on July 4, 1826, at Estiva, which was compared and found identical with the type by Dr. Hellmayr. More recently, Field Museum received an adult male taken by Mr. Cherrie at Urucúm de Corumbá on August 17, 1926. These are the only records of the species from Matto Grosso.

(2870) *Serpophaga inornata* Salvadori

Serpophaga inornata SALVADORI, Boll. Mus. Torino, XII, No. 229, p. 13, 1897 (San Francisco, Dept. Tarija, Bolivia); WETMORE, Bull. U. S. Nat. Mus., No. 133, 1926, p. 320 (west of Puerto Pinasco, Paraguay; crit.).

Serpophaga subcristata inornata HELLMAYR, Nov. Zoöl., XXXII, 1925, pp. 183, 184 (part, San Francisco; crit.)

Urucúm, near Corumbá, 3 ♂, 1 ♀, 1 (?).

RANGE.—Eastern Bolivia (Buenavista, Dept. Santa Cruz; San Francisco, Dept. Tarija); western Paraguay (near Puerto Pinasco); and Brazil, Matto Grosso (Urucúm, near Corumbá).

The above specimens of *Serpophaga inornata* have been carefully compared with a series of *Serpophaga munda* and *subcristata*. Specimen No. 127853, Nov. 29, ♀ (= *S. inornata*), from Urucúm, Matto Grosso, when compared with specimen No. 127017, Nov. 17, ♀ (= *S. subcristata*) from Rio Negro, Paraguay, shows the following differences:

Serpophaga inornata superficially resembles *S. subcristata* but the pileum is less grayish without any trace of white or black; the back decidedly greenish; the axillaries, under wing-coverts and inner margin of remiges bright yellow; the bill much slenderer and more compressed. My birds from Urucúm agree in every particular with specimens from Buenavista, Bolivia, aside from certain slight variations due to seasonal difference.

Measurements of Specimens Examined

	SEX	WING	TAIL	CULMEN
Urucúm, near Corumbá	3 ♂	47	46	7.5
“ “ “	1 ♀	46	43	8.5
“ “ “	1 ?	46	43	8.5

This appears to be the first record of *Serpophaga inornata* from Matto Grosso. It is quite an extension of range for this rare species, new to Brazil.

This tiny flycatcher was not uncommon at points visited in the Paraguayan Chaco, and a fair series was collected at Urucúm. It was found in the semi-open country among the scattered trees or along the edges of heavily forested areas.

The series shows considerable variation in the amount of yellow on the lowerparts, and in the development and color of the crest, variations that are probably due to age and sex.

Above, cinereous usually with an olive wash that is most pronounced on the lower back and rump. Feathers of the crown elongated, forming a crest. Pileum less grayish without any trace of white or black. Sides of head grayish. A distinct whitish supraloral streak, extending, but less defined, over the eye and postocular spot. Lores dusky gray. Wings blackish; the coverts with whitish tips, forming two transverse bands; secondaries and primaries (basally) narrowly edged with whitish; tail dusky blackish, the outer webs of outer rectrices grayish or whitish. Beneath, ashy white with more or less yellowish tinge on lower breast, belly, and under wing-coverts.

In immature birds the feathers of the crown are not elongated and are uniform with the back. In a later plumage (probably that corresponding to either the post-juvinal or first-winter plumage) the crown-feathers are elongated with more or less well-defined dusky mesial streaks.

(2892) *Pipromorpha oleaginea oleaginea* (Lichtenstein)

Muscicapa oleaginea LICHTENSTEIN, 'Verz. Doubl. Berlin Mus.,' 1823, p. 55 (Bahia).

Mionectes oleagineus PELZELN, 'Orn. Bras.,' II, 1868, p. 104 (part; Engenho do Gama); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 112 (part; spec. v, Borba, Rio Madeira).

Mionectes oleaginus IHERING, 'Cat. F. Braz.,' I, 1907, p. 276 (Matto Grosso).
Rio Roosevelt, 6th of March Rapids, 1 ♀ ad.

RANGE.—Northern and central Brazil, south to Bahia and Matto Grosso (Rio Roosevelt; Engenho do Gama, Rio Guaporé); French, Dutch, and British Guiana; Venezuela; Bolivia (Rio Espirito Santo); etc.

Having recently examined a large number of specimens from various localities, including a series from Bahia, Dr. Hellmayr is unable to support the distinctness of *Pipromorpha oleaginea chloronota* as claimed by W. E. Clyde Todd,¹ in his 'Revision of the Genus *Pipromorpha*.'

¹Proc. Biol. Soc. Wash., XXXIV, 1921, pp. 173-192.

Measurements

	SEX	WING	TAIL	CULMEN
Mexiana Island, Fazenda Nazareth	♂	66	54.5	11.5
" " " "	♀	60	51	12
Calama, Rio Madeira	♀	61.5	53.5	10
Rio Roosevelt	♀	57.5	48.5	11.5

(2899) *Leptopogon amaurocephalus amaurocephalus* Tschudi

Leptopogon amaurocephalus (Cabanis MS.) TSCHUDI, 'Faun. Peru., Aves,' 1846, p. 162, footnote (São Paulo, Brazil); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 117 (part; Pernambuco, etc.); ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 334 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 277 (Matto Grosso).

Barão Melgaço, 1 ♂; collected by Leo Miller.

RANGE.—From Maranhão and Pernambuco south to Santa Catharina and Matto Grosso (Chapana, Urucúm, Barão Melgaço). Paraguay; northern Argentina (Chaco and Jujuy); and eastern Bolivia (Dept. Santa Cruz).

I note so much variation in this species that I feel sure there are some undescribed local races, but for lack of sufficient material I cannot come to any conclusions.

(2907) *Phyllomyias fasciatus virescens* (Allen)

Sublegatus virescens ALLEN, Bull. Amer. Mus. Nat. Hist., II, 1889, p. 149 (Chapada); idem, IV, 1892, p. 337 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 285 (Matto Grosso).

Phyllomyias brevirostris virescens HELLMAYR, Nov. Zoöl., XV, 1908, p. 42 (Goyaz). No specimens collected.

RANGE.—Interior of Brazil: Matto Grosso (Chapada) and Goyaz (Goyaz City, Jaraguá).

(2917) *Phæomyias murina murina* (Spix)

Platyrrhynchus murinus SPIX, 'Av. Bras.,' II, 1825, p. 14, Pl. xvi, fig. 2 (Brazil).

Myiopatis semifusca SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 123 (eastern Brazil); ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 334 (Chapada).

Phæomyias murina IHERING, 'Cat. F. Braz.,' I, 1907, p. 279 (Matto Grosso); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 57 (Caceres and Poconé, Matto Grosso).

RANGE.—Brazil, south of the Amazon, from Mexiana, Marajó and the banks of the Tapajóz down to São Paulo, Minas Geraes and Matto Grosso (Chapada, Agua Blanca de Corumbá, Caceres and Poconé), west through Paraguay to northern Argentina and southeastern Bolivia (San Francisco, Dept. Tarija).

(2926) *Camptostoma obsoletum cinerascens* (Wied)

Hylophilus cinerascens WIED, Beitr. Naturg. Bras., III, (2), 1831, p. 723 (Barra do Jucú, Rio Espirito Santo, Espirito Santo).

Myiopatis obsoleta (not of Temminck) PELZELN, 'Orn. Bras.,' II, 1868, p. 106 (part; Goyaz).

Ornithion cinerascens ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 334 (Chapada, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 280 (part; Salto do Paranapanema).

Ornithion obsoletum cinerascens HELLMAYR, Nov. Zoöl., XV, 1908, pp. 43-44 (Rio Thesouras, Goyaz); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 57 (Caceres and Poconé, Matto Grosso).

Urucúm, 1 ♂, 1 ♀; Belvedere de Urucúm, 1 ♀; Tapirapoan, 1 ♂.

RANGE.—Eastern and central Brazil, from Espirito Santo north to Piauhy and Maranhão, west through Minas Geraes and Goyaz to Matto Grosso (Urucúm Tapirapoan, Chapada, Caceres, Poconé), south to northern São Paulo, and eastern Bolivia (plains of Chiquitos).

Very similar to *C. o. obsoletum* but decidedly smaller and paler, especially above.

		Measurements			
	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Matto Grosso, Tapirapoan	1 ♂	55	44	8	A. M. N. H.
Brazil, Matto Grosso, Urucúm	1 ♂	53	44	8	"
Brazil, Belvedere de Urucúm	1 ♀	50	38	7.5	"
Brazil, Urucúm, near Corumbá	1 ♀	50	39	7.5	"
Brazil, Chapada	3 ♀	51.8	40.8	7.8	"
<i>Camptostoma obsoletum obsoletum</i>					
Paraguay, Fort Wheeler	1 ♂	57	46.5	8	"
" " "	1 ♂	57	50	7	"
" Puerto Pinasco	1 ♀	51	40	8	"

(2938) *Elænia flavogaster flavogaster* (Thunberg)

Pipra flavogaster THUNBERG, Mém. Acad. Sci. St. Pétersb., VIII, 1822, p. 286 (Brazil; =Rio de Janeiro (see Lönnberg, Ibis, 1903, p. 241).

Elænea pagana ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 335 (Chapada, Matto Grosso).

Elænia flavogaster MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 57 (Poconé, Caceres, Matto Grosso).

Elænea flavogastra IHERING, 'Cat. F. Braz.,' I, 1907, p. 281 (Matto Grosso).

Tapirapoan, 1 ♂.

RANGE.—Paraguay; eastern Bolivia; northern Argentina. Brazil: Matto Grosso (Chapada, Poconé, Caceres); São Paulo; Minas Geraes (Rio das Velhas); Rio de

Janeiro; Bahia (Santo Amaro, Rio Preto); extending north to Ceará, Maranhão, and Pará, on both sides of the Amazon west to the Tapajóz and Rio Branco. The Guianas; Venezuela; Colombia; islands of Trinidad and Tobago.

(2939) *Elænia spectabilis* Pelzeln

Elainea spectabilis PELZELN, 'Orn. Bras.,' II, 1868, pp. 107, 176 (Goyaz).

Elænea spectabilis IHERING, 'Cat. F. Braz.,' I, 1907, p. 282 (range).

Agua Blanca de Corumbá, 2 ♂.¹

RANGE.—Northern and central Brazil (Barcellos, Rio Negro; Calama, Rio Madeira); Matto Grosso (Agua Blanca de Corumbá); Goyaz (Araguayá = Leopoldina; Jaraguá; Maria Rosa, near Bomfim); São Paulo (Itapura, Rio Paraná); west to the Bolivian border (Puerto Suarez, Rio Paraguay); northern Argentina; northeastern Peru.

This bird agrees with the characters assigned to the species by Berlepsch and Leverkühn,² differing from the well-known *Elænia flavogaster* and its races by much larger size, larger and stronger bill and by having hardly any white at the extreme base of some of the crest-feathers.

Considering its distribution, *Elænia spectabilis* is evidently specifically distinct, since in Matto Grosso it appears to occur together with *Elænia flavogaster flavogaster*, though the two birds have not yet been found in exactly the same localities. *Elænia spectabilis* has been found by Natterer near the city of Goyaz, and another specimen was afterwards obtained by the same naturalist at Barcellos, on the Rio Negro. Professor Behn secured four specimens, one at Araguayá (= Leopoldina), and another at Goyaz, the third at Jaraguá (northeast of the city of Goyaz), and the fourth at Maria Rosa (south of Bomfim); all four places in the state of Goyaz.

The late W. Hoffmanns took two specimens at Calama on the Rio Madeira, and in the Museu Paulista there is an adult male from Itapura, northern São Paulo, near the junction of the Rio Tieté and Alto Paraná.³ No other Brazilian specimens are on record so far as I know.

Elænia flavogaster flavogaster, of wide distribution in eastern and northern South America, has been collected by H. H. Smith, in a large series on the plateau of Chapada; that is to say, between the previously known range of *E. spectabilis* and Corumbá, which is its most southerly Brazilian record. A specimen which we are unable to separate from *Elænia flavogaster flavogaster* was taken at Tapirapóan.

¹First record from Matto Grosso.

²Ornis, VI, 1890, p. 13.

³Specimen examined by Dr. Hellmayr.

Measurements of *E. spectabilis*

	SEX	WING	TAIL	CULMEN
Agua Blanca de Corumbá *	♂	86.5	80	12.5
" " " "	♂	88	75	12.5

Specimen No. 149619 has not a typical exaspidean tarsus, which is nearer the pycnaspidean type. The outer and inner edges of the acrotarsium do not meet at any point and, on the posterior face of the tarsus from heel to toe, there is a row of small tuberculate scutella. The more study one gives to the tarsal envelope of members of the Tyrannidæ, the more one is convinced that at least among the *Elæniæ* the great variation seen is not of more, and probably less, than generic value.

(2944) *Elænia cristata* Pelzeln

Elænia cristata PELZELN, 'Orn. Bras.,' II, 1868, pp. 107, 177 (Goyaz; types examined in Vienna Museum); BERLEPSCH AND LEVERKÜHN, Ornith., VI, 1890, p. 12 (Lavrinhas, Matto Grosso).

Elænia albiceps (not of d'Orbigny and Lafresnaye) SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 141 (part; spec. s, Goyaz).

Elænia cristata IHERING, 'Cat. F. Braz.,' I, 1907, p. 281 (Matto Grosso).

Primavera, 1 ♂; Juruena, 1 ♀.

RANGE.—Campos of Brazil, in states of Amazonas (Bôavista, Rio Branco), Pará (Monte Alegre, Boim, and Santarém, Rio Tapajóz), Maranhão, Piauhy (Santo Antonio de Gilboez), Bahia (Santo Amaro), Goyaz (City of Goyaz), Matto Grosso (Lavrinhas, Primavera, Juruena), and São Paulo (Franca). French and British Guiana, Venezuela, and eastern Peru.

(2947) *Elænia chiriquensis albivertex* Pelzeln

Elænia albivertex PELZELN, 'Orn. Bras.,' II, 1868, pp. 107, 177 (Ypanema, São Paulo, Goyaz, and Forte do Rio Branco).

Elænia pagana (not *Muscicapa pagana* Lichtenstein) ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 335 (part; Chapada, Matto Grosso).

Elænia albivertex IHERING, 'Cat. F. Braz.,' I, 1907, p. 283 (range).

Belvedere de Urucúm, 2 ♂, 3 ♀, 1 im.; Rio Juruena, 1 ♂.

RANGE.—Brazil, from the confines of Guiana south to Matto Grosso (Urucúm, Rio Juruena); São Paulo (Ypanema); Goyaz; Minas Geraes (Lagôa Santa); Bahia, northern Brazil (Forte do Rio Branco). Colombia; Venezuela; Island of Trinidad; eastern Bolivia; eastern Peru.

Just above Belvedere de Urucúm, there was a range of hills about 1200 feet altitude. The sides of this range of hills were heavily wooded, but the tops were grassy savannas almost devoid of trees. It was on these grassy hilltops, and here only that Mr. Cherrie found the white-crowned *Elænia*. The immature examples are probably in post-juvinal plumage.

(2948) *Elænia albiceps albiceps* (Lafresnaye and d'Orbigny)

Muscipeta albiceps LAFRESNAYE AND D'ORBIGNY, 'Syn. Av.,' I, in Mag. de Zool., VII, 1837, Cl. 2, p. 47 (part; Yungas, Bolivia).

Elænia albiceps IHERING, 'Cat. F. Braz.,' I, 1907, p. 283 (part; Matto Grosso); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 409 (Arumatheua, Rio Tocantins).

Elænea pagana albiceps ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 335 (part; Chapada).

Urucúm, 1 ♂.

RANGE.—Andes of Bolivia, in depts. of La Paz, Cochabamba, and Santa Cruz. In Brazil it is apparently of rare occurrence, but has been collected at such widely separated localities as Urucúm and Chapada, in Matto Grosso, in São Paulo (Ypanema) and at Arumatheua, on the Rio Tocantins¹; and in the Berlepsch collection there is a trade-skin from Bahia.

Elænia mesoleuca, of which I have seen a large series from Paraná and São Paulo (Curytiba, Ypanema—Vienna Museum), differs from *Elænia albiceps* in the decidedly clearer, greenish instead of dull brownish-olive upperparts, by having the pileum nearly concolor with the back, with very little or no white at all at the base of the crown-feathers, while *Elænia albiceps* has the crown-feathers conspicuously elongated so as to form a loose crest and extensively white in the middle, broadly margined laterally with dusky. The foreneck of *Elænia mesoleuca* is more suffused with greenish and the flanks and under tail-coverts are, as a rule, more decidedly yellowish.

Elænia mesoleuca is known only from Bahia to Rio Grande do Sul, it being particularly numerous in the states of Paraná and Rio Grande do Sul. One male has been recorded from Ocampo, Prov. of Santa Fé, Argentina.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Elainia albiceps albiceps</i>					
Brazil, Matto Grosso, Urucúm	1 ♂	71	61.5	10.5	A. M. N. H.
Brazil, Matto Grosso, Chapada	1 ♂	72	60	10	"
Brazil, São Paulo, Ypanema	1 ♀	72	61	10.5	Vienna Natterer Coll.
<i>Elænia mesoleuca</i>					
Paraná, Curytiba (white vertical spot)	9 ♂	70	65.8	10.5	Vienna Natterer Coll.

¹This specimen was examined by Dr. Hellmayr and recorded by Dr. Snethlage, J. f. O., 1908, p. 527.

(2955) *Elænia parvirostris* Pelzeln

Elænia parvirostris PELZELN, 'Orn. Bras.,' II, 1868, pp. 107, 178 (descr. spec. ex Curytiba [Paraná], Borba [Rio Madeira], Barcellos; type select. ♂, Curytiba, in Vienna Museum).

Elænia albiceps (not of Lafresnaye and d'Orbigny) BERLEPSCH AND IHERING, Zeits. ges. Orn., II, 1885, p. 133 (Taquara do Mundo Novo, Rio Grande do Sul); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 141 (Rio Grande do Sul).

Elænia albiceps parvirostris HELLMAYR, Nov. Zoöl., XIV, 1907, p. 47 (Teffé, Rio Solimões).

Elænia parvirostris HELLMAYR, Nov. Zoöl., XVII, 1910, p. 294 (Maroins, Rio Machados); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 409 (Argentina to Colombia).

Carapana, lower Rio Roosevelt, 1 ♀.

RANGE.—Brazil, from Rio Grande do Sul north to Amazonia (Rio Madeira, Teffé, lower Rio Roosevelt, Rio Negro, Borba, Barcellos). Eastern Bolivia (Depts. Santa Cruz and Tarija); Paraguay; Uruguay; Argentina; eastern Peru; Venezuela.

(2960) *Elænia gaimardii gaimardii* (d'Orbigny)

Muscicapara gaimardii D'ORBIGNY, 'Voy. Amér. Mérid.,' Ois., 1839, p. 326 (type ex Yuracares, Bolivia, in Mus. Paris).

Muscicapa albicilla LAFRESNAYE AND D'ORBIGNY (not of Pallas, 1826), 'Syn. Av.,' I, in Mag. de Zool., VII, 1837, Cl. 2, p. 52 (descr. spec. ex Yuracares, Bolivia).

Elænia elegans PELZELN, 'Orn. Bras.,' II, 1868, pp. 107, 179 (descr. spec. ex Engenho do Gama, Rio Guaporé, Matto Grosso; type).

Elænia gaimardi SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 150 (part; Borba, Brazil).

Elænia gaimardi ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 336 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 283 (Matto Grosso); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 410 (Rio Tocantins, Rio Xingú, Rio Iriri, Rio Tapajóz, Rio Jamauchim).

Uturity, 1 ♂ (?).

RANGE.—Brazil: Amazonian forest region, from the upper Rio Negro (Marabitanas) south to Bolivia (Yuracares) and Matto Grosso (Engenho do Gama, Rio Guaporé; Chapada, Uturity) and northern São Paulo (Ituverava, Rio Paraná), east to the left bank of the Tocantins. Venezuela; Peru.

Uturity was the only point where this species was collected or observed.

(2963) *Elænia caniceps caniceps* (Swainson)

Tyrannula caniceps SWAINSON, 'Ornith. Draw.,' part 5, Pl. XLIX, before Dec., 1837 (Brazil).

Serpophaga albogrisea (not of Sclater and Salvin) ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 333 (part; adult males; Abrilongo and Chapada, Matto Grosso).

No specimens collected.

RANGE.—Eastern and central Brazil, from Maranhão and Piauhý south through Bahia, Minas Geraes, and Matto Grosso (Abrilongo, Chapada) to Rio de Janeiro and São Paulo. Paraguay; northern Argentina (Prov. Jujuy).

(2965) *Elænia viridicata viridicata* (Vieillot)

Sylvia viridicata VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XI, 1817, p. 171 (based on Azara, No. 156; Paraguay).

Elænea implacens (not of Selater) PELZELN, 'Orn. Bras.,' II, 1868, p. 108 (part; Ypanema, São Paulo).

Elænea viridicata ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 336 (Chapada, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 282 (Bebedouro, Rio Tieté, São Paulo); CHUBB, Ibis, 1910, p. 584 (Sapucay, Paraguay).

Elænea viridicata delicata BERLEPSCH, Ornith., XIV, 1907, p. 430 (part; type from Bahia).

Myiopagis viridicata rondoni CHERRIE, Bull. Amer. Mus. Nat. Hist., XXXV, 1916, p. 188 (Urucúm, near Corumbá, Matto Grosso).

Elænea grata CABANIS, Journ. f. Orn., XXXI, 1883, p. 216 (Biscacheral, Tucumán).

Paraguay: Trinidad, 2 ♂, 1 ♀; Rio Negro, 2 ♂. Matto Grosso: Urucúm, 1 ♂, 2 ♀; Descalvados, 1 ♀.

RANGE.—Brazil, from São Paulo (Ypanema, Bebedouro) and Matto Grosso (Chapada, Urucúm, near Corumbá) north to Piauhý (Parnaguá) and Grão Pará (Boim, Rio Tapajóz). Eastern Bolivia (Chiquitos, Santa Cruz); Paraguay (Trinidad, Rio Negro, Sapucay, Alto Paraná); northern Argentina (Tucumán); southeastern Peru.

"The specimens are all in new plumage and the condition of the sexual organs indicates that the breeding season was at hand." An adult male, taken November 8 (No. 127023) is olive-green above, the upper tail-coverts, lesser wing-coverts and outer edges to wing and tail-quills uniform with the back; the rectrices are dusky brown; the wing-quills darker; the pileum is darker than the back, being a dusky olive with a partially concealed crown-patch of pale light cadmium; a not prominent grayish white superciliary stripe extending from the bill to just back of the eye; a dusky spot at anterior angle of the eye; auricular region dusky grayish with olive wash, and with narrow grayish-white shaft-lines; an ill-defined dusky grayish postocular streak; chin and throat gray, the color deepening on the chest where it is heavily washed with olive-green; remainder of underparts nearly a citron-yellow. There is little color variation in the nine specimens; two, however, have the pileum uniform with remaining upperparts entirely lacking the yellow crown-spot.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Argentina, Salta, Embarca- ción, 2 ♂; Perico, Prov.					
Jujuy, 1 ♂	3 ♂	65.1	63.1	9.1	A. M. N. H.
Paraguay, Rio Negro	3 ♂	64.6	62.5	10.3	"
Bahia, Porto da Pedra, Rio Preto	♂	64	58.5	9.5	Vienna
Bahia, opposite Catinho, Rio Preto	♂	65	61	8.5	"
Piauhy, Parnaguá	♂	62	55.5	10	"
Matto Grosso, Urucúm (type of <i>M. v. rondoni</i> , No. 127860)	♂	66.5	62	10.5	A. M. N. H.
Bahia, Santa Rita on the Rio Preto	♀	62	57	10	Vienna
Bahia, opposite Catinho, Rio Preto	♀	58.5	55	10.5	"
Piauhy, Parnaguá	♀	57	52	9	"

(2975) *Suiriri affinis affinis* (Burmeister)

Elænea affinis BURMEISTER, 'Syst. Über. Th. Bras.,' II, 1856, p. 477 (Lagôa Santa, Minas Geraes); ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 336 (Chapada, Matto Grosso).

Elainea affinis PELZELN, 'Orn. Bras.,' II, 1868, p. 108.

Empidagra affinis IHERING, 'Cat. F. Braz.,' I, 1907, p. 284 (Matto Grosso).

Suiriri affinis SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 406 (Serra de Ereré, near Monte Alegre).

Rio do Color, 1 ♂, 1 ♀.

RANGE.—Campos of Brazil, from Matto Grosso (Rio do Color, Chapada), Paraná, northern São Paulo (headwaters of the Paraná), and Minas Geraes through Goyaz and northwestern Bahia (Rio Grande and Rio Preto) north to Piauhy, Maranhão, and Grão Pará (Serra de Ereré, near Monte Alegre, north bank of Lower Amazon).

(2977) *Legatus leucophaius leucophaius* (Vieillot)¹

Platyrhynchos leucophaius VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXVII, 1818, p. 11 (l'Amérique méridionale; cf. PUCHERAN, Arch. Mus. Paris, VII, 1855, p. 358; type-locality, Cayenne).

Legatus albicollis PELZELN, 'Orn. Bras.,' II, 1868, p. 108 (Barra do Rio Negro, Curytiba, Ypanema, Brazil); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 155 (part; Brazil, Cayenne); ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 336 (Chapada, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 284 (Matto Grosso).

Urucúm, 2 ♂, 2 ♀; Descalvados, 1 ♀; Rio Cuyabá, 1 ♂; Tapirapoan, 1 ♂, 1 ♀.

RANGE.—South America, from northern Argentina, Paraguay, Bolivia, and

¹Verh. Orn. Ges. Bay., XIV, Heft 4, 1920. *Miscellanea Ornithologica*, p. 283—*Legatus albicollis successor* CHUBB, Bull. B. O. C., XL, Dec., 1919, p. 43 (Brit. Guiana, Surinam, Cayenne) is a pure synonym

Brazil (São Paulo, Bahia, Pará, Barra do Rio Negro), Matto Grosso (Chapada, Urucúm, Descalvados, Rio Cuyabá, Tapirapoan), to Trinidad, Venezuela, Colombia, and Guiana.

At Fazenda do São João on the Rio Cuyabá, December 29, a nest and two fresh eggs were collected together with one of the parent birds. In color the eggs correspond almost exactly to the Saccardo's umber of Ridgway's 'Color Standard'; in addition, the entire surface is marked by irregular lines and scratches of darker shades of brown. The general direction of the lines is transverse instead of in the direction of the long axis. They are rather short ovate in form and measure 21.5×16.5 mm. and 21.4×16 mm., respectively. The nest was an old long-abandoned one of some cacique, probably that of *Archiplanus solitarius*, into which had been introduced a few small dry leaves.

The little white-necked flycatcher is very secretive about its home, and while Mr. Cherrie found several nests and eggs during his work in the Orinoco region of Venezuela, and has watched the birds for hours, he has never been fortunate enough to see them carrying nesting material; and he has actually doubted his own observations, until he secured from the oviduct of a breeding female an egg that confirmed these observations.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Bolivia, Vermejo, Prov. Santa Cruz	1 ♂	83	59	12	A. M. N. H.
Brazil, Matto Grosso, Chapada, 1 ♂; Urucúm, 2 ♂; Tapirapoan, 1 ♂; Rio Cuyabá, 1 ♂	5 ♂	82.3	59.5	10.8	"
Brazil, Matto Grosso, Urucúm, 2 ♀; Descalvados, 1 ♀; Tapirapoan, 1 ♀	4 ♀	77.1	57.6	10.5	"
Brazil, Rio de Janeiro	1 ♂	84	59	11	"
Argentina, St. Ana, Misiones	1 ♂	85	62.5	12	"
Ecuador, Prov. de Loja, Zamora, ¹	♂	92.5	64	13	"
Brazil, Santarém	?	73	51.5	10(juv.)	"
" Utinga, near Pará	♂	80.5	58	11.5	"
" S. Natal, Marajó	♂	80	57.5	10	"
Venezuela, Cumanacoa, Sucre	♂	79	55.5	10	"
Venezuela, Sacupana	♀	79	60	12	"

¹The male from Zamora is exceptionally large in the measurement of the wing; however, two other males from the same locality measure, wing, 78 to 84 mm.

Average Measurements (Continued)

	SEX	WING	TAIL	CULMEN	MUSEUM
Trinidad, Caparo	♂	85.5	62.5	11	"
Colombia, Cauca, Los Cisneros	♂	84.5	59.5	11	"
Colombia, San Antonio	♀	76.5	58	11.5	"
" Las Lomitas	♀	79.5	61	12	"

(2979) *Sublegatus modestus modestus* (Wied)

Muscipeta modesta WIED, 'Beitr. Naturg. Bras.,' III (2), 1831, p. 923 (Camamá and Bahia, Brazil).

Sublegatus platyrhynchus BERLEPSCH AND LEVERKÜHN, Orn., VI, 1890, p. 14 (Cuyabá and Jatubá, Matto Grosso).

Sublegatus griseocularis ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 336 (Chapada).

Serpophaga albogrisea ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 333 (part; juv. in first plumage; Chapada).

Sublegatus fasciatus IHERING, 'Cat. F. Braz.,' I, 1907, p. 284 (Matto Grosso); MÉNÉGAUX, Rev. Franç. d'Orn., V, 1917, p. 58 (Caceres).

Sublegatus modestus modestus HELLMAYR, Field Mus. Nat. Hist., Zoöl. Ser., XIII, part 5, 1927, p. 445 (Piraputanga, Matto Grosso).

No specimens collected.

RANGE.—Brazil, from the interior of Maranhão and Piauí through Bahia, Goyaz, and Minas Geraes, south to northern São Paulo (Itapura) and Matto Grosso (Chapada, Cuyabá, Jatubá, Caceres, Piraputanga). Eastern Bolivia; northern Argentina; Paraguay; southern Peru.

(2981) *Myiozetetes cayanensis cayanensis* (Linnæus)

Muscicapa cayanensis LINNÆUS, 'Syst. Nat.,' I, 12th Ed., 1766, p. 327 (based on *Muscicapa cayanensis* Brisson, 'Orn.,' II, 1760, p. 404, Pl. xxxviii, fig. 4; Cayenne).

Myiozetetes cayanensis HELLMAYR, Nov. Zoöl., XII, 1905, p. 293 (Igarapé-assú, Pará, Brazil); IHERING, 'Cat. F. Braz.,' I, 1907, p. 285 (Matto Grosso).

Myiozetetes cayennensis PELZELN, 'Orn. Bras.,' II, 1868, p. 109 (Engenho do Gama, Matto Grosso); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 160 (part; Pará, lower Amazon); ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 337 (Chapada).

Descalvados, 1 ♂; Fazenda do São João, 1 ♂; Tapirapoan, 2 ♂, 1 ♀.

RANGE.—French, Dutch, and British Guiana; northern Brazil, from the confines of Guiana south to Maranhão; entire Amazon valley to Bolivia (Rio Blanco, Rio Itonama) and southwestern Brazil, Matto Grosso (Chapada, Engenho do Gama, Tapirapoan, Fazenda do São João, Descalvados); Goyaz (Rio Araguaya) and western Minas Geraes (Rio Jordão, Araguary).

At Tapirapoan, immature birds were taken during January in post-juvénal plumage.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
French Guiana, Cayenne	3 ♂	82.6	68	10.3	A. M. N. H.
British Guiana, Tumatumari, 3 ♂; Minnehaha Creek, 1 ♂	4 ♂	87	71	13.7	"
Brazil, Matto Grosso, Chapada, 2 ♂; Descalvados, 1 ♂; Fazenda do São João, 1 ♂; Tapirapoan, 2 ♂	6 ♂	91.7	76.3	14.1	"
Brazil, Matto Grosso, Tapirapoan	1 ♀	86	74	13	"
Brazil, Matto Grosso, Chapada	1 ♀	91	76.5	15	"
North Brazil, Ipitinga, Rio Acará	1 ♂	87	75	13	Munich
North Brazil, Mexiana Island (Fazenda Nazareth)	1 ♀	83.5	75	14	"

(2995) *Pitangus sulphuratus maximiliani* (Cabanis and Heine)

Figures 34 and 35

Saurophagus maximiliani CABANIS AND HEINE, 'Mus. Hein.,' II, 1859, p. 63 ("Brasilien" = Bahia); CABANIS, Journ. f. Orn., XXII, 1874, p. 88 (Cantagallo).

Pitangus maximiliani PELZELN, 'Orn. Bras.,' II, 1868, p. 111 (Cuyabá, Engenho do Gama).

Pitangus sulphuratus bolivianus (not of Lafresnaye) ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 337; IHERING, 'Cat. F. Braz.,' I, 1907, p. 287 (Matto Grosso).

Paraguay: Trinidad, 2 ♂, 1 ♀; Puerto Pinasco, 1 ♂, 1 ♂(?). Matto Grosso: Descalvados, 1 ♂; Agua Blanca de Corumbá, 1 ♂, 1 ♀; Palmiras, 1 ♂; Rio São Lourenço, 1 ♀.

RANGE.—Eastern and central Brazil, from Maranhão and Piahy south to Rio Grande do Sul; west to Minas Geraes, Goyaz, and Matto Grosso (Cuyabá, Abrilongo, Descalvados, Agua Blanca de Corumbá; Palmiras, Rio São Lourenço). Paraguay (Trinidad, Puerto Pinasco); eastern Bolivia (Todos Santos; Trinidad, Rio Mamoré).

Birds from Matto Grosso and Paraguay are apparently referable to *Pitangus sulphuratus maximiliani*. They average the same size as specimens from Bahia, Ypiranga (São Paulo) and La Raiz, Organ Mountains. A series from the highlands of Bolivia are much larger in size; a male from the Rio Pilcomayo, Sucre, which is essentially topotypical, measures: wing, 134; tail, 101.5; culmen, 28.5 mm.; while the largest male from Matto Grosso (Chapada) measures: wing, 118; tail, 69; culmen, 25.5 mm. Dr. Hellmayr has misidentified the specimens from Goyaz, which he mentions under the name of *Pitangus sulphuratus bolivianus*, and he now agrees with me that they are referable to *Pitangus sulphuratus maximiliani* to which apparently all specimens from Brazil belong. Specimens from southern Brazil are intergrades between this form and *P. s. bolivianus*.

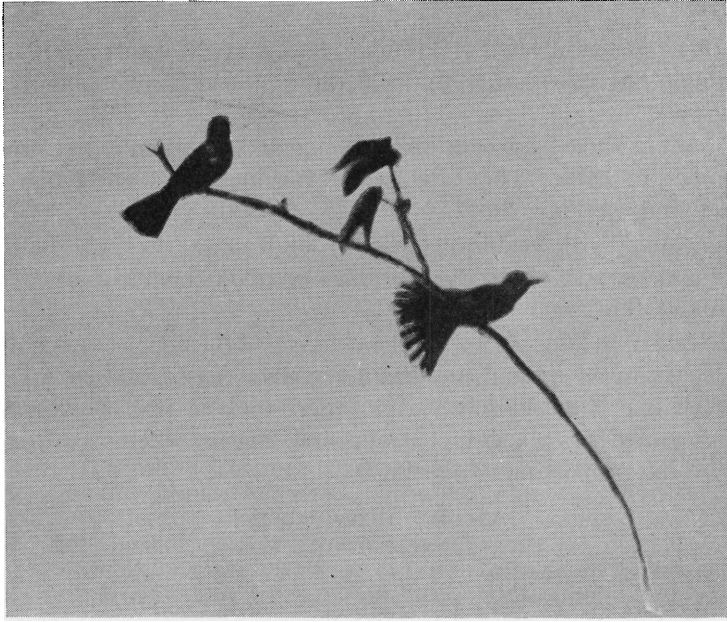


Fig. 34. *Pitangus sulphuratus maximiliani* (Cabanis and Heine),
Agua Blanca de Corumbá, Matto Grosso, Brazil.



Fig. 35. *Pitangus sulphuratus maximiliani* (Cabanis and Heine).
Agua Blanca de Corumbá, Matto Grosso, Brazil.

"The female collected at Trinidad, Paraguay, November 9, 1913, was brooding. She was seen to fly from the nest which resembles those of *Myiozetetes*.

"A set of three fresh eggs was collected at Agua Blanca de Corumbá, November 6, 1916. They are ovate, varying but slightly one from another and measure 20×27.5 , 20×27 , and 20×28.5 mm. They are cream-colored with seal-brown specks and spots that overlie other specks and spots of drab, the markings grouped chiefly in an irregular zone about the larger end.

"Nests were found in low, leafless bushes on the open campo not over three feet from the ground, and again in trees at least forty feet up. The nest itself is a large, loosely woven ragged-looking ball of plant fibers and soft grasses with a large entrance-hole on one side away from the center of the supporting tree or bush."

Average Measurements						
	SEX	WING	TAIL	CULMEN	MUSEUM	
<i>Pitangus sulphuratus maximiliani</i>						
Bolivia, Todos Santos, 1 ♂;						
Trinidad, Río Mamoré, 2 ♂						
3 ♂	115.6	88	28.6	A. M. N. H.		
Brazil, Bahia, 3 ♂; La Raiz,						
Organ Mts., 1 ♂						
4 ♂	115.3	85.8	25.7	"		
Paraguay, Puerto Pinasco, 2						
♂; Trinidad, 2 ♂						
4 ♂	122	93.1	29.1	"		
Paraguay, Trinidad						
1 ♀	110	85.5	25	"		
Brazil, Matto Grosso, Chapa-						
da, 1 ♂; Descalvados, 1 ♂;						
Agua Blanca de Corumbá,						
1 ♂; Palmiras, 1 ♂						
4 ♂	116.8	88.2	27.5	A. M. N. H.		
Brazil, Matto Grosso, Agua						
Blanca de Corumbá						
1 ♀	110	84.5	27	"		
Brazil, Matto Grosso, Rio São						
Lourenço						
1 ♀	114	89	26.5	"		
<i>Pitangus sulphuratus bolivianus</i>						
Bolivia, Tujma, 2 ♂; Vinto,						
Dept. Cochabamba, 1 ♂;						
Río Pilcomayo, 1 ♂						
4 ♂	133.5	101.1	30.2	"		
Bolivia, Dept. Cochabamba,						
Parotani, 1 ♀; Vinto, 1 ♀;						
Tarata, 1 ♀; Río Cachi-						
mayo, near Sucre, 1 ♀;						
Misque, 1 ♀; Chilon, Dept.						
Santa Cruz, 1 ♀						
6 ♀	125.2	96.5	28.9	"		
Argentina, Barracas al Sur, 1						
♂; Morón, 1 ♂; Buenos						
Aires, 1 ♂; Mendoza, 1 ♂						
4 ♂	119.2	81.8	27.8	"		
Argentina, Mendoza						
1 ♀	119	90	28	"		

(2996) *Pitangus lictor lictor* (Lichtenstein)

Lanius lictor LICHTENSTEIN, 'Verz. Doubl. Berlin Mus.,' 1823, p. 49 (Pará, Brazil; Coll. Berlin Mus.).

Pitangus lictor PELZELN, 'Orn. Bras.,' II, 1868, p. 111 (Engenho do Gama, on the banks of the Rio Guaporé, Poruti, and Villa Bella, Matto Grosso); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 178 (part; Matto Grosso, Bahia, Pará, and Mexiana Island, Brazil); IHERING, 'Cat. F. Braz.,' I, 1907, p. 287 (Matto Grosso).

No specimens collected.

RANGE.—Brazil, south to Rio de Janeiro and Matto Grosso (Villa Bella, Engenho do Gama, Poruti). Eastern Ecuador and eastern Peru; British, Dutch, and French Guianas; Venezuela; and eastern Colombia.

(3000) *Sirystes sibilator atimastus* Oberholser

Sirystes sibilator atimastus OBERHOLSER, Proc. U. S. Nat. Mus., XXV, No. 1276, 1902, p. 66 (Chapada, Matto Grosso, S. W. Brazil); HELLMAYR, Nov. Zoöl., XV, 1908, p. 50 (Chapada, Brazil; diag.).

Sirystes sibilator (not of Vieillot) ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 338 (Chapada).

Sirystes albocinereus atimastus BERLEPSCH, Proc. Fourth Int. Ornith. Congr. 1905, p. 475 (no locality given).

Sirystes sibilator IHERING, 'Cat. F. Braz.,' I, 1907, p. 287 (part; Matto Grosso). No specimens collected.

RANGE.—Southwestern Brazil, in state of Matto Grosso (Chapada). Endemic.

(3004) *Myiodynastes solitarius* (Vieillot)

Tyrannus solitarius VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXXV, 1819, p. 88 (Paraguay; based on *Suiriri chorreado todo* Azara, 'Apunt. Parag.,' II, 145, No. 196).

Myiodynastes solitarius ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 338 (Chapada, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 288 (Matto Grosso); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 58 (Corumbá, Matto Grosso).

Urucúm, 2 ♂, 1 ♀.

RANGE.—The whole of Brazil, Matto Grosso (Chapada, Urucúm, Corumbá); Paraguay (near Villa Pilar); Argentina; Uruguay; eastern Bolivia; Peru; eastern Ecuador (Sarayacu); French and British Guiana.

An immature bird was collected December 1.

(3006) *Megarynchus pitangua pitangua* (Linnæus)

Lanius pitangua LINNÆUS, 'Syst. Nat.,' I, 12th Ed., 1766, p. 136 (based on Brisson [ex Marcgrave], eastern Brazil).

Megarynchus pitangua PELZELN, 'Orn. Bras.,' II, 1868, p. 112 (Cuyabá, Matto Grosso); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 189 (part; Brazil); ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 338 (Chapada, Matto Grosso); SALVADORI, Boll. Mus. Torino, XV, No. 378, p. 6 (Urucúm); IHERING, 'Cat. F. Braz.,' I, 1907, p. 288 (Matto Grosso); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 58 (Caceres, Matto Grosso).

Urucúm, 3 ♂, 1 ♀; Descalvados, 1 ♀; Tapirapoan, 1 ♂.

RANGE.—Brazil, south to Paraná and Matto Grosso (Chapada, Cuyabá, Urucúm, Caceres, Descalvados, Tapirapoan). Paraguay; northeastern Argentina (Misiones); Bolivia; eastern Peru; Colombia; Venezuela; Trinidad; British, Dutch, and French Guianas.

A young male taken at Urucúm is in first plumage.

(3014) *Hirundinea bellicosa bellicosa* (Vieillot)

Tyrannus bellicosus VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXXV, 1819, p. 74 (based on Azara, No. 189, Paraguay).

Hirundinea rupestris PELZELN, 'Orn. Bras.,' II, 1868, p. 113 (Marambaya, Ypanema, etc.).

Hirundinea bellicosa SCLATER, 'Cat. B. Brit. Mus.,' IV, 1888, p. 196 (part; Pernambuco, Bahia, Brazil); ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 338 (Chapada, Matto Grosso); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 7 (Urucúm); IHERING, 'Cat. F. Braz.,' I, 1907, p. 289 (Matto Grosso).

Belvedere de Urucúm, 1 ♂, 1 ♀; fresh birds have the eye, bill, and feet blackish.

RANGE.—Brazil, from Maranhão, Piauhy and Ceará south to Rio Grande do Sul, west to Matto Grosso (Chapada, Urucúm). Paraguay; northeastern Argentina (Misiones).

The actions of this species reminded one strongly of the common *Sayornis*. I have seen no specimens from Paraguay, but Dr. Hellmayr says that he found one from Colonia Risso, Rio Apa, Paraguay, to agree with specimens from Chapada, Minas Geraes, and other Brazilian localities.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Matto Grosso, Belvedere de Urucúm, 1 ♂;					
Chapada, 3 ♂	4 ♂	109	72.6 ¹	16.3	A. M. N. H.
Brazil, Monte Serrat, Serra do Itatiaia	1 ♂	112.5	74.5	17	"
Brazil, Monte Serrat, Serra do Itatiaia	1 ♂	113.5	77.5	14.5	"
Brazil, Minas Geraes, Agua Suja	1 ♂	104	75	16	Munich
Brazil, Minas Geraes, Agua Suja	1 ♂	100	79.5	16	"
Brazil, Matto Grosso, Belvedere de Urucúm	1 ♀	107.5	'	17	A. M. N. H.
Brazil, Matto Grosso, Chapada	1 ♀	110	75.5	15	"
Brazil, Rio Grande do Sul, Linha Pirajá	1 ♀	107.5	72	14.5	"

¹Tail moulting; only 3 tails measured.

(3019) *Myiobius barbatus mastacalis* (Wied)

Muscicapa mastacalis WIED, 'Reise Bras.,' II, 1821, p. 151 (Rio Catolé, tributary of the Rio Pardo, s. Bahia; orig. descr., types now in coll. Amer. Mus. Nat. Hist.).

Muscipeta barbata (not *Muscicapa barbata* Gmelin) SWAINSON, Zoöl. Illustr., II, 1822, Pl. CXVI (Pitanga, about 20 leagues west of Bahia, Brazil; descr., crit.).

Myiobius xanthopygius PELZELN, 'Orn. Bras.,' II, 1868, p. 113 (part; Registo do Sai, Brazil).

Myiobius barbatus SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 199 (part; Bahia, Brazil).

Myiobius barbatus mastacalis HELLMAYR, Abhandl. 2. Kl. Bayr. Wiss., XXII, No. 3, 1906, pp. 641, 642 (Bahia to Rio de Janeiro); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 391 (part; Rio Tocantins, Rio Xingú, Rio Tapajóz).

Myiobius mastacalis TODD, Proc. Biol. Soc. Wash., XXXV, 1922, p. 20 (Brazil, from the Amazon and Rio Madeira south to São Paulo and east to Bahia).

Barão Melgaço, 1 ♀ (Leo E. Miller, Coll.); Rio Roosevelt, Broken Canoe Rapids, 1 ♂.

RANGE.—Brazil, south of the Amazon, west to Rio Madeira, south to Matto Grosso (headwaters of the Rio Roosevelt), and through Pará, Bahia, and Goyaz, along the east coast south to the littoral of São Paulo (Iguapé, Ubatuba).

(3025) *Terenotriccus erythrurus hellmayri* (Snethlage)

Myiobius erythrurus hellmayri SNETHLAGE, Ornith. Monatsb., XV, 1907, p. 195 (Pará; type).

Myiobius erythrurus PELZELN, 'Orn. Bras.,' II, 1868, p. 114 (part; Borba, Rio Madeira and Engenho do Gama, Matto Grosso).

Myiobius erythrurus fulvicularis (not of Salvin and Godman) HELLMAYR, Nov. Zoöl., XVII, 1910, p. 300 (Calama and Maroins, Rio Madeira).

Terenotriccus erythrurus SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914 p. 392 (part; Pará, Moca jatuba, Rio Tocantins, Rio Jamauchim, Rio Tapajóz).

Rio Roosevelt, Camp 9, 1 ♂.

RANGE.—Northern Brazil, south of the Amazon, from northern Maranhão west to the Rio Madeira, south to Matto Grosso (Rio Roosevelt and Engenho do Gama, Rio Guaporé).

(3040a) *Myiophobus fasciatus flammiceps* (Temminck)

Muscicapa flammiceps TEMMINCK, 'Nouv. Rec. Pl. Col.,' livr. 24, 1822, Pl. CXLIV, fig. 3 (Brazil; the description was doubtless based upon specimens procured by J. Natterer in the vicinity of Rio de Janeiro, S. E. Brazil; Dr. Hellmayr suggests Rio de Janeiro).

Myiobius nævius PELZELN, 'Orn. Bras.,' II, 1868, p. 114 (Cuyabá); ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 340 (Abrilongo, Chapada, Matto Grosso); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 7 (Urucim, Matto Grosso).

Myiobius fasciatus IHERING, 'Cat. F. Braz.,' I, 1907, p. 290 (Matto Grosso); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 58 (part; Poconé, Matto Grosso).

No specimens collected.

RANGE.—Brazil, north to Pará and Mexiana Island, south to Rio Grande do Sul, west to Matto Grosso (Chapada, Cuyabá, Urucúm, Abrilongo). Uruguay; Paraguay; Bolivia; northern Argentina.

(3044) **Pyrocephalus rubinus rubinus** (Boddaert)

Muscicapa rubinus BODDAERT, 'Tabl. Pl. Enl.,' 1783, p. 42 (based on Daubenton, 'Pl. Enl.,' 675, fig. 2, and Buffon, "Le Rubin de la rivière des Amazones").

Pyrocephalus rubineus PELZELN, 'Orn. Bras.,' II, 1868, p. 114 [Cuyabá, Engenho do Gama and (Villa Bella de) Matto Grosso]; ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 338 (Chapada; plumages); SALVADORI, Boll. Mus. Torino, X, No. 208, 1895, p. 11 (Corumbá); idem, XV, No. 378, 1900, p. 7 (Urucúm, Carandasinho); IHERING, 'Cat. F. Braz.,' I, 1907, p. 291 (Matto Grosso); MÉNÉGAUX, Rev. Franc. d'Orn., V, 1917, p. 58 (Caceres, Poconé).

No specimens collected.

RANGE.—Brazil, from the Amazon south to Rio Grande do Sul and Matto Grosso (Cuyabá, Chapada, Corumbá, Urucúm, Caceres, Poconé, Engenho do Gama, Carandasinho, Villa Bella). Argentina; eastern Bolivia; northeastern Peru; north to eastern Colombia.

(3049) **Cnemotriccus fuscatus bimaculatus** (Lafresnaye and d'Orbigny)

Muscipeta bimaculata LAFRESNAYE AND D'ORBIGNY, 'Syn. Av.,' I, in Mag. de Zool., VII, 1837, Cl. 2, p. 48 (Yungas, Bolivia; type in Paris Museum).

Empidochanes fuscatus (not of Wied) ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 340 (Chapada, Matto Grosso).

Empidochanes fringillaris PELZELN, 'Orn. Bras.,' II, 1868, p. 116 (part; Rio Paraná; Goyaz; Cuyabá); GRANT, Ibis, 1911, p. 122 (Pan de Azucar, Brazil).

Empidonax bimaculatus SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 7 (Urucúm, Matto Grosso).

Empidonax fuscatus bimaculatus MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 58 (Caceres).

Paraguay: Fort Wheeler, 1 ♀. Matto Grosso: Agua Blanca de Corumbá, 1 ♂; Urucúm, 3 ♂, 1 ♀; Descalvados, 1 ♂; Rio São Lourenço, 1 ♀.

RANGE.—Brazil (except wooded coastal belt from Bahia to Santa Catharina), from northern São Paulo, western Minas Geraes, and Matto Grosso (Chapada, Urucúm, Cuyabá, Caceres) north to Ceará, Maranhão, and the south bank of the Amazon (Rio Tapajóz, Rio Madeira). Eastern Bolivia; Paraguay; Argentina.

"This was a common bird in the forest region. Usually seen in the darkest parts of the woods where they live among the tangled mass of low trees and shrubs. They are quiet and retiring in disposition, quite as much so as in dress."

(3060) **Empidonax euleri euleri** (Cabanis)

Empidochanes euleri CABANIS, Journ. f. Ornith., XVI, 1868, p. 195 (Cantagallo, Rio de Janeiro; type in Berlin Museum).

Empidochanes fuscatus (not of Wied) PELZELN, 'Orn. Bras.,' II, 1868, p. 115 (part; Rio de Janeiro, Ypanema, Curytiba, etc.).

Empidonax bimaculatus (not *Muscipeta bimaculata* Lafresnaye and d'Orbigny), ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 341 (Chapada, Matto Grosso).

Empidonax eulerei IHERING, 'Cat. F. Braz.,' I, 1907, p. 292 (Matto Grosso).

Descalvados, 3 ♀; Rio São Lourenço, 1 ♂.

RANGE.—Brazil, from the Rio Negro (Rio Içanna) and lower Amazon (Rio Tocantins, Rio Madeira) south to Matto Grosso (Descalvados, Rio São Lourenço, Chapada) and Rio Grande do Sul. Uruguay; Paraguay (Sapucay), east of the Paraná; northeastern Argentina (Misiones); northern Peru (Pebas, Huambo, Yurimaguas).

(3076a) *Myiochanes cinereus pallescens* Hellmayr

Myiochanes cinereus pallescens HELLMAYR, Field Mus. Nat. Hist., Zoöl. Ser., XIII, part 5, 1927, p. 194 (São Marcello, Rio Preto, State of Bahia, Brazil).

No specimens collected.

RANGE.—Interior of Brazil, in states of Maranhão (Ponto, Canella), Piauhy (below Queimadas, Rio Parnahyba), Pernambuco, Bahia (Rio Preto), and Matto Grosso (Piraputanga), south to northern Paraguay (Colonia Risso); northern Argentina (Prov. Tucumán, Salta, and Jujuy).

(3084) *Myiarchus tyrannulus chlorepsciscus* Berlepsch and Leverkühn

Myiarchus tyrannulus chlorepsciscus BERLEPSCH AND LEVERKÜHN, Orn. VI, 1890, p. 16 (Cuyabá, Matto Grosso).

Myiarchus tyrannulus (not *Muscicapa tyrannulus* Müller) SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 251 (part; spec. w, Engenho do Gama); ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 342 (Chapada); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 7 (Urucúm); GRANT, Ibis, 1911, p. 122 (Puerto Asir, Paraguay; Pan de Azucar, Matto Grosso, Brazil).

Myiarchus ferox (not of Gmelin) PELZELN, 'Orn. Bras.,' II, 1868, p. 116 (part; Engenho do Cap. Gama, Matto Grosso).

Blacicus tyrannulus chlorepsciscus IHERING, 'Cat. F. Braz.,' I, 1907, p. 293 (Matto Grosso).

Myiarchus tyrannulus tyrannulus TODD, Proc. Biol. Soc. Wash., XXXV, 1922, p. 185 (part; references and localities in Peru, Bolivia, Matto Grosso, Paraguay and Argentina).

Paraguay: Fort Wheeler, 1 ♂, 1 ♀; Rio Negro, 1 ♂, 1 ♀. Matto Grosso: Urucúm 4, ♂, 3 ♀; Belvedere de Urucúm, 1 ♀.

RANGE.—Central Brazil, in state of Matto Grosso (Cuyabá, Chapada, Engenho do Gama, Urucúm, Pan de Azucar). Paraguay (Fort Wheeler, Rio Negro, Puerto Asir); eastern Bolivia (San Miguel); eastern Peru and northern Argentina.

(3085a) *Myiarchus ferox australis* Hellmayr

Myiarchus ferox australis HELLMAYR, Field Mus. Nat. Hist., Zoöl. Ser., XIII, part 5, 1927, p. 177 (Agua Suja, near Bagagem, Minas Geraes, Brazil).

Myiarchus cantans PELZELN, 'Orn. Bras.,' II, 1868, pp. 117, 182 (part; Rio de Janeiro and Sapitiba).

Myiarchus ferox (not *Muscicapa ferox* Gmelin) SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 253 (part; southeastern Brazil); ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 346 (Chapada); GRANT, Ibis, 1911, p. 123 (Paraguay, Arjerichi, Puerto San Juan, Desaguadero, Sapatero Cué, Riacho, Fuerte Olimpo; Brazil, Mirim, Rabicho, Boca de Homiguera).

Blacicus ferox IHERING, 'Cat. F. Braz.,' I, 1907, p. 294 (Matto Grosso)

Myiarchus ferox swainsoni (not of Cabanis and Heine) TODD, Proc. Biol. Soc. Wash., XXXV, 1922, p. 200 (from Bolivia and southern Brazil to Buenos Aires).

Paraguay: Puerto Pinasco, 1 ♂. Matto Grosso: Agua Blanca de Corumbá, 1 ♀; Descalvados, 1 ♂, 1 ♀; Rio São Lourenço, 2 ♂; Tapirapoan, 1 ♂.

RANGE.—Eastern Bolivia and southern Brazil, from Matto Grosso (Agua Blanca de Corumbá, Descalvados, Rio São Lourenço, Tapirapoan, Mirim, Rabicho, Boca de Homiguera), Minas Geraes (Agua Suja, Lagôa Santa), and Espirito Santo southwards; Paraguay (Puerto Pinasco, Arjerichi, Puerto San Juan, Desaguadero, Sapatero Cué, Riacho, Fuerte Olimpo); northern Argentina, south to Buenos Aires.

(3089) *Myiarchus pelzelni pelzelni* Berlepsch

Myiarchus pelzelni BERLEPSCH, Ibis, 1883, p. 139 (Bahia), SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 255 (Bahia, Brazil); BERLEPSCH AND LEVERKÜHN, Ornith., VI, 1890, p. 17 (Pontinho, west of Jatubá, Matto Grosso).

Blacicus pelzelni IHERING, 'Cat. F. Braz.,' I, 1907, p. 294 (Matto Grosso).

Urucúm, 1 ♂; Tapirapoan, 1 ♀.

RANGE.—Campo districts of Brazil, in states of Bahia, Matto Grosso (Pontinho, Urucúm Tapirapoan), Ceará, Piauí, Maranhão, and Pará (lower Tapajóz, Marajó, Mexiana) west to the Rio Purús. Eastern Peru (Sta. Ana, Urubamba Valley) and southeastern Colombia (Caquetá region). In northern Argentina (Prov. Santa Fé, Tucumán, Salta) and in eastern Bolivia (Chiquitos, Dept. Santa Cruz) it is replaced by *Myiarchus pelzelni ferocior* Cabanis, which differs only by its larger size and by having the upper wing-coverts more broadly margined with dingy white.

My specimens agree with topotypical material from Bahia.

Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Bahia	?	87.5	83.5	15	Munich
Mexiana Island, Fazenda Nazareth	♀	80.5	79.5	16	"
Urucúm	♂	91.5	89	17.5	A. M. N. H.
Tapirapoan	juv. ♀	84.5	84.5	15.5	"
Florencia, Caquetá	♂	90.5	88.5	16.5	"
<i>Myiarchus pelzelni ferocior</i>					
Argentina, ¹ Prov. Santa Fé, Mocovi	♂	93	91.5	18	Munich
Argentina, ¹ Prov. Santa Fé, Ocampo	♂	95.5	92	16.5	"
Bolivia, ¹ Dept. Santa Cruz	♂	95	88.5	18	"

¹These three specimens have been compared by Dr. Hellmayr and found identical with the type of *M. ferocior* from Tucumán in the Berlin Museum.

(3095) **Myiarchus tuberculifer tuberculifer** (Lafresnaye and d'Orbigny)

Tyrannus tuberculifer LAFRESNAYE AND D'ORBIGNY, 'Syn. Av.,' I, in *Mag. de Zool.*, VII, 1837, Cl. 2, p. 43 (Guarayos, Bolivia); D'ORBIGNY, 'Voy. Amér. Mérid.,' Ois., 1839, p. 307, Pl. xxxii, fig. 1 (Guarayos).

Myiarchus gracilirostris PELZELN, 'Orn. Bras.,' II, 1868, pp. 117, 183 (Villa Maria [= São Luiz de Cáceres], Matto Grosso).

No specimens collected.

RANGE.—Dutch and British Guiana; parts of northern Brazil; Venezuela; Colombia; eastern Ecuador; Bolivia; western Brazil, east to Matto Grosso (São Luiz de Cáceres) and the Rio Madeira.

(3098) **Empidonomus varius varius** (Vieillot)

Muscicapa varia VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXI, 1818, p. 458 (based on Azara, No. 187, Paraguay).

Empidonomus varius ALLEN, *Bull. Amer. Mus. Nat. Hist.*, IV, 1892, p. 347 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 294 (part; Matto Grosso).

Belvedere de Urucúm, 1 ♂; Urucúm, 2 ♂, 1 ♀.

RANGE.—Southeastern Brazil, from Rio de Janeiro to Rio Grande do Sul, north to Matto Grosso (Chapada, Urucúm). Paraguay; eastern Bolivia; northern Argentina.

"An abundant species at Trinidad, Paraguay, and at Urucúm. At Trinidad, November 10, 1913, a breeding female was taken, together with a nest and a single egg. The nest was set loosely between widely spreading, nearly horizontal twigs out toward the end of a branch of a low tree that stood near the edge of a strip of heavy forest. It is a slight affair, the body composed of rather short fibres—some black, some brown in color. It is shallow, saucer-shaped rather than cup-shaped. It measures outside diameter 16 cm. by barely 4 cm. in depth. It resembles somewhat nests of the North American scarlet tanager.

"The single egg is ovate in shape and measures 18 × 25 cm. In color it is a pale ochraceous-buff with medium-sized irregularly shaped chestnut-brown spots scattered somewhat sparsely but quite uniformly over the entire surface. About the larger end the chestnut spots are superimposed over an irregular band of spots and dots of a dark vinaceous-drab, and over all are a few irregular spots of blackish brown."

(3098c) **Empidonomus varius rufinus** (Spix)

Muscicapa rufinus SPIX, 'Av. Bras.,' II, 1825, p. 22, Pl. xxxi, figs. 1, 2 ("in provincia fl. Amazonum"; type in Munich Museum examined).

Empidonomus varius (not *Muscicapa varia* Vieillot) PELZELN, 'Orn. Bras.,' II, 1868, p. 117 (part; Barra do Jaurú, Matto Grosso; Marabitanas and Barcellos, Rio Negro; Pará. Spec. in Vienna Mus. examined); HELLMAYR, *Nov. Zoöl.*, XII, 1905, p. 293 (Igarapé-assú, Pará); IHERING, 'Cat. F. Braz.,' I, 1907, p. 294 (part; Santarém); SNETHLAGE, *Bol. Mus. Goeldi*, VIII, 1914, p. 382 (Pará, Peixe-Boi,

Quati-purú, Santo Antonio do Prata, Rio Tocantins, Baião, Arumatheua, Rio Xingú, Ponte Nova, Forte Ambé, Rio Tapajóz, Rio Jamauchim, Rio Jamundá, Faro, and Maranhão).

No specimens collected.

RANGE.—Northern and eastern Brazil, south to northern Matto Grosso (Jaurú) and Bahia. Eastern Peru; French and British Guiana and adjacent section of eastern Venezuela.

(3099) *Empidonomus aurantio-atro-cristatus pallidiventris* Hellmayr

Empidonomus aurantio-atro-cristatus minor (not of Stolzmann, 1926) HELLMAYR, Field Mus. Nat. Hist., Zoöl. Ser., XIII, part 5, 1927, p. 116 (São Luiz, Maranhão).

Empidonomus aurantio-atro-cristatus pallidiventris HELLMAYR, Field Mus. Nat. Hist., Zoöl. Ser., XII, 1929, p. 309 (new name for *E. a. minor* Hellmayr).

Tyrannus inca PELZELN, 'Orn. Bras.,' II, 1868, p. 118 (part; Goyaz, Cuyabá).

Tyrannus aurantio-atro-cristatus (not of Lafresnaye and d'Orbigny) ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 348 (Chapada).

Empidonomus aurantioatrocristatus IHERING, 'Cat. F. Braz.,' I, 1907, p. 295 (Matto Grosso); GRANT, Ibis, 1911, p. 123 (Boca de Homiguera).

No specimens collected.

RANGE.—Brazil, from Pará (Santarem), Maranhão, and Piauhy, south to Minas Geraes and Goyaz, west to Matto Grosso (Cuyabá, Chapada, Boca de Homiguera).

Although this species is not represented in the Roosevelt Collection, I have examined seven specimens from Chapada in The American Museum of Natural History and find that, in spite of the rather large size of some of the males, they should be referred to *E. a. pallidiventris*, of which there is a small series in the Kaempfer Collection from north-eastern Brazil. A male from Cuyabá in the Vienna Museum, while unusually large (wing, 98; tail, 86; bill, 15 mm.), also agrees with the small eastern race in coloration.

The birds taken by Kaempfer in Maranhão in August vary somewhat, one being much darker below than the other.

Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>E. a. aurantio-atro-cristatus</i> (darker throughout; size larger, bill strong)					
Argentina, Embarcacion, Salta,					
	3 ♂ ad.				
"	Rosario, Salta,				
	3 ♂ ad.	6 ♂ ad.	98	85.5	15 A. M. N. H.
"	Rosario, Salta, 2 ♀				
"	Embarcacion, Salta,				
	1 ♀	3 ♀	93	81.9	14.5 "
Bolivia, Buenavista	3 ♂ ad.	99.1	84.2	15	Field
Peru, Yurimaguas	1 ♀ ad.	96	83	"

Average Measurements (Continued)

	SEX	WING	TAIL	CULMEN	MUSEUM
Argentina, Santa Ana, Tucuman,	1 ♂	98	85	15.5	Field
" " "	1 ♂	100	87	16	"
<i>E. a. pallidiventris</i> (paler throughout; size smaller; bill slender and short)					
Maranhão (Codá, São Luiz)	4 ♂ ad.	90.1	78	12.2	"
Field	1 ♀ ad.	88	74	12	"
" "	1 ♀ ad.	88	76	13	"
" São Joao dos Patos, 2 ♂					
" São Luiz (Anil), 1 ♂					A. M. N. H.
" Parnahyba (Balsa River), 1 ♂	4 ♂	92.6	78.5	13.5	(Naumburg-Kaempfer Coll.)
" Matto Grosso, Chapada,	3 ♂ ad.	94	78.2	12.15	A. M. N. H. (Smith Coll.)
" Matto Grosso, Chapada,	3 ♀ ad.	88	72.6	13.	"
" Piauhy, Bello Horizonte	1 ♂ ad.	89.5	75	13	A. M. N. H. (Naumburg-Kaempfer Coll.)
" Piauhy, Bello Horizonte	1 ♀	89.5	76	13	"

(3103) *Tyrannus melancholicus melancholicus* Vieillot

Figure 36

Tyrannus melancholicus VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXXV 1819, p. 48 (based on Azara, No. 198, Paraguay); PELZELN, 'Orn. Bras.,' II, 1868, p. 117 (Cuyabá); ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 349 (Chapada, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 295 (Matto Grosso); GRANT, Ibis, 1911, p. 123 (Porto Esperança, Brazil).

Paraguay: Trinidad, 1 ♂. Matto Grosso: Rio São Lourenço, 1 ♂; Utiarity. 1 ♂.

RANGE.—Southern Brazil, north to Espírito Santo, Minas Geraes, Goyaz, and Matto Grosso (Cuyabá, Chapada, Rio São Lourenço, Utiarity). Eastern Bolivia (Caiza); Paraguay (Trinidad); Uruguay; northern Argentina; Peru; Ecuador; Colombia; northwestern Venezuela.

"Observed at all points where collecting was done. Several nests with eggs were observed at Agua Blanca de Corumbá, in early November. Here the favorite nesting-site seemed to be near the top of a species of thorny palm where the open, loosely-woven nest of twigs and weed stems was supported by the leaf stems. A set of two fresh eggs was taken November 11, 1916; they are ovate in form and measure 23×17.5 and 23.5×17.5 mm. In color one is white, the other pale vinaceous-buff;

in both the markings are chiefly about the larger end and consist of irregular spots and blotches superimposed upon one another, dark chestnut overlying others of hazel-brown which partly conceal yet others of lavender-brown."

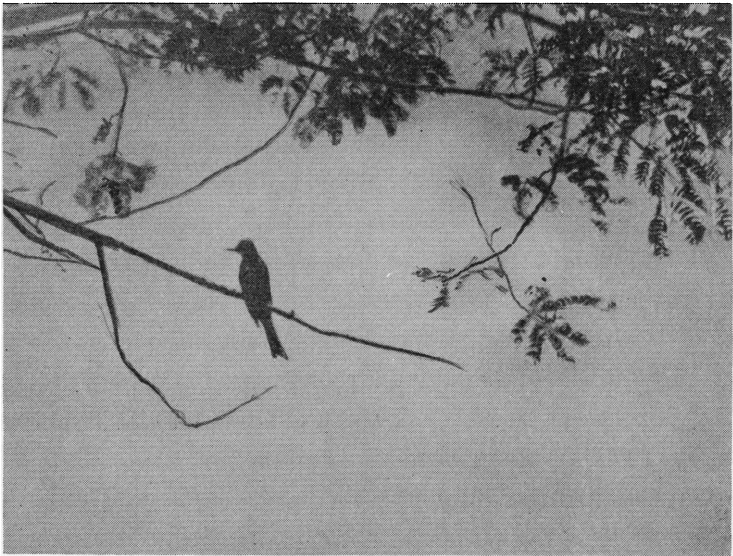


Fig. 36. *Tyrannus melancholicus melancholicus* Vieillot, Rio São Lourenço, Matto Grosso, Brazil.

(3106) ***Tyrannus albogularis*** Burmeister

Tyrannus albogularis BURMEISTER, 'Syst. Übers. Th. Bras.,' II, 1856, p. 465 ("northern forest district of Brazil near Bahia and Pernambuco") errore; PELZELN, 'Orn. Bras.' II, 1868, p. 117 (Cuyabá, [Villa Bella de] Matto Grosso, São Vicente); ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 348 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 295 (Matto Grosso).

No specimens collected.

RANGE.—Campos of the interior of Brazil, in states of Goyaz; Matto Grosso (Chapada, Cuyabá, São Vicente), Minas Geraes (Lagôa Santa), and São Paulo; north to the lower Amazon (Santarém, Monte Alegre.)

(3107) ***Muscivora tyrannus*** (Linnæus)

Muscivora tyrannus LINNÆUS, 'Syst. Nat., I, 12th Ed., 1766, p. 325 ["Habitat in Canada" (errore) and "Cayenne"].

Milvulus tyrannus ALLEN, Bull. Amer. Mus. Nat. Hist., IV, 1892, p. 350 (Chapada, Matto Grosso); GRANT, Ibis, 1911, p. 124 (Pan de Azucar, Matto Grosso).

Muscivora tyrannus IHERING, 'Cat. F. Braz.,' I, 1907, p. 296 (Matto Grosso); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 58 (São Luiz de Cáceres, Matto Grosso).

Paraguay, Fort Wheeler, 1 ♂. Rio Madeira, Calama, 1 ♀.

RANGE.—All of tropical and subtropical South America. Brazil: Matto Grosso (Chapada, São Luiz de Cáceres, Aldea Queimada, Pan de Azucar); Minas Geraes (Lagôa Santa, Sete Lagôa); São Paulo (Ypanema, Irisanga); Paraná (Curytiba, Castra); Goyaz; Bahia; Maranhão; Amazonia (Rio Negro; Calama). Paraguay (Fort Wheeler); Uruguay; Argentina; Venezuela; Colombia.

The fork-tailed flycatcher was observed at various points in Matto Grosso, but only two specimens were preserved. Miller collected an adult female at Calama, on the Rio Madeira, April 3, 1914. At Aldea Queimada, Matto Grosso (January 23, 1917), they were very abundant.

(3114) *Pipra fasciicauda scarlatina* Hellmayr

Pipra aureola scarlatina HELLMAYR, Verhandl. Ornith. Gesell. in Bayern, XII. No. 2, 1915, p. 122 (Fazenda Cayoá, Salto Grande do Rio Paranapanema, São Paulo, Brazil).

Pipra fasciata PELZELN, 'Orn. Bras.,' II, 1868, p. 127 (Villa Maria, Engenho do Gama, São Vicente, Matto Grosso); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 294 (Matto Grosso, Engenho do Gama, Rio Paraná); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 109 (Chapada, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 298 (Matto Grosso).

Pipra fasciicauda HELLMAYR, Ibis, 1906, p. 9 (part; Villa Maria, Engenho do Gama, etc.).

Descalvados, 1 ♂. The colors taken from a fresh bird were: feet, drab; maxilla, blackish; mandible, drab.

RANGE.—Central Brazil: Matto Grosso (Villa Maria, Engenho do Gama, Rio Guaporé, Villa Bella de Matto Grosso, São Vicente, Chapada); Goyaz; northern São Paulo (Rio Paraná, Fazenda Cayoá); Minas Geraes (Rio Jordão, Araguary), north to the lower Amazon; also in Paraguay (Sapucay; Alto Paraná).

It was observed along the river only in the thick forest belt.

(3117) *Pipra rubrocapilla* Temminck

Pipra rubrocapilla TEMMINCK, 'Nouv. Rec. Pl. Col.,' livr. 9, 1821, tab. LIV, fig. 3 (= ♂ ad.; Bahia); PELZELN, 'Orn. Bras.,' II, 1868, p. 127 (Engenho do Cap. Gama, Matto Grosso; Bahia; Borbá; Manaqueri); IHERING, 'Cat. F. Braz.,' I, 1907, p. 299 (Matto Grosso); HELLMAYR, Ibis, 1906, p. 11 (Engenho do Gama, Matto Grosso).

Uturity, 1 ♂; Rio Roosevelt, 1 ♀.

RANGE.—Eastern Brazil (Rio de Janeiro; Nova Friburgo¹; Cantagallo²; Barra do Jucú, Espírito Santo³; Bahia; Caxanga, a spot between Recife and Beberibé; Pernam-

¹*P. erythrocephala* Burmeister, 'Syst. Ubers. Th. Bras.,' II, 1856, pp. 443, 445.

²Ihering, Rev. Mus. Paul., IV, 1900, p. 156.

³*P. erythrocephala* Wied, 'Reise Brasil.,' I, 1820, p. 187.

buco) and Amazonia, south of the Amazon (Para; Santarém; Borba; Rio Madeira; Manaqueri and Ega; Rio Solimões; Rio Juruá), south to western Matto Grosso (Engenho do Gama, Utiarity, Rio Roosevelt). Northeastern Peru (Santa Cruz, Rio Hullaga).

The male recorded above had three distinct well-developed testicles.

(3130) *Pipra nattereri* Sclater

Pipra nattereri SCLATER, P. Z. S., 1864, p. 611, tab. 39 (descr. orig. ♂, ♀; Borba, Rio Madeira); 'Cat. B. Brit. Mus.,' XIV, 1888, p. 302 (Borba, Rio Madeira); PELZELN, 'Orn. Bras.,' II, 1868, p. 127 (Engenho do Cap. Gama, Borba); IHERING, 'Cat. F. Braz.,' I, 1907, p. 299 (Matto Grosso); HELLMAYR, Ibis, 1906, p. 40 (Borba, Rio Madeira).

Pipra gracilis HELLMAYR, Verh. Zool. Bot. Ges. Wien, LIII, 1903, p. 202 (Matto Grosso, Engenho do Gama, Rio Guaporé); Ibis, 1906, p. 39 (Engenho do Gama, Rio Guaporé).

Paca Tirada, 1 ♀; Mutum Cavallo, 1 ♂ (in plumage of female); Morinho Lyra, 1 ♀; Calama, 1 ♀.

RANGE.—Brazil, in states of Matto Grosso (Engenho do Gama, Rio Guaporé, Paca Tirada, Mutum Cavallo, Morinho de Lyra), Amazonas (Rio Madeira), and Pará (Rio Tapajóz).

This species was not previously represented in the museum collection. Dr. Hellmayr¹ has concluded that the type of his "*gracilis* was based on an individual variety of *P. nattereri*."

(3142) *Machæropterus pyrocephalus* (Sclater)

Pipra pyrocephala SCLATER, Rev. Mag. Zool., (2), IV, 1852, p. 9 (locality unknown). *Machæropterus pyrocephalus* PELZELN, 'Orn. Bras.,' II, 1868, p. 128 (Engenho do Gama, São Vicente); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 305 (Engenho do Gama, Matto Grosso, Rio Ucayali); IHERING, 'Cat. F. Braz.,' I, 1907, p. 300 (Matto Grosso).

Tapirapoan, 2 ♂, 1 ♀, 1 ♀ (?); Utiarity, 2 ♂. In fresh birds the eye is reddish; bill blackish; feet reddish buff (exactly the color of the pale shaft-streaks on the feathers of the breast and belly).

RANGE.—Central Brazil, Matto Grosso (Engenho do Gama, São Vicente, Tapirapoan, Utiarity); eastern Peru (Rio Ucayali); Venezuela.

This species was not previously represented in the Museum collection.

(3152) *Piprites chloris bolivianus* Chapman²

Piprites chloris bolivianus CHAPMAN, Amer. Mus. Novit., No. 138, 1924, p. 6 (Mission San Antonio, Rio Chimoré, Bolivia).

Piprites chlorion (not of Cabanis) PELZELN, 'Orn. Bras.,' 1868, II, p. 126 (part; Engenho do Gama, Matto Grosso).

No specimens collected.

¹Nov. Zool., XVII, 1910, p. 308.

²After having re-examined two specimens in the Vienna Museum, Dr. Hellmayr tells us that they are referable to *P. c. bolivianus*.

RANGE.—Brazil: Matto Grosso (Engenho do Gama); Amazonas (Salto do Girão, Rio Madeira); and northern Bolivia.

(3159) *Antilophia galeata* (Lichtenstein)

Pipra galeata LICHTENSTEIN, 'Verz. Doubl. Berlin Mus.,' 1823, p. 28 (São Paulo).
Metopia galeata PELZELN, 'Orn. Bras.,' II, 1868, p. 129 (Borda do Matto, Paciencia, Rio Paraná; José Dias, Goyaz; São Vicente, Matto Grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 107 (Chapada).

Antilophia galeata IHERING, 'Cat. F. Braz.,' I, 1907, p. 298 (Matto Grosso).
 Descalvados, 1 ♂; Aldea Queimada, 1 ♀.

RANGE.—Campos of Brazil, in states of São Paulo, Minas Geraes, Bahia, Piahy, Matto Grosso (São Vicente, Chapada, Descalvados, Aldea Queimada), and Goyaz (José Dias, Goyaz City, Fazenda Esperança).

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, São Paulo, between Campinas and Mogy Mirim	1 ♂	79	69.5	8.5	Munich
Brazil, Minas Geraes, Agua Suja, near Bagagem	1 ♂	80.5	67.5	9	"
Brazil, Minas Geraes, Agua Suja, near Bagagem	1 ♂	82.5	72	8.5	"
Brazil, Goyaz	1 ♂	76.5	66	8.5	"
" "	1 ♂	79.5	70.5	9.5	"
" Matto Grosso, Chapada, 4 ♂; Descal- vados, 1 ♂	5 ♂	79.3	69.1	8.8	A. M. N. H.
Brazil, Matto Grosso, Aldea Queimada	1 ♀	71.5	58.5	8.5	"

(3173a) *Manacus manacus subpurus* Cherrie and Reichenberger

Manacus manacus subpurus CHERRIE AND REICHENBERGER, Amer. Mus. Novit. No. 58, 1923, p. 4 (Tapirapoan, Rio Siputuba, Matto Grosso).

Chromachaeris manacus PELZELN, 'Orn. Bras.,' II, 1868, p. 130 (part; Engenho do Gama and São Vicente); IHERING, 'Cat. F. Braz.,' I, 1907, p. 301 (part; Matto Grosso).

Tapirapoan, 1 ♂ (the type); Mutum Cavallo, 1 ♂.

RANGE.—This subspecies is intermediate, geographically as well as in characters, between *Manacus manacus purus* (from Santarém to Borba, lower Rio Madeira), and *Manacus manacus gutturosus* (from southeastern Brazil). So far as I know, *Manacus manacus subpurus* is confined to the central portion of Brazil. It ranges from at least Calama, on the right bank of the upper Rio Madeira, down to western Matto Grosso (Tapirapoan, Mutum Cavallo, Engenho do Gama, São Vicente).

(3185) *Schiffornis turdinus amazonus* (Sclater)

Heteropelma amazonum SCLATER, P. Z. S., 1860, p. 466 (Chamicuros, Peru); PELZELN, 'Orn. Bras.,' II, 1868, p. 125 (Villa Maria, Engenho do Cap. Gama, banks

of the Rio Guaporé); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 320 (Upper Amazonia).

Scotothorus amazonum IHERING, 'Cat. F. Braz.,' I, 1907, p. 302 (Matto Grosso).

Morinho Lyra, 1 ♀; Rio Roosevelt, 1 ♀.

RANGE.—Brazil, in states of Matto Grosso (Morinho de Lyra, Rio Roosevelt, Villa Maria, Engenho do Cap. Gama, Rio Guaporé) and Amazon as (Rio Madeira and Rio Negro). Venezuela; eastern Peru; eastern Ecuador.

In the absence of topotypical material for comparison I have been unable to identify these two specimens satisfactorily, but I refer them provisionally to *Schiffornis turdinus amazonus*. One taken at Morinho de Lyra very closely resembles a specimen of *S. turdinus wallacei* from the Rio Xingú that was received from Dr. Snethlage. The example from the Rio Roosevelt differs from the bird from Morinho de Lyra and specimens of *Schiffornis turdinus wallacei* in having a much deeper rufous wash on the throat and upper breast, while the remaining lowerparts are much paler gray-green. Two specimens from the upper Orinoco, which may be *Schiffornis turdinus amazonus*, have the entire top of the head deeper cinnamon-brown, also the remaining upper parts a darker brownish olive. The rufescent wash on the throat and upper breast is less intense and the abdomen a darker grayish green. In view of the large amount of individual variation in specimens of all localities, I can come to no satisfactory conclusions without having seen a series from the type-locality.

(3189) **Neopelma pallescens** (Lafresnaye)

Tyrannula pallescens LAFRESNAYE, Rev. Mag. Zool., (2), V, 1853, p. 57 (Bahia).

Heteropelma flavicapillum SCLATER, P. Z. S., 1860, p. 466 (southeastern Brazil); 'Cat. B. Brit. Mus.,' XIV, 1888, p. 321 (southeast Brazil); PELZELN, 'Orn. Bras.,' II, 1868, p. 125 (Engenho do Gama); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 109 (Chapada).

Heteropelma chrysocephalum PELZELN, 'Orn. Bras.,' II, 1868, p. 125, (part; São Vicente).

Scotothorus pallescens HELLMAYR, Verh. Zool. Bot. Ges. Wien, LIII, 1903, p. 204 (Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 303 (Matto Grosso).

Uturity, 1 (?).

RANGE.—Central and eastern Brazil, from Maranhão and Piauhay south to Matto Grosso (Engenho do Gama, São Vicente, Chapada, Uturity) and São Paulo (Rio das Pedras, Nas Lages).

(3190) **Neopelma sulphureiventer** (Hellmayr)

Scotothorus sulphureiventer HELLMAYR, Verh. Zool. Bot. Ges. Wien, LIII, 1903 pp. 202, 203 (Matto Grosso).

Scotothorus sulphureiventris IHERING, 'Cat. F. Braz.,' I, 1907, p. 303 (Matto, Grosso).

Heteropelma chrysocephalum PELZELN, 'Orn. Bras.,' II, 1868, pp. 125, 185 (part; "jun.," Matto Grosso); SCLATER AND SALVIN, 'Nomencl. Av. Neotrop.,' 1873, p. 55 (part; interior of Brazil); SCLATER 'Cat. B. Brit. Mus.,' XIV, 1888, p. 322 (Matto Grosso).

No specimens collected.

RANGE.—Brazil, Matto Grosso (Villa Bella) and northern Bolivia (San Mateo, Todos Santos).

(3196) *Heterocercus lineatus* (Strickland)

Elænia lineata STRICKLAND, 'Contr. Orn.,' 1850, p. 121, Pl. LXIII (upper branches of the Amazon River; part descr. of "male" only).

Heterocercus lineatus PELZELN, 'Orn. Bras.,' II, 1868, p. 125 (Borba); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 324 (upper Amazonia); IHERING, 'Cat. F. Braz.,' I, 1907, p. 304 (Amazonia).

Broken Canoe Rapids, Rio Roosevelt, 1 ♀; bill black, feet slate-gray. Camp 30, Rio Roosevelt, 1 ♀; bill black, feet slate-gray.

RANGE.—North Brazil, from the lower Amazon south to northern Matto Grosso (Maroins, Rio Machados; Rio Roosevelt).

This rare species was not before represented in the collection.

(3200) *Tityra cayana brasiliensis* (Swainson)¹

Psaris brasiliensis SWAINSON, 'Anim. in Menag.,' 1837, p. 286 ("northern Brazil").

Tityra cayana brasiliensis ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 110 (Chapada).

Tityra brasiliensis PELZELN, 'Orn. Bras.,' II, 1868, p. 119 (Engenho do Gama); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 329 (Matto Grosso, Engenho do Gama); HELLMAYR, 'Rev. Spix,' 1906, p. 667 (Engenho do Gama); IHERING, 'Cat. F. Bras.,' I, 1907, p. 305 (Matto Grosso); GRANT, Ibis, 1911, p. 125 (Coimbra, Brazil).

Tityra cayana PELZELN, 'Orn. Bras.,' II, 1868, p. 119 (part; Retiro, Matto Grosso); HELLMAYR, 'Rev. Spix,' 1906, p. 667 (part; Retiro); IHERING, 'Cat. F. Braz.,' I, 1907, p. 304 (part; Matto Grosso).

Urucúm, 2 ♀, fresh birds have the feet slate-gray, bill black at the extreme tip followed by slate-gray and reddish purple at the base; Agua Blanca de Corumbá, 1 ♂. Paraguay: Rio Negro, 1 ♂.

RANGE.—Brazil, from Piauhý south to Matto Grosso (Engenho do Gama, Retiro, Urucúm, Chapada) and Rio Grande do Sul. Paraguay and northeastern Argentina (Misiones).

Birds from Urucúm agree in size with a topotype from Cayenne, French Guiana, while three females from Venezuela are slightly larger, especially in the length of the tail.

¹Since discussing these birds with Dr. Hellmayr, I have come to quite a different conclusion. All birds from Matto Grosso should be referred to *T. cayana brasiliensis* in spite of certain individuals (♂ from Retiro, two ♀ from Urucúm) being hardly distinguishable from typical *T. c. cayana*. The fact is, that in Matto Grosso *brasiliensis* intergrades through individual variation with *cayana*, which ranges as far south as eastern Bolivia. The same takes place along the banks of the lower Amazon. The case will be fully explained in Dr. Hellmayr's forthcoming monographic catalogue of the Cotingide.

The bird from Agua Blanca de Corumbá is a male just assuming the plumage of the adult. The black crown and nape are still flecked with gray feathers, and many of the feathers of the back and breast have black shaft-stripes.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Tityra cayana braziliensis</i>					
Brazil, Bahia, 3 ♂; Faz. In-gazeira, Rio Preto, 1 ♂	4 ♂	126.7	74.7	24.6	Vienna
Brazil, Piauhy, Philomena	1 ♂	124	73	24	"
" " Buriti, Parna-guá	1 ♂	127.5	74	24	"
Brazil, Piauhy, S. Maria, near S. Philomena	1 ♀	120.5	74	23	"
Brazil, São Paulo, Ypanema, 2 ♂; Fac. Antonio Dias, 1 ♂; Irisanga, 1 ♂; Itararé, 1 ♂	5 ♂	125.6	72.5	25.3	"
Brazil, São Paulo, Mattodentro	1 ♀	119	73	25	"
" Paraná, Curytiba	1 ♂	121	70.5	21	"
" " "	1 ♂	124.5	71	22.5	"
" " "	1 ♀	123	73	24	"
" Rio de Janeiro	1 ♀	120.5	74	23	"
" Matto Grosso, Engenho do Gama, 2 ♂; Retiro, 1 ♂	3 ♂	121.8	72.6	24.1	"
Brazil, Matto Grosso, Engenho do Gama, 2 ♀; Uru-cúm, 2 ♀	4 ♀	116	68.3	24	A. M. N. H.
<i>Tityra cayana cayana</i>					
Brazil, Barrado Rio Negro, 3 ♂; Barcellos, Rio Negro, 2 ♂	5 ♂	116.4	70.1	24.3	Vienna
Brazil, Barra do Rio Negro	1 ♀ ¹	122.5	71.5	23	"
North Brazil, Forte do Rio Branco, 1 ♀; Barra do Rio Negro, 2 ♀	3 ♀	113.6	71.6	24.5	"
North Brazil, Pará	1 ♀	113	75	26	"
French Guiana, Cayenne	1 ♀	114	71	22.5	Vienna
" " "	1 ♀	112	68.5	23.5	"
Venezuela, Cristóbal Colón, 1 ♀; Sacupana, 1 ♀; El Pilar, 1 ♀	3 ♀	111.5	71.5	26.1	A. M. N. H.

¹Aberrant *cayana*.

(3202) *Tityra semifasciata semifasciata* (Spix)

Pachyrhynchus semifasciatus SPIX, 'Av. Bras.,' II, 1825, p. 32, Pl. XLIV, fig. 2 ("in Provincia Pará").

Tityra personata semifasciata ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 110 (Chapada).

Tityra semifasciata PELZELN, 'Orn. Bras.,' II, 1868, p. 119 (Caiçara, Engenho do Gama, Matto Grosso; HELLMAYR, 'Rev. Spix,' 1906, p. 668 (Pará; Manáos; Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 306 (Matto Grosso).

Tapirapoan, 1 ♀; bare skin about face and at base of bill reddish purple; Juruena, 1 ♀; Calama, 1 ♂.

RANGE.—The whole Amazon Valley with tributaries from Pará to northeastern Peru, north to eastern Ecuador.

It is possible that birds from southern Matto Grosso belong to the large form *T. s. fortis*, known from eastern Bolivia and southern Peru. I have seen a series from Chapada, with measurements as follows:

Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Calama, Rio Madeira	1 ♂	116	68	25	A. M. N. H.
Juruena, Matto Grosso	1 ♀	116.5	73.5	26	"
Tapirapoan, Matto Grosso	1 ♀	120	70.5	28	"

(3208) *Erator inquisitor pelzelni* (Salvin and Godman)

Tityra pelzelni SALVIN AND GODMAN, 'Biolog. Centr. Amer.,' II, 1890, p. 120 (Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 306 (Matto Grosso).

Tityra inquisitor ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 110 (Corumbá, Chapada).

Tityra albitorques (not of Dubus) PELZELN, 'Orn. Bras.,' II, 1868, p. 120 (part; Engenho do Gama and Villa Bella, Matto Grosso); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 332 (part; spec. y, Matto Grosso).

Urucúm, 1 ♂.

RANGE.—Brazil, in state of Matto Grosso (Villa Bella de Mattogrosso, Engenho do Gama, Rio Guaporé, Chapada, Urucúm, Corumbá) and eastern Bolivia (Chiquitos, Santa Cruz de la Sierra).

The four adult males (two from Chapada, Smith Coll.) illustrate very well the individual variation in the markings of the tail. The male from Corumbá is an extreme example of *Erator inquisitor pelzelni*, as described by Salvin and Godman, in having the basal two-thirds of the rectrices as well as very distinct apical margins white. The male from Urucúm (Roosevelt Coll.) has the white at the base of the tail but little more extended than in *Erator inquisitor inquisitor*, while there is only a narrow white edge at the tip of the outermost rectrix. Finally, the male from Chapada, No. 32612, in the color of the tail, is practically identical with typical *Erator inquisitor inquisitor*, having only a little white at the

extreme base and no white at all at the tips. However, the seven examples are decidedly smaller than *Erator inquisitor inquisitor* from São Paulo and Minas Geraes, and agree in size with *Erator inquisitor erythrognys*.

Two specimens from Santarém cannot be referred to any known race. In the coloration of the tail they closely approach *Erator albitorques*, and the male, besides, has the ear-coverts neither uniform black nor pure white, as in *Erator albitorques*, but black mixed with white; while the female in the clear cinereous ground-color of the upperparts resembles *Erator inquisitor erythrognys*, but by the restriction of the black spotting on the mantle forms the transition to the wholly unspotted female of *Erator albitorques*.

Average Measurements					
	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Erator inquisitor inquisitor</i>					
Brazil, São Paulo, Ituverava,					
1 ♂; Cubatão, 2 ♂;					
Goyaba, 1 ♂; Irisanga, 1					
♂; Ypanema, 2 ♂					
	7 ♂	111.5	68.5	22.4	Vienna
	1 ♀	106.5	65	23	"
	1 ♀	113	62	22.5	Munich
Brazil, Minas Geraes, Agua					
Suja, near Bagagem					
	3 ♂	113.6	68.5	22.3	"
Brazil, Minas Geraes, Agua					
Suja, near Bagagem					
	1 ♀	108.5	64.5	21.5	"
Brazil, Minas Geraes, Agua					
Suja, near Bagagem					
	1 ♀	105	65.5	24	"
Brazil, Piauí, Buriti, near					
Parnaguá					
	1 ♂	105	66	23.5	Vienna
Brazil, Piauí, Buriti, near					
Parnaguá					
	1 ♀	100.5	65	23	"
<i>Erator inquisitor erythrognys</i>					
Venezuela, El Llagual					
	4 ♂ ¹	104.7	64.1	21.8	A. M. N. H.
Colombia (Bogotá Coll.)					
	1 ♀	104	63	22.5	Munich
<i>Erator inquisitor pelzelni</i>					
Brazil, Matto Grosso, 1 ♂;					
Urucúm, 1 ♂; Chapada,					
3 ♂					
	5 ♂	105.5	65.1	22.1	Vienna and
	1 ♀	100	62	23.5	A. M. N. H.
Brazil, Matto Grosso					
" " " Engen-					
ho do Gama					
	1 ♀	100	59	22	"
<i>Erator inquisitor subspecies</i>					
Brazil, Santarém					
	1 ♂	102.5	64.5	21	A. M. N. H.
" "					
	1 ♀	95	58.5	21.5	"
North Brazil, Pará, Peixe-Boi					
	1 ♀	96.5	59.5	20	Munich

¹One in first annual plumage.

(3210) *Erator leucura* (Pelzelin)¹

Tityra (Erator) leucura PELZELN, 'Orn. Bras.,' II, 1868, pp. 120, 183 (Salto do Girão, Rio Madeira, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 306 (Matto Grosso); SNETHLAGE, Bol. Mus. Goekdi, VIII, 1914, p. 348 (Rio Madeira).

RANGE.—Brazil, Matto Grosso: Salto do Girão, Rio Madeira. Endemic.

(3211) *Platypsaris rufus rufus* (Vieillot)

Tityra rufa VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., III, 1816, p. 347 (based on Azara, No. 208, Paraguay = ♀).

Hadrostomus atricapillus ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 110 (Chapada).

Hadrostomus rufus IHERING, 'Cat. F. Braz.,' I, 1907, p. 306 (Matto Grosso).

No specimens collected.

RANGE.—Campo region of Brazil, from Piahy and Ceará south to Matto Grosso (Chapada) and Santa Catharina, Paraguay; eastern Bolivia (Chiquitos); and northeastern Argentina.

(3216) *Pachyramphus viridis cuvierii* (Swainson)

Psaris cuvierii SWAINSON, 'Zoöl. Illustr.,' I, 1821, tab. xxxii (Brazil).

Pachyrhynchus cuvierii SPIX, 'Av. Bras.,' II, 1825, p. 33, tab. XLV, fig. 2 ("in Brasilia").

Pachyrhamphus viridis PELZELN, 'Orn. Bras.,' II, 1868, p. 120 (Sangrador, Cuyabá, Engenho do Gama, Matto Grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 110 (Corumbá); IHERING, 'Cat. F. Braz.,' I, 1907, p. 307 (Matto Grosso); GRANT, Ibis, 1911, p. 125 (Rabicho, Brazil); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 57 (Caceres).

Urucúm, 1 ♀.

RANGE.—Eastern Brazil, in states of Ceará, Bahia, Rio de Janeiro (Nova Fribourgo), Minas Geraes (Lagôa Santa), São Paulo, Paraná (Curytiba), and Matto Grosso (Sangrador, Cuyabá, Engenho do Gama, Corumbá, Urucúm, São Luiz de Caceres, Rabicho).

Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Matto Grosso, Chapada	♂	73.5	56	12	A. M. N. H.
Brazil, Bahia	♀	68.5	51	13	"
" "	♀	68.5	56	13	"
Matto Grosso, Urucúm	♀	71	51.5	13	"

(3228a) *Pachyramphus polychopterus niger* (Spix)

Pachyrhynchus niger SPIX, 'Av. Bras.,' II, 1825, p. 33, Pl. XLV, fig. 1 (= ♂ ad.; no locality stated; Fontebôa suggested by Berlepsch and Hartert, 1902).

Pachyrhamphus polychropterus PELZELN, 'Orn. Bras.,' II, 1868, p. 121 (part; Borba and Salto do Girão, Rio Madeira).

Calama, 1 ♂.

¹Known only from a single young specimen. Hence it is impossible to say anything definite regarding its validity.

RANGE.—Western Brazil, from the Rio Madeira and Rio Negro westward. Eastern Peru; eastern Ecuador; southeastern Colombia.

(3229) *Pachyramphus polychopterus notius* Brewster and Bangs¹

Pachyramphus notius BREWSTER AND BANGS, Proc. New Eng. Zoöl. Club., II, 1901, p. 53 (Concepción del Uruguay).

Pachyramphus polychopterus PELZELN, 'Orn. Bras.,' 1868, II, p. 121 (part; Barra do Jaurú, Cuyabá); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 110 (Chapada); IHERING, 'Cat. F. Braz.,' 1907, I, p. 308 (Matto Grosso).

Paraguay: Trinidad, 1 ♂; Rio Negro, 2 ♂, 1 ♀. Matto Grosso: Urucúm, 5 ♂, 1 ♂ im., 1 ♀; Belvedere de Urucúm, 1 ♂, 2 ♀; Agua Blanca de Corumbá, 1 ♂; Descalvados, 1 ♂. Adult males have the bill plumbeous with the extreme tip only blackish, feet dusky slate.

RANGE.—Southern Brazil, from Rio de Janeiro, Minas Geraes, and Matto Grosso (Cuyabá, Chapada, Urucúm, Belvedere de Urucúm, Agua Blanca de Corumbá, Descalvados, Barra do Jaurú) south to Rio Grande do Sul. Uruguay; Paraguay; northern Argentina; eastern and southern Bolivia.

The distinction between the Bahian race and that of southern Brazil holds good, the northern bird being invariably smaller. However, the nomenclature as employed by Bangs and Penard is incorrect. The type of *Pachyramphus polychopterus* (this is the original spelling) is a specimen of the Bahian form, hence *splendens* becomes a synonym of *polychopterus*, while the larger southern bird has to stand as *P. polychopterus notius*.²

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Pachyramphus p. polychopterus</i>					
Brazil, Bahia, 5 ♂					
“ “ Fac. de Fora,					
Rio Grande, 1 ♂					Vienna
Brazil, Bahia, 1 ♂					Munich
“ “ 3 ♂	10 ♂	73.1	58.5	12.1	Berlepsch Coll.
“ “	1 ♀	72.5	54	13	Berlepsch Coll.
“ “	1 ♀	74	58	12	Munich
“ Piahy, Parnaguá, 2					
♀; Lagôa do Purgatorio,					
1 ♀	3 ♀	71.6	54.8	14	Vienna
<i>Pachyramphus polychopterus notius</i>					
Paraguay, Trinidad	1 ♂	81	59	15	A. M. N. H.
“ Rio Negro	1 ♀	76.5	60	14.5	“
“ “	1 ♀	77	61.5	13	“

¹An earlier name is *P. p. spixii* (Swainson). Cf. Hellmayr, Field Mus. Nat. Hist., Zoöl. Ser., XIII, part 6, 1929, p. 177.

²Proc. Biol. Soc. Wash., XXXV, 1922, p. 225.

Average Measurements (*Continued*)

	SEX	WING	TAIL	CULMEN	MUSEUM
Argentina, La Plata	1 ♂	83	64.5	13.5	A. M. N. H.
“ Perico	1 ♀	77.5	62	13.5	“
Brazil, Matto Grosso, Belvedere de Urucúm, 2 ♀; Urucúm, 2 ♀	4 ♀	74.4	56	13	“
<i>Pachyrhamphus polychopterus tristis</i>					
Island of Trinidad, Caparo	3 ♂	74.5	55.6	13.3	Munich
“ “	1 ♀	73	56	14	“
Venezuela, Cumbre de Valencia, San Esteban	1 ♂	70	53.5	13	“
Venezuela, Cumbre de Valencia, San Esteban	1 ♂	70	57	12	“
Venezuela, Cumbre de Valencia, San Esteban	1 ♀	69.5	58	12	“

(3233) *Pachyrhamphus marginatus* (Lichtenstein)

Todus marginatus LICHTENSTEIN, 'Verz. Doubl., Berlin. Mus.,' 1823, p. 51 (Bahia).

Pachyrhamphus atricapillus ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 110 (Chapada).

Barão Melgaço, 1 ♂; Monte Cristo, 1 ♀.

RANGE.—Brazil, from the confines of Guiana south to Matto Grosso (Chapada, Barão Melgaço, Monte Cristo) and São Paulo (São Sebastião). Guiana; Venezuela; eastern Columbia to northern Bolivia.

While Messrs. Bangs and Penard had a larger series of *P. marginatus marginatus* and *P. marginatus nanus* than I have, I, nevertheless, come to entirely different conclusions. My three specimens from Bahia, which should be typical *marginatus*, on the contrary, show the same measurements as their series of *P. marginatus nanus*. On the other hand, my birds from Matto Grosso and Bolivia (Todos Santos), although approaching the measurements given by Messrs. Bangs and Penard for *P. marginatus nanus* (the smaller race), are even larger than are my Bahia birds. None of my specimens shows a TRUE frontal band (only the nasal plumes being white). Specimens from Bahia and the one bird from Todos Santos have the nasal plumes denser than our male from Barão Melgaço, Matto Grosso. I, therefore, refer my birds to *P. marginatus*, as my specimens do not confirm the conclusions reached by Messrs. Bangs and Penard.¹

¹Bull. Mus. Comp. Zoöl., LXIV, 1921, p. 394.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
British Guiana, Tumatumari,					
Potaro River	1 ♂	69	51	12	A. M. N. H.
Venezuela, ft. of Mt. Duida,	1 ♂	68	52	12.5	"
" Caura Valley	1 ♂	65*	47	12	Munich
" " " " "	1 ♂	67.5	50	14	"
" " " " " 1 ♀ ¹ ;					
Rio Caura, 4 ♀; S. Pedro,					
on the Rio Caura, 1 ♀	6 ♀	62.6	47.5	12.7	"
Brazil, Matto Grosso, Barão					
Melgaço	1 ♂	69	50	12	A. M. N. H.
Brazil, Matto Grosso, Monte					
Cristo	1 ♀	62.5	47	12.5	"
N. Brazil, Marabitanas, 1 ♂;					
Maroins, Rio Machados,					
1 ♂; Boim, on the Tapajóz,					
1 ♂; Pará, Utinga, 1 ♂	4 ♂	68.8	53	12.7	Munich
N. Brazil, Obidos, Col. do					
Veado	1 ♀	64	47	11.5	A. M. N. H.
N. Brazil, Mazagão, Rio					
Tocantins	1 ♀	65.5	48	12.5	"
N. Brazil, Bahia	juv. 1 ♂	66	52	12.5	"
" " " " "	1 ♂	67.5	51	12.5	"
Bolivia, Todos Santos	1 ♂	69	49.5	12	"
" " " " "	1 ♂	71.5	53	11.5	"

(3238) *Lathria cineracea cineracea* (Vieillot)

Ampelis cineracea cineracea VIEILLOT, 'Tabl. Enc. Meth.,' Orn., II, 1822, p. 761 (based on Levaillant "*Cotinga cendré*," Cayenne).

Lipaugus plumbeus PELZELN, 'Orn. Bras.,' II, 1868, p. 122 (Dourado and Engenho do Gama, Matto Grosso).

Lathria cinerea SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 352 (Cayenne, Guiana, Amazonia); IHERING, 'Cat. F. Braz.,' I, 1907, p. 309 (Matto Grosso); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 351 (Amazonia, Guiana).

Barão Melgaço, 1 ♂, 1 ♀; Morinho Lyra, 1 ♂.

RANGE.—Venezuela; Guiana; Amazonia; south to northern Matto Grosso (Dourado, Engenho do Gama, Barão Melgaço; and eastern Bolivia).

"The shrill, characteristic whistle of the gray, screaming Piha was not heard until the expedition was half-way across the plano alto separating the Paraguayan water-shed from that of the Amazon. At Morinho Lyra, where the expedition passed through a belt of heavy forest, these birds were heard on every side and a fine male was collected. They were frequently heard and seen on the journey down the Rio Roosevelt."

¹Tail moulting.

(3246a) *Lipaugus simplex frederici* Bangs and Penard

Lipaugus simplex frederici BANGS AND PENARD, Bull. Mus. Comp. Zool., LXIII, 1918, p. 71 (vicinity of Paramaribo, Surinam).

Lipaugus simplex PELZELN, 'Orn. Bras.,' II, 1868, p. 123 (Engenho do Cap. Gama and Villa Bella, Matto Grosso).

Urupá, 1 ♂.

RANGE.—The whole of the Guianan-Amazonian forest region, from Guiana west to the eastern base of the Andes in Colombia and Ecuador, and throughout Amazonia from northern Marañhao to eastern Peru and northern Matto Grosso (Engenho do Gama, Villa Bella, Urupá).

I am not able to identify with certainty the bird from Urupá. On geographic grounds it belongs to *Lipaugus simplex frederici* which ranges all over Guiana and Amazonas south to western Matto Grosso, while typical *L. s. simplex* is obviously restricted to the forest region of eastern Brazil (Bahia to Rio).

(3251) *Attila brasiliensis brasiliensis*¹ Lesson

Attila brasiliensis LESSON, 'Traité d'Orn.,' 1830, p. 360 ("Du Brésil"); PUCHERAN, Arch. Mus. Paris, VII, 1855, p. 366 (type locality stated to be Cayenne and not Brazil).

Attila uropygialis PELZELN,² 'Orn. Bras.,' II, 1868, p. 96 (Salto do Girão, Rio Madeira, Matto Grosso).

No specimens collected.

RANGE.—The whole of the Guianan-Amazonian region, from Guiana, Trinidad, and Venezuela, south to Matto Grosso (Salto do Girão) and eastern Bolivia.

(3255) *Attila bolivianus bolivianus* Lafresnaye

Attila bolivianus LAFRESNAYE, Rev. Zool., 1848, p. 46 (Bolivia); IHERING, 'Cat. F. Braz.,' I, 1907, p. 310 (Matto Grosso).

Attila validus PELZELN, 'Orn. Bras.,' II, 1868, pp. 95, 169 (Villa Maria, Engenho do Gama, Matto Grosso); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 364 (Matto Grosso, Brazil; Bolivia); ALLEN, Bull. Amer. Mus. Nat., Hist., V, 1893, p. 110 (Chapada).

Descalvados, 1 ♀; in fresh birds the feet were blue-gray; eye gray; bill dusky blackish.

RANGE.—Bolivia (Guarayos, Moxos, Chiquitos); Matto Grosso (Chapada, Villa Maria, Engenho do Gama, Descalvados); Amazonas (Rio Purús).

This bird compared with three females from Bolivia (Todos Santos, 2 ♀; Mission San Antonio, Rio Chimoré, 1 ♀) is of a less intense brown. On the under surface, the chin and extreme upper throat is grayish. The tawny color of the breast does not extend as far up as in the Bolivian birds, nor as far along the sides and flanks.

¹According to Dr. Hellmayr, *Attila brasiliensis* and *A. spadiceus* prove to be mutants of the same bird. The earliest name is *A. spadiceus spadiceus* (GMELIN). This has been pointed out at length in Field. Mus. Nat. Hist., Zool. Ser., XIII, part 6, 1929, pp. 128-131.

²*Attila ruficularis* PELZELN ('Orn. Bras.,' II, 1868, pp. 96, 170; Salto do Girão) is based on individual variation of *A. s. spadiceus*.

When discovered, this bird was carrying nesting material, wet, black-colored rootlets and green mosses to the crotch of a large tree, where a half-built nest was found about three feet from the ground. The nest-tree was in the densest part of a belt of forest along the Rio Paraguay.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Bolivia, Rio Espirito Santo, mouth of Rio San Antonio	1 ♂	96	80.5	23	A. M. N. H.
Bolivia, Mission San Antonio	1 ♀	90.5	74.5	22.5	"
" Todos Santos	1 ♂	95.5	81.5	24	"
" " "	1 ♀	88.5	73.5	21.5	"
" " "	1 ♀	88	74	21.5	"
Brazil, Matto Grosso, Descal- vados	1 ♀	89	74	23	"

(3261) *Attila phœnicurus* Pelzeln

Attila phœnicurus PELZELN, 'Orn. Bras.,' II, 1868, pp. 96, 171 (Mattodentro [type] and Villa Bella, Matto Grosso); SCLATER, 'Cat. B. Brit., Mus.,' XIV, 1888, p. 358 (Brazil).

Attila phœnicurus IHERING, 'Cat. F. Braz.,' I, 1907, p. 311 (Matto Grosso).

No specimens collected.

RANGE.—Brazil, in states of São Paulo (Mattodentro, Ubatuba), Paraná (Curytiba), Goyaz (City), and Matto Grosso (Villa Bella de Matto Grosso).

(3265) *Casiornis rufa* (Vieillot)

Thamnophilus rufus VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., III, 1816, p. 316 (based on Azara's *Batara roxo*, No. 218, Paraguay).

Casiornis rubra PELZELN, 'Orn. Bras.,' II, 1868, p. 96 (Engenho do Gama, Matto Grosso); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 365 (Brazil, Paraguay, Argentina); ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 110 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 311 (Matto Grosso); GRANT, Ibis, 1911, p. 125 (Puerto San Juan, Paraguay).

Paraguay: Trinidad, 1 ♂; Fort Wheeler, 1 ♂; Rio Negro, 1 ♂, 1 ♀. Matto Grosso: Urucúm, 2 ♀, 1 im.; Belvedere de Urucúm, 1 ♀. In life the eye is dark; maxilla black; mandible and feet slate-gray.

RANGE.—Central Brazilian Plateau from Maranhão south to São Paulo, Minas Geraes, and Matto Grosso (Chapada, Engenho do Gama, Urucúm). Bolivia (San Francisco, Bolivian Chaco); Paraguay (Trinidad, Fort Wheeler, Puerto San Juan); Argentina.

This bird was not uncommon in the forested areas.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Paraguay, Trinidad, 1 ♂;					
Fort Wheeler, 1 ♂; Rio					
Negro, 1 ♂	3 ♂	86.8	82.5	14.5	A. M. N. H.
Paraguay, Rio Negro	1 ♀	83	79	16	"
Brazil, Matto Grosso, Belvedere de Urucúm, 1 ♀; Uru-					
cúm, 3 ♀; Chapada, 2 ♀	6 ♀	79.1	73.7	14.3	"

(3293) *Cotinga cayana* (Linnæus)

Ampelis cayana LINNÆUS, 'Syst. Nat.,' I, 12th Ed., 1766, p. 298 ("Cayana"); PELZELN, 'Orn. Bras.,' II, 1868, p. 133 (Borba, Rio Xié, Rio Vaupé, São Jeronymo, Rio Negro, Barra do Rio Negro, Pará); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 385 (Guiana, Amazonia).

Cotinga cayana IHERING, 'Cat. F. Braz.,' I, 1907, p. 314 (Amazonia).

Rio Roosevelt, Camp 6, 1 ♂, 1 ♀.

RANGE.—Guianas; Amazonia (Pará, Borba, Rio Negro, Barra do Rio Negro); Matto Grosso (Rio Roosevelt, Camp 6); eastern Ecuador; eastern Peru, south to northern Bolivia.

(3297) *Xipholena punicea* (Pallas)

Turdus puniceus PALLAS, in Vroeg's 'Catal., Adumbrat.,' 1764, p. 2 (South America).

Xipholena pompadora PELZELN, 'Orn. Bras.,' II, 1868, p. 133 (Barra do Rio Negro, Rio Xié, Rio Içanna, Rio Vaupé, Rio Negro); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 387 (Guiana, Surinam, Cayenne).

Xipholena punicea IHERING, 'Cat. F. Braz.,' I, 1907, p. 314 (Amazonia).

Rio Roosevelt, Camp 6, 1 ♂, 1 ♀; Barão Melgaço, 1 ♂.

RANGE.—Amazonia (Barra do Rio Negro, Rio Xié, Rio Içanna, Rio Vaupé, Rio Negro, Rio Jurua); Matto Grosso (Rio Roosevelt, Camp 6; Barão Melgaço); Guiana.

(3315) *Cephalopterus ornatus* Geoffroy St.-Hilaire

Cephalopterus ornatus GEOFFROY ST.-HILAIRE, Ann. Mus. Hist. Nat. Paris, XIII, 1809, p. 238, Pl. xv (Brésil); PELZELN, 'Orn. Bras.,' II, 1868, p. 135 (Rio Galera, Villa Maria, Caiçara, Engenho do Cap. Gama, Rio Guaporé, Ponte do Guaporé, São Vicente); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 399 (Amazonia, Matto Grosso, Engenho do Gama, Bolivia, Tilotilo, Yungas, Huacahamache); IHERING, 'Cat. F. Braz.,' I, 1907, p. 316 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Cuyabá, Matto Grosso, Rio Galera, Villa Maria, Caiçara, Engenho do Cap. Gama, Rio Guaporé, Ponte do Guaporé, São Vicente); Amazonia (Forte do Principe, Forte do Rio Branco, Rio Branco, Takutú, Rio Cauamé, Serra Caraumán). Guiana; Venezuela; Ecuador; Peru; Bolivia (Tilotilo, Yungas, Huacahamache).

(3318) **Gymnoderus foetidus** (Linnæus)

Gracula foetida LINNÆUS, 'Syst. Nat.,' I, 10th Ed., 1758, p. 108 (ex Rolander, "America" = Surinam).

Gymnoderus foetidus PELZELN, 'Orn. Bras.,' II, 1868, p. 135 (Villa Maria, Rio do Cabaçal, Retiro, Caiçara, Engenho do Gama, Matto Grosso, Rio Guaporé); SCLATER, 'Cat. B. Brit. Mus.,' XIV, 1888, p. 402 (Caiçara, Matto Grosso); IHERING, 'Cat. F. Bras.,' I, 1907, p. 316 (Matto Grosso).

Descalvados, 1 ♂. In the fresh bird the following notes on the color were made: bare skin of the head and neck pale cobalt blue; eye red; bill blue-gray basally and blackish at the tip; a broad, unfeathered abdominal tract having the skin tough and much thickened and of the same cobalt blue as the head and neck; feet blue-gray, about the same shade as the base of the bill.

RANGE.—Guianas; southern Venezuela; Brazil, in states of Pará (Quati-purú, Mexiana, Monte Alegre), Amazonas (Borba, Barra do Rio Negro, Rio Purús [Monte Verde], and Matto Grosso (Villa Maria, Rio do Cabaçal, Retiro, Caiçara, Engenho do Gama, Matto Grosso, Rio Guaporé, Descalvados); eastern Ecuador, Peru; northern Bolivia.

Normally the bright blue abdominal skin is covered by the feathers of the sides and flanks. This specimen was flushed from the ground beneath a tree bearing berry-like fruit. Mr. Cherrie believed that the bird had been feeding on fallen fruit. This was the first occasion when this species was seen on the ground; previously they were observed in the tree-tops only.

(3326) **Riparia riparia riparia** (Linnæus)

Hirundo riparia LINNÆUS, 'Syst. Nat.,' I, 10th Ed., 1758, p. 192 (habitat in Europa).

Cotyle riparia PELZELN, 'Orn. Bras.,' I, 1868, p. 18 (Caiçara); SHARPE, 'Cat. B. Brit. Mus.,' X, 1885, p. 99 (North America, ranging as far south as Brazil in winter); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 469 (North and South America).

Riparia riparia IHERING, 'Cat. F. Braz.,' I, 1907, p. 339 (Matto Grosso).

Tapirapoan, 1 ♂.

RANGE.—Brazil: Matto Grosso (Tapirapoan, Caiçara); Bahia (Joazeiro); Amazonas (Rio Negro). Peru; Colombia; Bolivia. Winter visitor to South America.

"The bank swallow was observed at many points along the upper Rio Paraguay and at suitable localities along streams that we recrossed on the tableland in the journey toward the Rio Roosevelt, and also along that stream."

(3327) **Iridoprocne albiventris** (Boddaert)

Hirundo albiventris BODDAERT, 'Tabl. Pl. Enl.,' 1783, p. 32 (based on Daubenton 'Pl. Enl.,' 546, fig. 2, Cayenne).

Tachycineta albiventris SHARPE, 'Cat. B. Brit. Mus.,' X, 1885, p. 113 (from southern Brazil throughout Amazonia); SALVADORI, Boll. Mus. Torino, XV, No. 378.

1900, p. 3 (Carandasinho, Matto Grosso); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 469 (Amazonia and neighboring states).

Tachycineta albiventer IHERING, 'Cat. F. Braz.,' I, 1907, p. 339 (range in Brazil).
No specimens collected.

RANGE.—Brazil: São Paulo (Pirahy, Ypanema); Matto Grosso (Carandasinho); Minas Geraes; Rio de Janeiro; Amazonia, from northern Maranhão to the Rio Purús. Colombia; Venezuela; and Guiana; south to Buenos Aires.

"Common all along the Rio Roosevelt, particularly in the upper stretches of the river where they often formed an important feature of the landscape. Dozens huddled together in compact rows along the twigs and branches of half-submerged dead trees. At the approach of the canoes they would take wing with one accord and the air would pulsate with twittering, eager bird life."

(3328) *Iridoprocne leucorrhoa* (Vieillot)

Hirundo leucorrhoa VIEILLOT, 'Nouv. Dict. Hist. Nat.,' nouv. éd., XIV, 1817, p. 519 (based on Azara, No. 304, Paraguay).

Petrochelidon leucorrhoa PELZELN, 'Orn. Bras.,' I, 1868, p. 17 (Villa Bella de Matto Grosso).

Tachycineta leucorrhoa IHERING, 'Cat. Faun. Braz.,' I, 1907, p. 339 (Matto Grosso).

No specimens collected.

RANGE.—Southern Brazil, in states of Matto Grosso (Villa Bella), Minas Geraes (Marianna), São Paulo (Ypiranga, Iguapé, Cachoeira, Jundiáhy, Ypanema), and Rio Grande do Sul (Mundo Novo, Pedras Brancas, São Lourenço); Uruguay; Paraguay; Argentina, south to the Chubut; southeastern Peru.

Three adults taken by Natterer on June 15, 1826, at Villa Bella de Matto Grosso, constitute the only record of this swallow for the state.

(3331) *Hirundo rustica erythrogaster* Boddaert

Hirundo erythrogaster BODDAERT, 'Tabl. Pl. Enl.,' 1783, p. 45 (Cayenne); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 469 (Pará, Marajó, Rio Jamundá [Faro]).

Hirundo erythrogastra SHARPE, 'Cat. B. Brit. Mus.,' X, 1885, p. 137 (in winter as far south as southern Brazil); PELZELN, 'Orn. Bras.,' I, 1868, p. 18 (Engenho do Cap. Gama, Matto Grosso, Amazonia [Marabitanas, Rio Negro]); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 346 (Corumbá); IHERING, 'Cat. F. Braz.,' I, 1907, p. 340 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Corumbá, Engenho do Cap. Gama); Amazonia (Marabitanas, Rio Negro; Pará; Marajó; Rio Jamundá, Faro). Venezuela; Paraguay; Argentina; Chile; South America generally.

Only a winter visitor to South America.

(3334) *Progne chalybea domestica* (Vieillot)

Hirundo domestica VIEILLOT, 'Nouv. Dict. Hist. Nat.,' nouv. éd., XIV, 1817, p. 520 (based on Azara, No. 300, Paraguay and Rio de la Plata).

Progne domestica PELZELN, 'Orn. Bras.,' I, 1868, p. 17 (Caiçara); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 346 (Chapada).

Progne chalybea (sic) *domestica* IHERING, 'Cat. Faun. Braz.,' I, 1907, p. 340 (Matto Grosso).

Progne chalybea domestica MÉNÉGAUX, 'Rev. Franc. d'Orn.,' V, 1917, p. 58 (Poconé, Corumbá).

No specimens collected.

RANGE.—Eastern and southern Brazil, from southern Piauhuy south to Matto Grosso (Caiçara, Chapada, Poconé, Corumbá) and Rio Grande do Sul; Uruguay; Paraguay; eastern Bolivia; northern Argentina.

Although no specimens have been taken, there can be little doubt that the gray-breasted martin, so common at many points in the tableland of Matto Grosso, belonged to the large southern race, to which birds from Chapada, in the Museum collections, as well as two adult females from Piraputanga, in Field Museum, are clearly referable. It evidently replaces typical *P. c. chalybea* south of the Amazonian-Paraguayan watershed.

(3335) *Progne chalybea chalybea* (Gmelin)

Hirundo chalybea GMELIN, 'Syst. Nat.,' I, (2), 1789, p. 1026 (based on Brisson and Daubenton, 'Pl. Enl.,' 545, fig. 2, Cayenne).

Progne chalybea SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 471 (Pará, Rio Purús, Marajó, Amapá, Monte Alegre); SHARPE, 'Cat. B. Brit. Mus.,' X, 1885, p. 178 (part; upper Amazons, Pará, Guiana, Cayenne, Bolivia); IHERING, 'Cat. F. Braz.,' I, 1907, p. 340 (range).

Uturity, 1 ♀; Calama, 1 ♂.

RANGE.—Northern South America, south to Pará and northern Matto Grosso (Uturity).

At Uturity on the Rio Papagaio the gray-breasted martin was abundant. The specimens taken are typical of this form.

The perfect plumage, and the much enlarged testes of the Calama specimen, taken March 31, would indicate that it was at the breeding time.

(3336) *Phæoprogne tapera fusca*¹ (Vieillot)

Figure 37

Hirundo fusca VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XIV, 1817, p. 510; 'Tabl. Encycl. Meth.,' Orn., II, p. 529 (based on *Golondrina parda*, Azara, 'Apunt.,' II, 1805, p. 505, No. 301, Paraguay).

¹See Smithsonian Misc. Coll., 1865, part I, p. 285.

Progne tapera SHARPE, 'Cat. B. Brit. Mus.,' X, 1885, p. 180 (Brazil, S. E. Brazil); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 346 (Chapada, Corumbá, Uacuryzal, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 340 (Matto Grosso); GRANT, Ibis, 1911, p. 90 (Rabicho, Brazil; near Villa Pilar, Paraguay); MÉNÉGAUX, 'Rev. Franc. d'Orn.,' V, 1917, p. 58 (Corumbá).

Petrochelidon tapera PELZELN, 'Orn. Bras.,' I, 1868, p. 17 (Matto Grosso, Engenho do Cap. Gama, Ant. Correia, Cuyabá, Caiçara).

Paraguay: Fort Wheeler, 1 ♂. Matto Grosso: Descalvados, 1 ♂, 1 ♀; Urucúm, 3 ♂, 1 ♀; Agua Blanca de Corumbá, 1 ♂; Rio São Lourenço, 1 ♀; Palmiras, 1 ♂, 1 ♀.

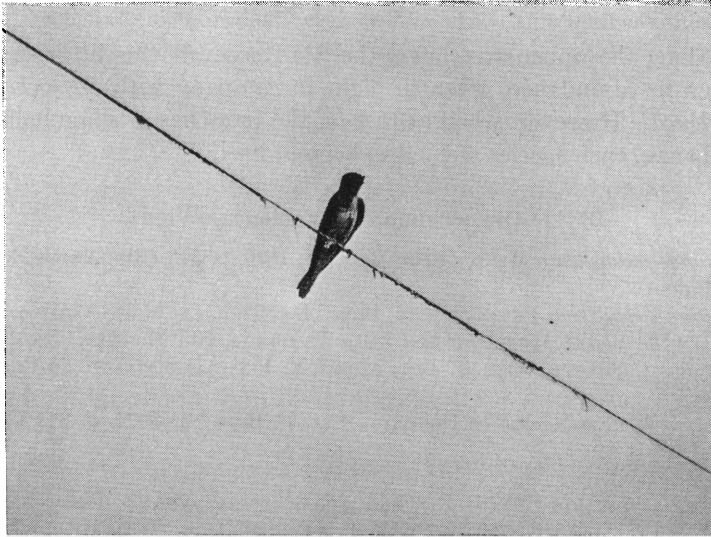


Fig. 37. *Phæoprogne tapera fusca* (Vieillot), Descalvados, Matto Grosso, Brazil.

RANGE.—Argentina (Los Yngleses, Ajó); Paraguay (Fort Wheeler, near Villa Pilar). Brazil: in states of Rio Grande do Sul and Matto Grosso (Agua Blanca de Corumbá, Descalvados, Rio São Lourenço, Palmiras, Chapada, Uacuryzal, Engenho do Cap. Gama, Ant. Correia, Cuyabá, Caiçara).

These birds are typical examples of the species with many dusky-centered feathers along the median breast-line. A specimen from the Museu Goeldi, Pará, collected by Dr. Snethlage on the Rio Xingú, is without the dusky-centered breast feathers and represents the type of bird to which Dr. Chapman has given the name *P. t. immaculata*¹ [= *Phæoprogne tapera tapera* (Linnæus)].

"The abandoned nests of the ovenbird were favorite nesting-sites for this martin and I frequently saw an ovenbird driving the martins

¹Bull. Amer. Mus. Nat. Hist., XXXI, 1912, p. 156.

away from occupied nests. December seemed to be the height of the nesting season at Descalvados."

(3337) *Atticora fasciata* (Gmelin)

Hirundo fasciata GMELIN, 'Syst. Nat.,' I, (2), 1789, p. 1022 (based on Daubenton, 'Pl. Enl.,' 724, fig. 2, Cayenne).

Atticora fasciata PELZELN, 'Orn. Bras.,' I, 1868, p. 18 (Rio Guaporé, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 341 (Matto Grosso).

Rio Roosevelt, 1 ♀.

RANGE.—Brazil: Matto Grosso (Rio Roosevelt, Rio Guaporé); Amazonia, from Pará to the Rio Purús. Guiana; Venezuela; Bolivia; Peru; Ecuador.

"Along the upper stretches of the Rio Roosevelt this little swallow was seen in abundance, often in flight in company with *Diplochelidon melanoleuca*. However, when at rest on the branches of some half-submerged snag, each species seemed to keep to itself."

(3341) *Diplochelidon melanoleuca* (Wied)

Hirundo melanoleuca WIED, 'Reise Bras.,' I, 1820, p. 345 (Rio Grande de Belmonte, Bahia).

Atticora melanoleuca PELZELN, 'Orn. Bras.,' I, 1868, p. 18 (Matto Grosso, Forte do Principe de Beira; Bananeira and Salto Theotônio, Rio Madeira; Rio Negro, Marabitanas); SHARPE, 'Cat. B. Brit. Mus.,' X, 1885, p. 185 (Forte do Principe, Brazil).

Diplochelidon melanoleucus IHERING, 'Cat. F. Braz.,' I, 1907, p. 341 (Matto Grosso).

Rio Branco, 1 ♂, 1 (?).

RANGE.—East Brazil (Bahia, Rio Grande de Belmonte); Goyaz (Borda do Matto da Paranaíba); Matto Grosso (Forte do Principe de Beira, Salto Theotônio, Rio Madeira; Rio Branco); Amazonas (Rio Negro, Marabitanas). Venezuela; Guiana.

Noted everywhere on the journey down the Rio Roosevelt, but more abundant below the long series of falls and rapids in the middle course of the river from above.

(3342) *Pygochelidon cyanoleuca* (Vieillot)

Hirundo cyanoleuca VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XIV, 1817, p. 509 (based on Azara, No. 303, Paraguay).

Atticora cyanoleuca ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 346 (Chapada).

Diplochelidon cyanoleucus IHERING, 'Cat. F. Braz.,' I, 1907, p. 341 (Matto Grosso).

No specimens collected.

RANGE.—South America down to Paraguay; Argentina (Los Yngleses, Ajo); Bolivia (Caiza). Brazil: Rio de Janeiro; São Paulo (Ypanema); Minas Geraes (Lagôa Santa); Matto Grosso (Chapada).

(3344) *Alopocheidon fucata* (Temminck)

Hirundo fucata TEMMINCK, 'Nouv. Rec. Pl. Col.' livr. 27, Oct., 1822, Pl. CLXI, fig. 1 (Brésil).

Atticora fucata SHARPE, 'Cat. B. Brit. Mus.', X, 1885, p. 188 (Guiana and Brazil); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 346 (Chapada, Matto Grosso).

Alopocheidon fucatus IHERING, 'Cat. F. Braz.', I, 1907, p. 342 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Rio Grande do Sul; Minas Geraes (Lagôa Santa, Paracatú); São Paulo (Casa Pintada, Ypanema, Itararé); Matto Grosso (Chapada). Paraguay (Mortero); northern Argentina (from Salta, Chaco, and Corrientes south to Cordoba); Guiana (Roraima, Rio da Prata); Venezuela (near Cumaná and Caracas).

(3345) *Petrochelidon pyrrhonota* (Vieillot)

Hirundo pyrrhonota VIEILLOT, 'Nouv. Dict. d'Hist. Nat.' nouv. éd., XIV, 1817, p. 519 (based on *Golondrina rabadilla acanelada* Azara, 'Apunt.', II, p. 511; Paraguay).

Petrochelidon americana PELZELN, 'Orn. Bras.', I, 1868, p. 17 (Engenho do Cap. Gama, Matto Grosso).

Petrochelidon pyrrhonota SHARPE, 'Cat. B. Brit. Mus.', X, 1885, p. 193 (Brazil and Paraguay); IHERING, 'Cat. F. Braz.', I, 1907, p. 342 (Matto Grosso).

No specimens collected.

RANGE.—North America to Argentina; Brazil [São Paulo (Itararé, Pranapitanga, Irisanga)]; Matto Grosso (Engenho do Cap. Gama); Argentina (Luiconia, Ajo); Paraguay.

A winter visitor to South America.

(3347) *Stelgidopteryx ruficollis ruficollis* (Vieillot)

Hirundo ruficollis VIEILLOT, 'Nouv. Dict. d'Hist. Nat.' nouv. éd., XIV, 1817, p. 523; "Brésil" = Rio de Janeiro, coll. Delalande (see Pucheran, Rev. Mag. Zool., (2), V, 1853, p. 442).

Cotyle flavigastra PELZELN, 'Orn. Bras.', I, 1868, p. 17 (Matto Grosso, Cuyabá, Caiçara).

Stelgidopteryx ruficollis SHARPE, 'Cat. B. Brit. Mus.', X, 1885, p. 208 (Brazil, Amazonia); GRANT, Ibis, 1911, p. 92 (Rabicho, Brazil); IHERING, 'Cat. F. Braz.', I, 1907, p. 342 (Matto Grosso); BAIRD, 'Review Am. Birds,' 1865, p. 315, footnote (Brazil); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 472 (Brazil, Bolivia, Amazonia).

Descalvados, 1 ♂; Tapirapoan, 1 ♂; Calama, 2 ♀; collected by Leo E. Miller.

RANGE.—Brazil: Rio de Janeiro; São Paulo (Casa Pintada, Ypanema); Matto Grosso (Cuyabá, Tapirapoan, Descalvados, Caiçara, Rabicho); Minas Geraes (Lagôa Santa); Pará; Amazonia (Rio Xingú, Rio Jamauchim, Rio Tapajóz). N. Argentina (Colonia Mihanovitch); Bolivia.

The South American rough-winged swallow was common at many points along the Rio Roosevelt.

(3350) *Polioptila dumicola dumicola* (Vieillot)

Sylvia dumicola VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XI, 1817, p. 170 (based on *Contramæstre azuladillo*, Azara, No. 158, Paraguay).

Polioptila dumicola GRANT, Ibis, 1911, p. 84 (Villa Franca, Cabo Emma, Paraguay); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 342 (Corumbá).

Paraguay: Fort Wheeler, 2 ♂; Puerto Pinasco, 1 ♂, 1 ♀. Matto Grosso: Urucúm, 2 ♂, 3 ♀; Belvedere de Urucúm, 2 ♂.

RANGE.—Paraguay (Fort Wheeler, Puerto Pinasco, Villa Franca, Cabo Emma); central and southern Bolivia (Caiza); Uruguay; Argentina (south to Buenos Aires and Cordoba). Brazil: Matto Grosso (Corumbá, Urucúm, Belvedere de Urucúm) and Rio Grande do Sul.

"There is a very considerable amount of individual variation shown in the fifteen specimens in the collection, but the uniform blue-gray of the throat, fore-neck, and breast, at a glance serves to distinguish this species from the northern Matto Grosso form, *P. dumicola berlepschi*. "At Puerto Pinasco the breeding season begins in September, and early in that month parties of gnatcatchers are seen in the thickets, the males whispering the few notes that form their squeaky little song as they flit from twig to twig, in their restless search for insect prey, or stopping with widely spread tails and loosely fluttering wings to do court to their modest little companions."

(3351) *Polioptila dumicola berlepschi* Hellmayr

Polioptila berlepschi HELLMAYR, Nov. Zoöl., VIII, 1901, p. 356 (Rio Paraná, São Paulo); IHERING, 'Cat. F. Braz.,' I, 1907, p. 328 (Porto da Faya); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 84 (Caceres).

Polioptila dumicola (not of Vieillot) PELZELN, 'Orn. Bras.,' II, 1868, p. 70 (Matto Grosso, Cuyabá, Engenho do Gama).

Polioptila boliviana (not of Selater) LEVERKÜHN, Journ. f. Ornith., XXXVII, 1889, p. 109 (Cuyabá, Cachoeirinha); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 342 (Chapada, Cachoeira, Abrilongo, Matto Grosso); HELLMAYR, Nov. Zoöl., VII, 1900, p. 536 (Cuyabá, Matto Grosso).

Rio São Lourenço, 1 ♂, 1 ♀; Tapirapoan, 2 ♂.

RANGE.—Brazil, in states of São Paulo (Rio Paraná, Rio das Pedras, Itapura), Goyaz, Minas Geraes, and Matto Grosso (Cuyabá, Engenho do Gama, Rio São Lourenço, Tapirapoan, Chapada, Cachoeira, Cachoeirinha, Abrilongo, Caceres). Bolivia (Chiquitos).

All the gnatcatchers collected north of Corumbá represented by specimens from the Rio São Lourenço and Tapirapoan are of this form. The Chapada, Matto Grosso, birds recorded by Dr. Allen belong to the same race.



Heleodytes unicolor (Lafresnaye), ♂, ♀, Descalvados, Matto Grosso, Brazil, November 20, 1916, Roosevelt Expedition; George K. Cherrie.

(3377) *Heleodytes unicolor*¹ (Lafresnaye)

Plate XVI

Campylorhynchus unicolor LAFRESNAYE, Rev. Zool., 1846, p. 93 (Guarayos, Bolivia); PELZELN, 'Orn. Bras.,' I, 1867, p. 49 (Cuyabá); SHARPE, 'Cat. B. Brit. Mus.,' VI, 1881, p. 190 (western Brazil and Bolivia); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 343 (Uacuryzal, near Corumbá, Matto Grosso); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 3 (Urucúm).

Heleodytes unicolor IHERING, 'Cat. F. Braz.,' I, 1907, p. 322 (Matto Grosso); LIMA, Rev. Mus. Paul., XII, (2), 1920, p. 94 (Matto Grosso).

Descalvados, 1 ♂, 2 ♀; Urucúm, 3 ♂, 2 ♀; Agua Blanca de Corumbá, 1 ♂; Tapirapoan, 1 ♀; Palmiras, 1 ♂; Rio São Lourenço, 1 ♂. An adult female had the eye yellowish red; feet slate-gray; maxilla blackish and mandible pale.

RANGE.—West Brazil: Matto Grosso (Corumbá, Uacuryzal, near Corumbá, Cuyabá, Urucúm, Agua Blanca de Corumbá, Descalvados, Tapirapoan, Palmiras, Rio São Lourenço). Bolivia (Guarayos).

The geographical range of this species is doubtless quite restricted as it has been included in very few collections. It was only observed at the points enumerated above. At Urucúm, during November and December, brown cactus wrens were to be seen in family parties frequenting the thickets that bordered the cultivated fields. The song was not heard and the breeding season seemed to have closed; but on the supplementary expedition, while Mr. Cherrie was located at Descalvados, at the same relative season, November, the song was frequently heard and several nests were found.

"This species apparently² has habits similar to those that were noted in its northern relatives, the large cactus wren and the fulvous-naped cactus wren (*H. griseus* and *H. nuchalis*), employing abandoned nests of other birds which were refurnished and relined. About Descalvados, old nests of a species of fire-wood gatherer (*Phacellodomus*) seemed to be preferred. With such a nest as a foundation the brown cactus wren proceeds first to prepare a soft bed of feathers for the eggs, and then to stuff every crevice and cranny between the sticks with masses of soft, fine rootlets, grasses, half-rotted leaves or feathers; the result is a most untidy affair."

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Matto Grosso, Urucúm, 3 ♂; Rio São Lourenço, 1 ♂; Palmiras, Rio Taquary, 1 ♂; Descalvados, 1 ♂; Uacuryzal, near Corumbá, 2 ♂	8 ♂	86.5	77.8	20.1	A. M. N. H.

¹Dr. Hellmayr has compared five topotypes from Bolivia (Guarayos and Santa Cruz) with a series from Cuyabá, Matto Grosso, and can find no differences.

²Science Bulletin Brooklyn Museum, II, 1916, pp. 141-146.

Average Measurements (Continued)

	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Matto Grosso, Uru- cúm, near Corumbá, 2 ♀; Descalvados, 1 ♀; Tapira- poan, Siputuba River, 1 ♀	4 ♀	82.2	82.2	20.2	A.M.N.H.

(3384) *Odontorchilus cinereus* (Pelzeln)

Odontorhynchus cinereus PELZELN, 'Orn. Bras.,' I, 1868, p. 48 (Salto do Girão, Rio Madeira, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 322 (Matto Grosso). No specimens collected.

RANGE.—Brazil, Matto Grosso, Salto do Girão, Rio Madeira. This is a lower Amazonian form ranging from the Tapajóz to the upper Rio Madeira.

(3390) *Thryophilus leucotis albipectus* (Cabanis)

Thryothorus albipectus CABANIS, in Schomburgk's 'Reisen Brit. Guiana,' III, 1848, p. 673 (Cayenne).

Thryothorus leucotis (not of Lafresnaye) PELZELN, 'Orn. Bras.,' I, 1868, p. 47 (Salto do Girão, Rio Madeira, Matto Grosso; Forte do Rio Branco, Rio Branco).

Thryophilus albipectus IHERING, 'Cat. F. Braz.,' I, 1907, p. 322 (Guiana, Amazonia); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 492 (Amazonia, Guyana).

São João, Rio Roosevelt, 1 ♂ ad.

RANGE.—Guiana; southern Venezuela (Caura-Orinoco basin); and northern Brazil, west to the Rio Negro and Rio Madeira, south to northern Matto Grosso (Rio Roosevelt).

The specimen had the testes much enlarged and was taken together with an unfinished nest.

(3394) *Thryophilus leucotis rufiventris* (Sclater)

Figure 38

Thryothorus rufiventris SCLATER, P. Z. S. L., 1870, p. 328 (Goyaz and Matto Grosso).

Thryothorus galbraithi (not of Lawrence) PELZELN, 'Orn. Bras.,' I, 1868, p. 47 (Rio Virissimo; Goyaz; Cuyabá, Matto Grosso).

Thryophilus galbraithi SHARPE, 'Cat. B. Brit. Mus.,' VI, 1881, p. 208 (Central Brazil); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 343 (Chapada, Matto Grosso).

Thryophilus albipectus rufiventris IHERING, 'Cat. F. Braz.,' I, 1907, p. 323 (Matto Grosso); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 84 (Caceres).

Descalvados, 2 ♂; Rio São Lourenço, 1 ♂, 1 ♀.

RANGE.—Matto Grosso (Cuyabá, Chapada, Descalvados, Rio São Lourenço, Caceres); northeastern São Paulo (Barretos, on the Rio Grande); Goyaz (City of Goyaz, Rio Theouras, Rio Araguaya, Rio Parnahyba, Leopoldina, Araguaya); southern Piauí (Santa Philomena, Rio Taquarussú).¹

¹*T. l. rufiventris* and *T. guarayanus* may be geographical representatives, but the fact that *T. l. rufiventris* has been found at Descalvados about half-way between Villa Bella and Corumbá, which mark the limits of the Brazilian range of *T. guarayanus*, leads me to agree with Dr. Hellmayr, from whom I have received the above information, that they should be kept as separate species.

These specimens, compared with examples from Rio Araguaya, Goyaz, are a richer, deeper ochraceous below and have a deeper rusty brownish wash on the upperparts.

"Nests and eggs were found at Descalvados in early December. Usually the nest is placed within two or three feet of the ground, suspended between the leaf-stocks of a low, thorny palm, whose sharp, needle-like thorns surrounding it from all sides serve both as a support and a protection. Frequently the sharp thorns are set so thickly about the entrance that it is quite remarkable how the birds get in or out without being impaled.

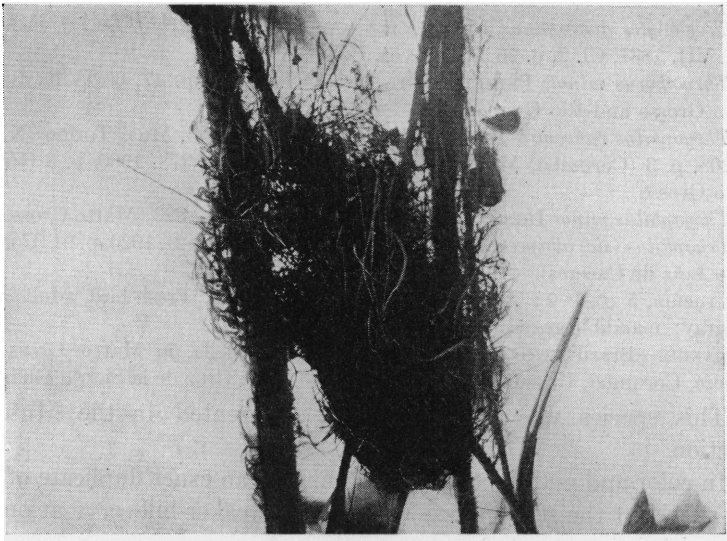


Fig. 38. Nest of *Thryophilus leucotis rufiventris* (Sclater), about one meter from the ground in a thorny palm, Descalvados, Matto Grosso, Brazil.

"The nest is a purse- or retort-shaped affair and is suspended by the neck. One found at Descalvados, December 6, was constructed entirely of blackish-brown grasses and vegetable fibers and rootlets that formed an untidy looking mass; the entrance was not only protected by the surrounding thorns, but hidden by loosely hanging nesting material that had to be brushed aside each time the parent bird entered or left the nest. This nest contained four eggs in which incubation was far advanced. Two of the eggs measure 15.5×20 and 14.5×19 mm. respectively. They are ovate in form. In color they are very pale olive-buff all over, thickly speckled with hazel-brown, but the spots are so crowded about the larger end that they form a well-defined band."

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Goyaz, Rio Araguaya	1 ♂	68	50	17.5	Munich
" " "	1 ♂	66	51	17	"
Brazil, Matto Grosso, Descalvados, 2 ♂; Rio São Lourenço, 1 ♂	3 ♂	71.6	52.8	18.3	A. M. N. H.
Brazil, Matto Grosso, Rio São Lourenço	1 ♀	65	49	18	"

(3395) *Thryophilus guarayanus* (Lafresnaye and d'Orbigny)¹

Troglodytes guarayanus LAFRESNAYE AND D'ORBIGNY, 'Syn. Av.,' I, in Mag. de Zool., VII, 1837, Cl. 2, p. 26 (Guarayos, Bolivia).

Thryothorus minor PELZELN, 'Orn. Bras.,' I, 1868, pp. 47, 66 (Villa Bella de Matto Grosso and Rio Guaporé).

Thryophilus rufiventris (not of Sclater) SALVADORI, Boll. Mus. Torino, X, 1895, No. 208, p. 3 (Corumbá, Matto Grosso); idem, XV, No. 378, 1900, p. 3 (Urucúm, Matto Grosso).

Thryophilus minor IHERING, 'Cat. F. Braz.,' I, 1907, p. 323 (Matto Grosso).

Thryophilus (sic) albipectus LIMA, Rev. Mus. Paul., XII, (2), 1920, p. 94 (Corumbá or São Luiz de Cáceres).

Urucúm, 5 ♂, 1 ♀; Agua Blanca de Corumbá, 1 ♀. Fresh bird, adult ♂: feet slate-gray; mandible grayish slate; maxilla blackish.

RANGE.—Brazil: western Matto Grosso (Villa Bella de Matto Grosso, Rio Guaporé, Corumbá, Urucúm); eastern Bolivia (Santa Cruz de la Sierra, Guarayos).

This species was not previously represented in the Museum's collection.

In color and marking this wren is almost an exact duplicate of *T. a. rufiventris*, but the smaller size and shorter, weaker bill serve at once to distinguish it.

Found about the gardens and in the shrubbery near the buildings at Urucúm, much as the house wren. Mr. Cherrie frequently heard the song but considered it not unusual.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Matto Grosso, Urucúm, near Corumbá	4 ♂	55.3	42.5	15.5	A. M. N. H.
Brazil, Matto Grosso, Agua Blanca de Corumbá	1 ♀	54	40	15	"

¹Hellmayr, Nov. Zool., XXVIII, 1921, pp. 272-273. Birds from Urucúm and Villa Bella are stated to be identical with others from east Bolivia.

(3412) *Pheugopedius genibarbis intercedens* (Hellmayr)

Thryothorus genibarbis intercedens HELLMAYR, Nov. Zoöl., XV, 1908, p. 17 (Rio Thesouras, Goyaz, Brazil); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 84 (Caceres).

Thryothorus genibarbis (not of Swainson) ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 343 (Chapada, Matto Grosso);

Thryothorus genibarbis IHERING, 'Cat. F. Braz.,' I, 1907, p. 323 (Matto Grosso).

Thryothorus melanos (not of Vieillot) PELZELN, 'Orn. Bras.,' I, 1868, p. 48 (part; Tenente Borges, Goyaz; Cuyabá, Engenho do Gama, Matto Grosso).

Thryothorus genibarbis intercedens LIMA, Rev. Mus. Paul., XII, (2), 1920, p. 94 (Matto Grosso).

Descalvados, 1 ♂; Tapirapoan, 1 ♂; 1 ♀; Barão Melgaço, 1 ♂, 1 ♀; Primavera, 1 ♂. Endemic to Matto Grosso.

RANGE.—Interior of Brazil, in the states of Goyaz (City of Goyaz, Faz. do Tenente Borges, Faz. Esperança, Rio Thesouras) and Matto Grosso (Descalvados, Tapirapoan, Barão Melgaço, Primavera, Cuyabá, Chapada, Villa Bella de Matto Grosso, Engenho do Gama, Caceres). *T. genibarbis genibarbis* Swainson, eastern Brazil, from Bahia to Pará and west to Borba, on the east bank of the Rio Madeira. *T. genibarbis juruanus* Ihering, northwest Brazil, from the left bank of the Rio Madeira (Humaythá) to the Rio Juruá.

One of the finest songsters of the Matto Grosso forest.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Matto Grosso, Descalvados, 1 ♂; Tapirapoan, 1 ♂; Primavera, 1 ♂; Barão Melgaço, 1 ♂; Chapada, 5 ♂	9 ♂	63.3	58.1	16.5	A. M. N. H.

(3438) *Troglodytes musculus musculus* Naumann

Troglodytes musculus NAUMANN, 'Vögel Deutschl.,' III, 1823, p. 724, table (Lichtenstein manuscript; Bahia); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 343 (Chapada, Matto Grosso); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 3 (Urucúm); GRANT, Ibis, 1911, p. 86 (Arjerichi, Villa Franca, Colonia Risso, Cabo Emma, Paraguay).

Thryothorus platensis PELZELN, 'Orn. Bras.,' I, 1868, p. 48 (Cuyabá, Villa Bella de Matto Grosso).

Troglodytes musculus rex IHERING, 'Cat. F. Braz.,' I, 1907, p. 326 (Matto Grosso).

Troglodytes musculus guariza (not of Des Murs) MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 84 (Poconé, Matto Grosso).

Paraguay: Trinidad, 1 ♀; Fort Wheeler, 1 ♂, 1 ♀; Puerto Pinasco, 1 ♂, 1 ♀. Matto Grosso: Urucúm, 1 ♂, 1 ♀, 1 ♀ (?); Belvedere de Urucúm, 2 ♂; Tapirapoan, 1 ♂.

RANGE.—Brazil, from Piahy and Ceará to São Paulo, west to Goyaz and Matto Grosso, south to Paraguay.

"This was the race of the house wren found in the Paraguayan Chaco. A nest was found at Fort Wheeler, October 9, 1916. It was built under the eaves of the ranch-house, a typical house wren's nest of sticks and straws, carefully lined with feathers. It contained seven fresh eggs, only one of which was taken. It is indistinguishable from eggs of other house wrens and measures 17×12.5 mm."

(3465) *Leucolepis modulator griseolateralis* (Ridgway)

Cyphorhinus griseolateralis RIDGWAY, Proc. U. S. Nat. Mus., X, 1887, p. 518 (Diamantina, near Santarém, Rio Tapajóz).

Leucolepis griseolateralis IHERING, 'Cat. F. Braz.,' I, 1907, p. 324 (Diamantina); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 489 (Rio Jamauchim).

Rio Roosevelt, 1 ♀; feet dusky horn color; maxilla black; mandible slate; eye red brown.

RANGE.—South bank of the lower Amazon from the Rio Tapajóz (Diamantina, near Santarém, Rio Jamauchim) along the Rio Madeira south to northern Matto Grosso (Maroins, Rio Machados, Rio Roosevelt).

The bird from the Rio Roosevelt agrees exactly with No. 352, a female, from Calama, on the Rio Madeira. Both have the upperparts clear brown, the sides of the neck, breast and abdomen earthy brown or ashy; flanks dark brownish. No. 946, from Maroins, Rio Machados, has the breast and abdomen dull ashy, dingy whitish tinged with pale brownish on the flanks. These four specimens thus present a considerable amount of individual variation.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Maroins, Rio Machados	1 ♂	61.5	35	17.5	Munich
Brazil, Maroins, Rio Machados, 1 ♀ juv.; Calama, 1 ♀; Rio Roosevelt, 1 ♀	3 ♀	60.3	35.1	16.5	A. M. N. H.

(3482) *Mimus triurus* (Vieillot)

Turdus triurus VIEILLOT, 'Nouv. Dict. Hist. Nat.,' nouv. éd., XX, 1818, p. 275 (based on Azara, No. 224, Paraguay).

Mimus triurus PELZELN, 'Orn. Bras.,' II, 1868, p. 94 (Caité, near the Rio Jaurú, Matto Grosso); IHERING, 'Cat. Faun. Braz.,' I, 1907, p. 326 (Matto Grosso).

RANGE.—Eastern Bolivia; southwestern Brazil, in state of Matto Grosso (Caité); Paraguay; northern Argentina; accidentally in Chile.

A single female obtained by Natterer at Caité, near the Rio Jaurú, on June 26, 1826, is the only record of this mocking-bird from Matto Grosso.

(3489) *Mimus saturninus frater* Hellmayr

Mimus saturninus frater HELLMAYR, Verhandl. Zool. Bot. Ges. Wien, LIII, 1903, p. 220 (São Paulo, Ypanema).

Mimus saturninus PELZELN, 'Orn. Bras.,' I, 1868, p. 95 (Cuyabá, Matto Grosso).

Mimus modulator ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 342 (Chapada, Matto Grosso).

Mimus saturninus modulator IHERING, 'Cat. F. Braz.,' I, 1907, p. 327 (Matto Grosso).

Tapirapoan, 1 ♂, 1 ♂ im.

RANGE.—Brazil: Maranhão (São Francisco, Codó, Grajahú); Piahy (Gilboez); Goyaz (Faz. Esperança, Catalão); São Paulo (Victoria, Ypanema); Minas Geraes (Prov. Araguary, Rio Jordão); Matto Grosso (Mirando, Chapada, Cuyabá, Tapirapoan). Bolivia (Trinidad).

Both specimens were moulting and in very ragged plumage. The song was not heard, only a few birds seen, and they were very wary.

The Matto Grosso birds are nearest *M. saturninus frater*, although a trifle smaller. I have seen a series of birds from São Paulo in the Munich Museum (type-locality of *M. s. frater*), but measurements given by Dr. Hellmayr¹ show the Matto Grosso bird to be smaller than those from São Paulo. Our series from Chapada, Matto Grosso, is even smaller than the birds listed by Dr. Hellmayr, but we refer them provisionally to *Mimus saturninus frater*. However, the birds from Bolivia and Matto Grosso may represent an undescribed race.

I do not consider *M. modulator* specifically distinct. It is a southern representative of *saturninus*, two specimens from Rio Grande do Sul being intermediate between *modulator* and *frater*.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Mimus saturninus saturninus</i>					
Brazil, Santarém	1 ♂	101	103 ²	18	A. M. N. H.
" "	1 ♀	99	98	18	"
<i>Mimus saturninus modulator</i>					
Argentina, near Buenos Aires	1 ♂	122	129	3	"
<i>Mimus saturninus frater</i>					
Brazil, Matto Grosso, Tapirapoan, 1 ♂; Chapada, 1 ♂	8 ♂	106.5	110.8	18	"

¹An Account of the birds collected by G. A. Baer in the State of Goyaz, Brazil; Nov. Zoöl., XV, 1908, p. 15.

²Tail moulting.

³Culmen broken.

Average Measurements (*Continued*)

	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Matto Grosso, Chapada, 6 ♀; Tapirapoan, 1 ♀	7 ♀	100.2	113.7	16.7	A. M. N. H.
Bolivia, Trinidad	1 ♀	97	117	17	"
" " "	1 ♀	103	110	17	"
Brazil, São Paulo, Victoria	1 ♂	117	124	18.5	Munich
" " "	1 ♂	115	122.5	18.5	"
" " "	3 ♀	105.3	119.1	18.1	"
" Minas Geraes, Agua Suja, near Bagagem	1 ♂	114.5	127.5	16.5	"
Brazil, Minas Geraes, Agua Suja, near Bagagem	1 ♀	104	115	17.5	"

(3498) *Donacobius atricapillus atricapillus* (Linnæus)

Turdus atricapilla LINNÆUS, 'Syst. Nat.,' I, 12th Ed., 1766, p. 295 (ex Brisson; "Cap. b. Spei." errore. East Brazil substituted as typical habitat; auct. Berlepsch and Hartert, 1902).

Donacobius atricapillus PELZELN, 'Orn. Bras.,' I, 1868, p. 49 (Cuyabá, Matto-grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 343 (Corumbá); SALVADORI, Boll. Mus. Torino, X, No. 208, 1895, p. 3 (Corumbá); IHERING, 'Cat. F. Braz.,' I, 1907, p. 328 (Matto Grosso); GRANT, Ibis, 1911, p. 85 (Boca de Homiguera, Brazil).

Fazenda do São João 1 ♂; Calama, 1 ♀.

RANGE.—From eastern Colombia, Venezuela, and Guiana through the greater part of Brazil south to Matto Grosso (Cuyabá, Corumbá, Fazenda do São João) and São Paulo; Paraguay and northeastern Argentina.

Dr. Chapman has discussed¹ at some length the great amount of color variation that may be observed in examples of this species obtained in different regions; and as there are only two specimens in the Roosevelt collection, I feel I could not add to our knowledge by further discussion. Our knowledge of this mocking-thrush must remain fragmentary until more careful studies have been made in the field and series of skins with reliable data accumulated by our museums, when there will probably be found to be several well-marked races.

Berlepsch and Hartert (Nov. Zoöl., IX, 1902, p. 4) were the first authors to designate a definite type-locality for this species, selecting as such "Eastern Brazil," and there seems to be no valid reason to reverse this action and substitute "Cayenne," as proposed by von Berlepsch in 1908.

¹Bull. Amer. Mus. Nat. Hist., XXXVI, 1917, pp. 123, 530.

(3515) *Planesticus rufiventris rufiventris*¹ (Vieillot)

Turdus rufiventris VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XX, 1818, p. 226 (Brésil); D'ORBIGNY, 'Voy. Amér. Mérid.,' Ois., 1838, p. 203 ("des environs de Buenos Ayres [en hiver] aux plaines brûlantes de Santa Cruz de la Sierra en Bolivia;'' descr. ♂, ♀); PELZELN, 'Orn. Bras.,' II, 1868, p. 94 (Rio de Janeiro, Sapitiba; São Paulo, Mattodentro, Ypanema; Paraná, Curytiba, Castro; Goyaz; Matto Grosso: Cuyabá); REINHARDT, Vidensk. Medd. Naturh. Foren. Kjobenhavn, 1870, p. 453 (Minas Geraes); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 2 (Urucúm, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 319 (Matto Grosso; Paraguay); GRANT, Ibis, 1911, p. 82 (Arjerichi; Sapatero-Cué, near Villa Franca, Paraguay).

Paraguay: Fort Wheeler, 2 ♂; Rio Negro, 1 ♂, 2 ♀. Matto Grosso: Urucúm, 2 ♂, 2 ♀; Agua Blanca de Corumbá, 1 ♂. Colors of the soft parts from a fresh bird: feet drab; eyelids yellow; eye dark; maxilla with upper half dusky, the lower half and the mandible yellowish olive.

RANGE.—From the vicinity of Buenos Aires and Córdoba, Argentina, as far north as the province of Santa Cruz de la Sierra, Bolivia and the Brazilian states Matto Grosso (Urucúm, Cuyabá, Agua Blanca de Corumbá), Goyaz, and southern Bahia; Paraguay (Fort Wheeler, Rio Negro, Asunción, Concepción).

The series compared with a couple of specimens in the Museum collection from Rio de Janeiro shows the general color above more olive and less grayish; a character long ago pointed out with reference to examples from Buenos Aires by Mr. Seebohm.²

Many examples of this thrush were seen in cages at Rio de Janeiro, at Asunción, and at Urucúm. At Urucúm it was common, frequenting the trees and thickets about the gardens and cultivated fields as well as inhabiting the thick forests thereabouts. Like most of the thrushes of the genus *Planesticus* it runs about on the ground in search of food. The song was often heard but was neither unusual in sweetness nor in strength. However, Mr. W. Foster considers it "the best singing bird in Paraguay,"³ and Hudson compares its song to that of the English song thrush.⁴ This species enjoys a wide range and is very constant in characters.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Paraguay, Fort Wheeler, Rio Negro	3 ♂	116.1	108.5	17.6	A. M. N. H.
Brazil, Matto Grosso, Urucúm; Agua Blanca de Corumbá	3 ♂	120.1	111.5	18.8	"

¹Dr. Hellmayr (*in lit.*) states that the grayish tone of the upperparts and breast is irrespective of locality, being a sign of the worn breeding plumage. It is, however, possible that birds from Bolivia, Paraguay, and Argentina are more brownish above and paler below than typical *rufiventris* from southern Brazil. Large series in fresh plumage should be compared. *T. chochí* Vieillot, based on Azara, No. 79, Paraguay, would be available for the western form, if separable.

²Cat. Birds Brit. Mus., V, 1881, p. 223.

³Chubb, on the 'Birds of Paraguay,' Ibis, 1910, p. 611.

⁴Argentine Ornithology, I, 1888, p. 3.

Average Measurements (*Continued*)

	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Matto Grosso, Urucúm, Agua Blanca de Corumbá	4 ♂	117.2	95.7	19.1	A. M. N. H.
Paraguay, Rio Negro	1 ♀	114	98	?	"
" " "	1 ♀	113	98.5	19	"

(3526) *Planesticus albicollis paraguayensis* (Chubb)

Turdus albicollis VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XX, 1818, p. 227 (Coll. Delalande fils, "Brésil," = Rio de Janeiro); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 340 (Chapada, Matto Grosso).

Merula albicollis paraguayensis CHUBB, Ibis, 1910, p. 608 (Sapucay, Paraguay).
No specimens collected.

RANGE.—Southeastern Brazil, Rio Grande do Sul to Rio de Janeiro and Matto Grosso (Chapada).

After seeing a large series in the Naumburg-Kaempfer Collection I believe this to be separable from *Planesticus albicollis albicollis* restricted to Rio de Janeiro and São Paulo.¹

(3529) *Planesticus amaurochalinus* (Cabanis)

Turdus amaurochalinus CABANIS, 'Mus. Hein.,' I, 1850, p. 5 (Brazil); GRANT, Ibis, 1911, p. 82 (Porto Esperança).

Paraguay: Fort Wheeler, 2 ♂. Matto Grosso: Urucúm, 1 ♀. Eye brown; feet dusky gray; bill yellowish horn-color.

RANGE.—From northern Argentina (north of Buenos Aires across to Mendoza) through Uruguay, Paraguay, and Bolivia to southeastern Peru, and all over Brazil north to Pará, westward to Santa Izabel, Rio Preto, Rio Madeira, south to Matto Grosso (Urucúm, Porto Esperança).

"The female collected December 3 was flushed from a nest containing two fresh eggs. The nest was placed in the crotch of a large tree in the thick forest only about eight feet from the ground. It is a typical "robin's" nest constructed of coarse plant-stems and dead forest-leaves cemented together with mud and lined with rootlets or root-like vegetable fibers. The nest-cavity is broadly cup-shaped, being 40 mm. deep by 75 mm. in diameter. The two eggs are short, ovate in form, a very pale drab in color, marked over the entire surface with dots, spots, and blotches of various shades of brown from a pale brownish drab to hazel and chestnut, the deeper colored markings being superimposed over the paler ones. The markings are largest and clustered most thickly about the larger end. The eggs measure 19.5×25, and 20×25.5 mm., respectively."

¹In Minas Geraes and Bahia this thrush is not found.

(3533) *Planesticus ignobilis debilis* (Hellmayr)

Turdus ignobilis debilis HELLMAYR, Journ. f. Ornith., 'L, 1902, p. 56 (Rio Madeira = Salto Theotonio); IHERING, 'Cat. F. Braz.,' I, 1907, p. 320 (Salto Theotonio, Matto Grosso); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 496 (Rio Purús [Bom Lugar], (?) Monte Alegre).

Turdus poiteauii PELZELN, 'Orn. Bras.,' II, 1868, p. 94 (Salto Theotonio).

No specimens collected.

RANGE.—Western Brazil, from the Rio Purús to the upper Rio Madeira (Salto Theotonio, Matto Grosso). Eastern Peru; Ecuador; and Colombia.

(3536) *Planesticus fumigatus fumigatus* (Lichtenstein)

Turdus fumigatus LICHTENSTEIN, 'Verz. Doubl., Berlin. Mus.,' 1823, p. 38 ("Brazil"); PELZELN, 'Orn. Bras.,' II, 1868, p. 94 (Engenho do Gama and São Vicente, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 319 (Matto Grosso).

No specimens collected.

RANGE.—Guiana; Venezuela; eastern Brazil, west to the lower Rio Madeira (Borba) and Matto Grosso (Engenho do Gama and São Vicente), south to the Rio Parnahyba, Rio de Janeiro.

The specimens obtained by Natterer in western Matto Grosso (Engenho do Gama, São Vicente) form the transition to *P. f. hauxwelli* by the white under tail-coverts and the reduction of the rusty inner margin of the remiges.

(3538) *Planesticus leucomelas leucomelas* (Vieillot)

Turdus leucomelas VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XX, 1818, p. 238 (ex Azara, No. 80, part; ♂ only; Paraguay); IHERING, 'Cat. F. Braz.,' I, 1907, p. 318 (Matto Grosso).

Turdus albiventer PELZELN, 'Orn. Bras.,' II, 1868, p. 93 (Cuyabá, Villa Bella de Matto Grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 341 (Chapada, Matto Grosso); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 3 (Urucúm).

Paraguay: Trinidad, 1 ♀. Matto Grosso: Urucúm, 2 ♂, 1 ♂ im., 1 ♀, 1 ? im.; Belvedere de Urucúm, 1 ♂; Juruena, 1 ♀ juv.; Tapirapoan, 2 ♀.

RANGE.—Northern Argentina (Territorio del Chaco), Paraguay, and southern Brazil, in the states of Rio de Janeiro, Minas Geraes, São Paulo, and Matto Grosso (Urucúm, Juruena, Tapirapoan, Chapada, Cuyabá, Villa Bella).

Our specimens from Paraguay and Matto Grosso agree with topotypes in the Munich Museum.

Average Measurements

	SEX	WING	TAIL	CULMEN
<i>Planesticus leucomelas leucomelas</i>				
Brazil, Matto Grosso,				
	6 ♂	120.1	102.2	18.5
Brazil, Matto Grosso,				
	4 ♀	116.6	96	19

Average Measurements (Continued)

	SEX	WING	TAIL	CULMEN
Brazil, Matto Grosso, Tapirapoan	1 ♀	109	89.5 ¹	19.5
Brazil, Matto Grosso, Juruena	1 ♀	110	90.5	18
Paraguay, Trinidad	1 ♀	102.5	99	20
<i>Planesticus leucomelas albiventer</i>				
Brazil, Sta. Izabel	♂	118	98	18
" Tamacury	?	116	94	16.5
" Pará	Juv. ♂	114.5	95	15
" Utinga	Im. ♀	114	91	18.5

(3540) *Planesticus subalaris* (Seebohm)

Merula subalaris SEEBOHM (Leverkühn MS.), P. Z. S., 1887, p. 557 (Jatubá); LEVERKÜHN, Journ. f. Orn., XXXVII, 1889, p. 103 (Jatubá); BERLEPSCH AND LEVERKÜHN, Ornith., VI, 1890, p. 5 (Jatubá, western Goyaz).

Turdus subalaris IHERING, 'Cat. F. Braz.,' I, 1907, p. 320 (Goyaz and Matto Grosso).

No specimens collected.

RANGE.—Brazil, in states of Paraná,² Goyaz (Jatubá), and Matto Grosso (Serra da Chapada). Paraguay (Puerto Bertoni); and Argentina (Santa Ana, Misiones).

The type, an adult male, was secured by Professor Behn, on September 7, 1847, at Jatubá, in western Goyaz. The British Museum has an adult male taken by the late Alphonse Robert in the Serra da Chapada, Matto Grosso (alt. 700–900 meters), on July 13, 1902.

(3540a) *Planesticus lawrencii* (Coues)

Turdus lawrencii COUES, Bull. U. S. Geol. and Geogr. Surv. Terr., V, No. 4, 1880, p. 570 (new name for *Turdus brunneus* Lawrence (not of Boddaert), Ibis, 1878, p. 57, Pl. I ("upper Amazon").

Turdus altiloquus TODD, Proc. Biol. Soc. Wash., XXXVIII, 1925, p. 92 (Arimã, Rio Purús, Brazil).

Barão Melgaço, 1 ♂; collected by L. E. Miller.

RANGE.—Western Brazil: Rio Purús (Arimã); Rio Solimões (São Paulo de Olivença, Tonantins, and Caviana); northern Matto Grosso (Barão Melgaço).

I have compared the type of *Turdus brunneus* Lawrence (= *Turdus lawrencii* Coues), in the American Museum collections, with nine specimens of *Turdus altiloquus* from the Rio Purús and the Rio Solimões, in the Carnegie Museum. The paler coloration of the Lawrence specimen is probably due to the age of the skin. In all other characters I find the type indistinguishable from the series from upper Amazonia.

¹Tail moulting.

²*Planesticus subalaris* Stolzmann, Ann. Zool. Mus. Pol. Hist. Nat., V, 1926, p. 183 (Marechal Mallet, Invernadinha, Cara Pintada, and Vermelho, Paraná).

(3550) *Hylocichla fuscescens fuscescens* (Stephens)

Turdus fuscescens STEPHENS, in Shaw's 'Gen. Zoöl.,' X, (1), 1817, p. 182 (the country to the north of Pennsylvania); PELZELN, 'Orn. Bras.,' II, 1868, p. 92 (São Vicente); SALVIN AND GODMAN, 'Biol. Centr. Am.,' Aves, I, 1879, p. 10 (part; São Vicente, Brazil; Santarém, lower Amazon); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 340 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 320 (Amazonas, Matto Grosso).

Hylocichla fuscescens SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 498 (parte septentrional da America do S.).

No specimens collected.

RANGE.—Brazil: Santarém and Matto Grosso (São Vicente, Chapada).

The four specimens taken by Natterer at São Vicente are typical *H. f. fuscescens*, and so are, according to Allen, a couple of specimens obtained by Smith at Chapada, February 21, 1883, and November, 1882.

This thrush breeds in North America and visits Brazil only in winter.

(3550a) *Hylocichla fuscescens salicicola* Ridgway

Hylocichla fuscescens salicicola RIDGWAY, Proc. U. S. Nat. Mus., IV, 1882, p. 374 (Fort Garland, Colorado).

Turdus fuscescens salicicolus ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 340 (Chapada).

RANGE.—One female taken at Chapada, on March 27, 1883, is referred by Dr. Allen to this western form. Dr. Chapman confirms this identification.

(3563) *Vireosylva virescens virescens* (Vieillot)¹

Vireo virescens VIEILLOT, 'Hist. Nat. Ois. Amér. Sept.,' 1, 1807, p. 84, Pl. LIII (Pennsylvania?).

Vireo olivaceus ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 346 (Chapada, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 335 (North America to Venezuela and Matto Grosso).

Vireosylva olivacea RIDGWAY, Bull. U. S. Nat. Mus., No. 50, part 3, 1904, p. 147 (South America, as far as Brazil [Pará, Chapada, Prov. Matto Grosso]; Bolivia, and eastern Peru).

No specimens collected.

RANGE.—North America. In winter to Venezuela, Colombia (Santa Marta, Bucaramanga, etc.), Brazil [Matto Grosso (Chapada), Amazonas (Marabitanas)], Bolivia, and eastern Peru.

(3565) *Vireosylva chivi chivi* (Vieillot)

Sylvia chivi VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XI, 1817, p. 174 (ex Azara, Paraguay).

Vireo chivi ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 345 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 335 (Matto Grosso, Porto da Faya); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 85 (Poconé, Caceres).

¹The correct name of this species is as given above (see Bangs and Penard, Bull. Mus. Comp. Zoöl., LXVII, 1925, p. 205).

Urucúm, 3 ♂, 3 ♀, 1 im.; Belvedere de Urucúm, 2 ♂; Tapirapoan, 2 ♀; Utiarity, near Salto Bello, 1 ♂; Matto Grosso, 1 (?).

RANGE.—Southern Brazil, from Rio Grande do Sul north to Matto Grosso (Chapada, Porto da Faya, Poconé, Caceres, Urucúm, Belvedere de Urucúm, Tapirapoan, Utiarity, near Salto Bello), Goyaz, and Minas Geraes. Northern Argentina; Paraguay; Uruguay; Bolivia.

Average Measurements of Specimens¹ Examined

	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Matto Grosso, Belvedere de Urucúm, Urucúm, Utiarity, Tapirapoan	7 ♂	67	48.5	12.5	A. M. N. H.
Bolivia, Vermejo, Rio Grande (Prov. Santa Cruz)	3 ♂	70.5	53.5	10.6	"
Argentina, Embarcación, above San Pablo, Salta	6 ♂	69.5	53	12.5	"

(3565c) *Vireosylva chivi agilis* (Lichtenstein)

Lanius agilis LICHTENSTEIN, 'Verz. Doubl. Berlin. Mus.,' 1823, p. 49 (Bahia).

Vireosylva agilis PELZELN, 'Orn. Bras.,' II, 1868, p. 73 (part; Borba, Marabitanas, Barra).

Vireo chivi IHERING, 'Cat. F. Braz.,' I, 1907, p. 335 (part; Santarém and Rio Juruá).

Barão Melgaço, 1 ♀; wing, 66; tail, 48.5; culmen, 14 mm.

RANGE.—Northeastern Brazil (Bahia to Ceará and Maranhão, probably even to Lower Amazonia).

I presume that the Barão Melgaço bird belongs to *Vireosylva chivi agilis*, although I, of course, have considered *V. c. griseola* Todd (Proc. Biol. Soc. Wash., XXXVII, 1924, p. 124). Our specimen from Barão Melgaço has the crissum considerably paler, and the edgings of the primaries less greenish, when compared to specimens from Pied Saut, French Guiana. A series from the lower Amazon (Itacotiara and Manáos)² probably represents *V. chivi griseola*, which seems to be very close to *V. c. agilis*. *V. c. vividior* is apparently restricted to the Caribbean coast of Venezuela, including Trinidad and Tobago.

The geographic variation of *V. chivi* requires detailed study with the help of large series.

(3572) *Pachysylvia semicinerea semicinerea* (Sclater and Salvin)

Hylophilus semicinereus SCLATER AND SALVIN, P. Z. S., 1867, p. 570, Pl. xxx, fig. 2 (Pará); LAYARD, Ibis, 1873, p. 377 (Pará).

Hylophilus thoracicus PELZELN, 'Orn. Bras.,' II, 1868, p. 70 (part; Salto do Girão and Borba, Rio Madeira).

¹American Museum of Natural History.

²Field Museum.

Pachysylvia thoracica semicincta IHERING, 'Cat. F. Braz.,' I, 1907, p. 336 (Amazonia inferior, Pará); HELLMAYR, Nov. Zoöl., XIII, 1906, p. 355; idem, XVII, 1910, p. 266 (Santa Izabel, Rio Preto, Rio Madeira).

Barão Melgaço, 1 ♂. (Coll. L. E. Miller).

RANGE.—North Brazil, south of the Amazon, from northern Maranhão (Turyassú) to the Rio Madeira, south to northern Matto Grosso (Barão Melgaço).

(3573) *Pachysylvia pectoralis* (Sclater)

Hylophilus pectoralis SCLATER, P. Z. S., 1866, p. 321 (Villa Bella, Matto Grosso); PELZELN, 'Orn. Bras.,' II, 1868, p. 70 (Villa Maria, Matto Grosso).

Pachysylvia pectoralis IHERING, 'Cat. F. Braz.,' I, 1907, p. 336 (Amazonas, Matto Grosso, Guyana); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 475 (Brazil: Quati-purú, Rio Tocantins [Ilha Pae Lourenço], Marajó, Mexiana, Arumanduba, Monte Alegre).

No specimens collected.

RANGE.—British, Dutch, and French Guiana, and Lower Amazonia, south to western Matto Grosso (São Luiz de Cáceres, Villa Bella) and to the sources of the Rio Araguaya, Goyaz (Leopoldina).

(3575) *Pachysylvia muscicapina griseifrons* Snethlage

Pachysylvia muscicapina griseifrons SNETHLAGE, 'Orn. Monatsber.,' XV, 1907, p. 160 (Villa Braga, Rio Tapajóz); Bol. Mus. Goeldi, VIII, 1914, p. 476 (Rio Tapajóz, Boim, Villa Braga); HELLMAYR, Nov. Zoöl., XVII, 1910, p. 268 (Maroins, Rio Machados).

Rio Roosevelt, Camp 8, 1 ♂; Broken Canoe Rapids, 1 ♀; Monte Cristo, 1 ♀. Fresh specimens: feet and eye gray.

RANGE.—Northern Brazil, south of the Amazon from the Rio Tapajóz (Boim, Villa Braga, Apaçy) to the Rio Madeira, south to northern Matto Grosso (Maroins, Rio Machados; Rio Roosevelt, Camp 8; Broken Canoe Rapids, Monte Cristo).

(3577) *Pachysylvia pæcilotis pæcilotus* (Temminck)

Hylophilus pæcilotis TEMMINCK, 'Nouv. Rec. Pl. Col.,' livr. 29, 1822, Pl. CLXXIII, fig. 2 ("Brésil" = Ypanema, São Paulo).

Hylophilus pæcilotis GRANT, Ibis, 1911, p. 89 (Riacho Paraguay Mirim and Rabicho, S. W. Matto Grosso).

No specimens collected.

RANGE.—Southeastern Brazil from Rio de Janeiro to Santa Catharina, and also in southwestern Matto Grosso (Rabicho, Riacho Paraguay Mirim), Paraguay, Misiones.

The claims of this species to be included in the fauna of Matto Grosso rest on two specimens secured by C. B. Grant, in the vicinity of Coimbrá, in October, 1909.

(3597) *Vireolanus leucotis simplex* Berlepsch

Vireolanus leucotis simplex BERLEPSCH, 'Orn. Monatsber.,' XX, 1912, p. 18 (Sta. Elena, Rio Jamauchim); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 479 (Rio Tocantins, Aramatheua; Rio Jamauchim, Rio Tapajóz (Boim)).

Barão Melgaço, 2 ♂; collected by Leo E. Miller.

RANGE.—From the Amazon south to northern Matto Grosso. It is known only from Boim (on the Tapajoz), Arumatheua (on the Rio Tocantins), and Sta. Elena (on the Rio Jamauchim). A specimen from the north bank of the Amazon (Rio Jary) belongs to the typical race. Compared with an example from British Guiana, the Barão Melgaço birds lack the white subauricular line.

Measurements

	SEX	WING	TAIL	CULMEN
Brazil, Barão Melgaço	♂	71.5	53	15
“ “ “	♂	70	51.5	16.5

(3604) *Cyclarhis gujanensis gujanensis* (Gmelin)

Tanagra gujanensis GMELIN, 'Syst. Nat.,' I, (2), 1789, p. 893 ("Guyane," sc. Cayenne).

Cyclarhis gujanensis SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 479 (Amazonia, Guyana); IHERING, 'Cat. F. Braz.,' I, 1907, p. 338 (Guyana, Amazonia).

Juruena, 1 ♂.

RANGE.—Guiana. Amazonia (Tury-assú, Pará, Rio Guamá Rio Tocantins, Rio Xingú, Rio Jamauchim, Rio Tapajoz, Monte Alegre, Rio Madeira) south to northern Matto Grosso (Juruena). Eastern Peru.

The single specimen from the Rio Juruena is at a glance separable from the other Matto Grosso skins by the grayish-white lower breast and abdomen (grayish on the sides and pure white on the middle of the belly) without a tinge of buffy. Above, the whole head, except a narrow rufous forehead and superciliary stripe, nearly pure gray (deep neutral gray), but with a very faint indication of an olive wash on top of the head, the chin and sides of the face paler gray. The maxilla is dusky reddish brown fading into dusky horn-color at tip. Mandible dusky blackish at base (including base of gonys) becoming dusky horn-color at tip; eye (in life) orange. The one specimen from the Rio Juruena agrees with a Cayenne bird, while three specimens from the lower Amazon (Forte Ambé, Rio Xingú; Faro, Rio Jamundá), and one from Utinga (Pará) being in fresher plumage are slightly more buffy underneath.

Measurements

	SEX	WING	TAIL	CULMEN
French Guiana, Cayenne	♂	70	56	16
Brazil, Rio Xingú	♂	70	55.5	16.5
“ Faro, Rio Jamundá	♀	68.5	53.5	17
“ Utinga	♀	70.5	55.5	16
“ Juruena	♂	73.5	60	16.5



Basileuterus leucophrys Pelzeln, ♂, ♀; Aldeia Queimada, Matto Grosso, Brazil, January 23, 1914, Roosevelt Expedition; George K. Cherrie.

(3606) *Cyclarhis gujanensis cearensis* Baird

Cyclorhis cearensis BAIRD, 'Rev. of Amer. Birds,' Pt. 1, 1864 (1866), p. 391 (Ceará, Brazil).

Thamnophilus guianensis (not of Gmelin) WIED, 'Beitr. Naturg. Bras.,' III, (2), 1831, p. 1016 (Campo Geral).

Cyclorhis wiedii PELZELN, 'Orn. Bras.,' II, 1868, pp. 74, 137 (Engenho do Gama and Cuyabá, Matto Grosso).

Cyclorhis viridis (not of Vieillot) ALLEN, Bull. Amer. Mus. Nat. Hist., II, 1889, pp. 123-127 (part; adult bird in breeding season; Chapada, Matto Grosso); idem, III, 1891, p. 346 (Chapada, Matto Grosso); SALVADORI, Boll. Mus. Torino, XV, 1900, No. 378, p. 3 (Corumbá); GRANT, Ibis, 1911, p. 89 (part; Pan de Azucar).

Cyclarhis guyanensis cearensis MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 85 (Poconé).

Urucúm, 1 ♂, 1 ♂ im., 1 ♀, 1 ♀ im.; Tapirapoan, 1 ♂, 1 ♀.

RANGE.—From eastern Bolivia, all over the Brazilian plateau south to northern São Paulo (Rio Paraná and Barretos), east to Bahia, Pernambuco, and Ceará.

Four of these specimens from Urucúm (Nos. 127186, 128084, 127187, 128087) are adults with a very distinct plumbeous spot on the basal half of the lower mandible. The two others from Urucúm (Nos. 128085, 128086), one of which still retains on the sides of the occiput some fluffy feathers of the juvenal plumage, wholly lack this spot, the lower mandible being dark horn-color, very slightly paler towards the tip. In a series of eleven specimens from Bahia, secured by Rollo H. Beck, there are eight with a distinct plumbeous spot. The sexual organs of all were marked by the collector as, "distinct," "swelling," or "large," and two bear even the note, "nesting." On the labels of three others without any trace of the plumbeous spot, the sexual organs are described by Beck as small. A series from western Minas Geraes, Agua Suja, near Bagagem, is even more instructive. In addition to eight with a more or less distinct plumbeous spot at the base of the lower mandible, there are three which, in the absence of this mark (Nos. 11,1422, 11,1423, 11,1418, Munich Museum), agree with the specimens from Urucúm and Bahia referred to above. A male (No. 11,1415, Munich Museum) shows on the same portion of the lower mandible, occupied in the majority by the plumbeous spot, a number of minute plumbeous dots.

The only conclusion to be drawn from the preceding facts is that the so-called *Cyclarhis wiedii* is merely the immature stage or probably the bird of the year of the normal type,¹ as has been intimated long ago by Dr. Allen.² Dr. Hellmayr³ for some time regarded the specimen without plumbeous bill-spots as specifically distinct, but he now fully agrees with my conclusions.

¹Naumburg, The Auk, XLII, No. 3, 1925.

²Bull. Amer. Mus. Nat. Hist., II, 1889, p. 123.

³Nov. Zoöl., XV, 1908, p. 23.

There is still a possibility of the name "*wiedii*" coming into use, if the averaging shorter bill of the specimens of the central Brazilian plateau (western Minas Geraes and Goyaz to Matto Grosso) and of eastern Bolivia be deemed a sufficient reason for their subspecific separation.

Average Measurements					
	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Cyclarhis gujanensis cearensis</i>					
Brazil, Bahia	6 ♂ ¹	69.5	55.2 ¹	16.8 ²	A. M. M. H.
" "	4 ♀	70.3	57.5	16.2	"
" Matto Grosso (Urucúm, Tapirapoan, Chapada)	7 ♂ ³	73.2	62.2	15.4	"
Brazil, Bahia, Matto Grosso, (Urucúm, Tapirapoan, Chapada)	6 ♀ ⁴	73.1	63	16	"
Brazil, west Minas Geraes, Agua Suja, near Bagagem	4 ♂ ⁵	73.7	63.5	15.8	Munich
Brazil, west Minas Geraes, Agua Suja, near Bagagem	3 ♀ ⁵	72.5	60.8	16.5	"

(3617) *Compsothlypis pitiayumi pitiayumi* (Vieillot)

Sylvia pitiayumi VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XI, 1817, p. 276 (based on Azara, No. 109, Paraguay).

Compsothlypis pitiayumi ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 344 (Chapada, Abrilongo); MÉNÉGAUX, Rev. Franç. d'Orn., V, 1917, p. 85 (Caceres).

Utariaty, near Salto Bello (alt. 1500 to 2500 ft.), Rio Papagaio, 1 ♂.

RANGE.—Eastern and Central Brazil, from Maranhão, Piauhy, and Ceará, south to Matto Grosso (Chapada, Abrilongo, São Luiz de Caceres, Utariaty) and Rio Grande do Sul. Paraguay; Uruguay; northern Argentina.

The single bird from Utariaty agrees with specimens from other parts of Brazil.

(3633) *Oporornis agilis* (Wilson)

Sylvia agilis WILSON, Amer. Ornith., V, 1812, p. 64, Pl. xxxix, fig. 4 (Connecticut; Pennsylvania, near Philadelphia).

Oporornis agilis BERLEPSCH, Journ. f. Ornith., 1889, p. 98 (Tonantins, Rio Solimões); HELLMAYR, Nov. Zoöl., XVII, 1910, p. 264 (Allianca, on Rio Machados above the mouth of the Rio Jamary); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 481 (America do S. até o Brazil no inverno).

Rio São Lourenço, 2 ♂.

¹Measurements of 5 tails, 1 moulting.

²Measurements of 5 culmens, 1 imperfect.

³Three birds of the year.

⁴Four birds of the year.

⁵Two birds of the year.

RANGE.—Northern North America, the West Indies in migration. Wintering in Colombia (Santa Marta region, Bonda); Venezuela (Maipures, upper Orinoco; Cumbre de Valencia, Carabobo¹); Brazil (Tonantins, Rio Solimões; Allianca, Rio Madeira; Rio São Lourenço).²

(3639) *Geothlypis æquinoctialis velata* (Vieillot)³

Sylvia velata VIEILLOT, 'Hist. Nat. Ois. Amér. Sept.,' II, p. 22, Pl. LXXIV ("1807"; no locality given; "de la collection de M. Dufresne"). I suggest Rio de Janeiro as type-locality.⁴

Geothlypis velata ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 344 (Corumbá, Chapada, Matto Grosso); GRANT, Ibis, 1911, p. 88 (Puerto Pinasco, Curuzú Chica, Paraguay).

Geothlypis æquinoctialis cucullata IHERING, 'Cat. F. Braz.,' I, 1907, p. 332 (Paraguay).

No specimens collected.

RANGE.—From Buenos Aires and Córdoba northward to northwestern Argentina (Salta, Tucumán), the plains of eastern Bolivia (Chiquitos), Matto Grosso (Chapada, Agua Blanca de Corumbá), the eastern states of Brazil, and Paraguay (Fort Wheeler, Puerto Pinasco, Curuzú Chica, Sapucay).

Quite common during September in the marshes about Fort Wheeler and in the neighborhood of Puerto Pinasco.

(3645) *Granatellus pelzelni pelzelni* Sclater

Granatellus pelzelni SCLATER, P. Z. S., 1864, pp. 606, 607, Pl. XXXVII, fig. 1; descr. orig. ♂ (Destacamento do Ribeirão, Rio Madeira, western Brazil. Coll. P. L. Sclater; ex Natterer MSS.); PELZELN, 'Orn. Bras.,' III, 1870, p. 216 (Destacamento do Ribeirão, Salto do Girão, on the Rio Madeira, Matto Grosso); SHARPE, 'Cat. B. Brit. Mus.,' X, 1885, p. 370 (Rio Madeira, Amazonia); IHERING, 'Cat. F. Braz.,' I, 1907, p. 332 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Rio Madeira, Destacamento do Ribeirão, Salto Girão), Amazonas, and Para. Guiana; Venezuela.

(3666) *Myiothlypis flaveolus* Baird

Myiothlypis flaveolus BAIRD, 'Rev. Amer. Birds,' Pt. I, May, 1865, p. 252 (Paraguay); PELZELN, 'Orn. Bras.,' II, 1868, p. 72 (Villa Bella de Matto Grosso).

Basileuterus flaveolus ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 345 (Chapada, Matto Grosso); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 3

¹See Hellmayr and Seilern, Arch. f. Naturg., 73, A, Heft 5, 1912, p. 46.

²Naumburg, The Auk, 1926, p. 489, 'The Bird Fauna of North America in Relation to its Distribution in South America.'

³Cf. Nov. Zoöl., XXVIII, 1921, p. 243.

⁴Lafresnaye and d'Orbigny, 'Syn. Av.,' I, p. 20 (in imp. Brasiliensis; rep. Boliviana); d'Orbigny, 'Voyage,' p. 217 (Rio de Janeiro; Corrientes; Chiquitos; descr. ad. and juv.). The M. Dufresne referred to by Vieillot was the curator of the Empress Josephine's private museum at Malmaison, and later joined the staff of the Paris Museum as "Aide Naturaliste." He owned a private collection, which was acquired by the Royal Scottish Museum at Edinburgh. So far as my knowledge goes he did no traveling himself. The type of *Sylvia velata* Vieillot (which no doubt applies to the South Brazilian form with gray temporal region) certainly came from somewhere on the coast of eastern Brazil, presumably Rio de Janeiro. (Note given author by C. E. H.)

(Urucúm); IHERING, 'Cat. F. Braz.,' I, 1907 p. 333 (Matto Grosso, Paraguay); GRANT, Ibis, 1911, p. 89 (Sapatero Cué, Paraguay); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 85 (Caceres).

Paraguay: Fort Wheeler, 1 ♀. Matto Grosso: Urucúm, 3 ♂, 1 ♀; Utiarity, 1 ♂, 1 ♀.

RANGE.—Brazil, in states of São Paulo (Rio Paraná), Goyaz, Bahia, Maranhão, Piahy, Ceará, and Matto Grosso (Urucúm, Utiarity, Chapada, Caceres, Descalvados). Paraguay (Fort Wheeler, Sapatero Cué); eastern Bolivia; Venezuela.

Common at Urucúm and at various points on the plateau along the road to the headwaters of the Rio Roosevelt. It is a species that is found only in the more heavily wooded parts of the region.

Specimens were collected at Fort Wheeler and at Descalvados. At the latter place a laying female was collected December 4.

(3672) *Basileuterus hypoleucus* Bonaparte

Basileuterus hypoleuca BONAPARTE, 'Consp. Avium,' II, 1850, p. 313 (Brazil); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 344 (Chapada, Matto Grosso); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 3 (Urucúm); IHERING, 'Cat. F. Braz.,' I, 1907, p. 333 (Matto Grosso).

Urucúm, 4 ♂, 4 ♀; in the fresh birds the bill is dusky above, pale below; feet pale yellowish; eye dark brown.

RANGE.—Brazil, in states of São Paulo, Minas Geraes, Goyaz, and Matto Grosso (Urucúm, Chapada).

At Urucúm it was common, frequenting the undergrowth in the heavier forest areas. A brooding female, No. 128103, was shot November 28.

(3679) *Basileuterus auricapillus auricapillus* (Swainson)

Setophaga auricapilla SWAINSON, 'Anim. in Menag.,' 1837, p. 293 (part; Brazil).

Basileuterus vermivorus PELZELN, 'Orn. Bras.,' II, 1868, p. 71 (São Vicente).

Paraguay: Rio Negro, 1 ♀. Matto Grosso: Utiarity, 1 ♂.

RANGE.—All over eastern and central Brazil from Maranhão and Piahy to Rio Grande do Sul and Matto Grosso (Utiarity, São Vicente). Paraguay; northern Argentina.

I cannot distinguish the birds from Utiarity and the Rio Negro (Paraguay) by color from either Venezuelan or Trinidad specimens. In size the Trinidad and Venezuela birds average practically the same, and agree with the Matto Grosso specimens. However, I believe that a larger series from Brazil may prove *Basileuterus auri capillus olivascens* to be distinguishable from *Basileuterus auricapillus auricapillus*.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Basileuterus auricapillus olivascens</i>					
Venezuela, Caura	1 ♂	61	51	11.5	Munich
“ Andes of					
Cumaná	1 ♂	59	54	11	“
Venezuela, Andes of					
Cumaná	1 ♂?	55	50	12	“
Venezuela, Island of Trini- dad (Aripo, Caparo, Prin- cestown)	6 ♂	58.2	53.3	11.3	A. M. N. H. and Munich
<i>Basileuterus auricapillus auricapillus</i>					
Paraguay, Bernalcué, near Asunción	1 ♂	58	58	10.5	Munich
Brazil, Matto Grosso, Uturity	1 ♂	57.5	51.5	11.5	A. M. N. H.
Paraguay, Rio Negro	1 ♀	52.5	53	9	“
<i>Basileuterus auricapillus olivascens</i>					
Island of Trinidad, Princes- town	1 ♀	54.5	50	11	“
Island of Trinidad, Princes- town	1 ♀	55	49.5	11	“

(3686) *Basileuterus leucophrys* Pelzeln

Basileuterus leucophrys PELZELN, 'Orn. Bras.,' II, 1868, pp. 72, 137 (Porto do Rio Paraná, São Paulo, and Rio Manso, Matto Grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 345 (Chapada, Matto Grosso).

Aldea Queimada, 2 ♀.

RANGE.—Brazil, São Paulo (Porto do Rio Paraná) and Matto Grosso (Engenho do Cap. Gama, Ant. Correia, Rio Manso; Aldea Queimada).

These specimens seem to be just completing the moult.

Endemic to Matto Grosso.

(3696) *Anthus lutescens lutescens* Pucheran

Anthus lutescens (Cuvier MS.) PUCHERAN, Arch. Mus. Hist. Nat. Paris, VII, 1855, p. 343 ("Brésil"; type from Rio de Janeiro, Coll. Delalande); IHERING, 'Cat. F. Braz.,' I, 1907, p. 330 (Porto da Faya, Matto Grosso).

Anthus rufus ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 344 (Corumbá); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 3 (Matto Grosso).

No specimens collected.

RANGE.—Campo districts of Colombia, Venezuela, Guiana, and Brazil, south to Matto Grosso (Corumbá, Porto da Faya) and Rio Grande do Sul. Bolivia and northern Argentina.

(3706) **Pheucticus aureoventris** (d'Orbigny and Lafresnaye)

Pitylus aureo-ventris D'ORBIGNY AND LAFRESNAYE, 'Syn. Av.,' I, in Mag. de Zool., VII, 1837, Cl. 2, p. 84 (Yungas, Sicasica, Bolivia).

Pheucticus aureiventris PELZELN, 'Orn. Bras.,' III, 1870, p. 221 (Villa Maria, No Dourado [camp in the forest of Das Lavrinhas], Engenho do Gama, Matto Grosso); SHARPE, 'Cat. B. Brit. Mus.,' XII, 1888, p. 54 (Province of Mattogrosso, Brazil); IHERING, 'Cat. F. Braz.,' I, 1907, p. 368 (Matto Grosso).

No specimens collected.

RANGE.—Bolivia (Yungas, Sicasica); Argentina (from Jujuy to La Rioja and Córdoba); central Brazil (Matto Grosso, Engenho do Gama, Villa Maria, No Dourado, Urucúm); ? Paraguay; and southern Peru.

One female, taken at Urucúm on August 17, 1926, by George K. Cherrie, in Field Museum.

(3713) **Cyanocompsa cyanoides rothschildii** (Bartlett)

Guiraca rothschildii BARTLETT, Ann. Mag. Nat. Hist., (6) VI, 1890, p. 168 (Caramang River, British Guiana).

Guiraca cyanoides PELZELN, 'Orn. Bras.,' III, 1870, p. 222 (part; Engenho do Gama and Salto do Girão, Matto Grosso).

No specimens collected.

RANGE.—Guiana; southern Venezuela; eastern Colombia; Ecuador; and Peru. Brazil: throughout Amazonia from northern Maranhão (Tury-assú) west to the Peruvian border, south to western Matto Grosso (Salto do Girão, Rio Madeira, Engenho do Gama, Rio Guaporé).

The only specimens recorded from the state of Matto Grosso are those obtained by Natterer, an adult female from Salto do Girão, Oct. 12, 1829, and a young male (in the brown juvenal dress) from Engenho do Gama, Aug. 14, 1826. They agree with Guianan skins in corresponding plumage.

(3714) **Cyanocompsa cyanea argentina** (Sharpe)

Guiraca argentina SHARPE, 'Cat. B. Brit. Mus.,' XII, 1888, p. 73 (western Argentina, restricted type-locality Cosquin, Córdoba).

Guiraca cyanea PELZELN, 'Orn. Bras.,' III, 1870, p. 221 (Cuyabá, Matto Grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 368 (Chapada); SALVADORI, Boll. Mus. Torino, XV, 1900, No. 378, p. 4 (Urucúm).

Guiraca cyanoides PELZELN, 'Orn. Bras.,' III, 1870, p. 222 (part; Cuyabá).

Cyanocompsa cyanea IHERING, 'Cat. F. Braz.,' I, 1907, p. 368 (Matto Grosso).

No specimens collected.

RANGE.—Northern and western Argentina, extending into eastern Bolivia and Matto Grosso (Cuyabá, Chapada, Urucúm).

While somewhat smaller than Argentina birds, the specimens from Matto Grosso are nearer *C. c. argentina* than any other form. They agree exactly with a series from Mizque, Bolivia.

Wing of 3 adult males,¹ Cuyabá, 84 mm.; 2, Urucúm, 82–83 mm.; 3, Bolivia, 84, 85, 86 mm.; 13, western Argentina (Salta to Córdoba), 84–90, once 92 mm.

(3717) *Cyanoloxia glaucocærulea* (d'Orbigny and Lafresnaye)

Pyrrhula glauco-cærulea D'ORBIGNY AND LAFRESNAYE, 'Syn. Av.,' I, in Mag. de Zool., VII, 1837, Cl. 2, p. 85 (Maldonado).

Guiraca glauco-cærulea PELZELN, 'Orn. Bras.,' III, 1870, p. 222 (Engenho do Gama, Matto Grosso).

Cyanoloxias glaucocærulea IHERING, 'Cat. F. Braz.,' I, 1907, p. 368 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: in states of Matto Grosso (Engenho do Gama), São Paulo, and Rio Grande do Sul. Paraguay; Uruguay; Argentina.

(3718) *Oryzoborus angolensis angolensis* (Linnæus)

Loxia angolensis LINNÆUS, 'Syst. Nat.,' I, 12th Ed., 1766, p. 303 (ex Edwards: "Angola"; errore. Dr. Hellmayr substitutes eastern Brazil as type locality).²

Loxia torrida SCOPOLI, Ann. Nat. Hist., I, 1769, p. 140.

Oryzoborus torridus PELZELN, 'Orn. Bras.,' III, 1870, p. 222 (Cuyabá, Engenho do Cap. Gama, Matto Grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 368 (Chapada, Matto Grosso).

Oryzoborus angolensis IHERING, 'Cat. F. Braz.,' I, 1907, p. 369 (Matto Grosso).

Urucúm, 1 ♀ ?; Descalvados, 2 ♂; Fazenda do São João, 1 ♀; Tapirapoan, 1 ♂; Rio Roosevelt, 1 ♂, 1 ♀, 1 juv.

RANGE.—Paraguay. Eastern Brazil from Piauhý and Ceará, south to Rio Grande do Sul and Matto Grosso (Urucúm, Dsecalvados, Chapada, Cuyabá, Engenho do Gama, Fazenda do São João, Tapirapoan, Rio Roosevelt).

"On the twenty-sixth of February, on the Rio Roosevelt, a pair of adults were collected together with a young bird, just out of the nest.

"The nest was placed in a low shrub only about three feet from the ground in a thicket by the side of the trail. It was a very slight cup-shaped affair suspended between the upright twigs of a small fork. It was built of small vegetable fibres loosely woven together and with the walls so thin that one might easily see through them. Some spider-webs seem to have been employed in tying the rim of the nest to the surrounding supporting twigs.

"The young bird in first juvenal plumage resembles the female but is strongly washed with rufous brown."

¹Measurements given to the writer by Dr. C. E. Hellmayr.

²Nov. Zoöl., XIII, 1906, p. 19.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Matto Grosso, 2 ♂;					
Descalvados, 1 ♂; Rio					
Roosevelt, 1 ♂	4 ♂	59.2	55.5	12.5	A. M. N. H.
Brazil, Bahia	3 ♂	56.1	53.3	13.3	"

(3721) *Oryzoborus crassirostris maximiliani* Cabanis

Oryzoborus maximiliani CABANIS, 'Mus. Hein.,' I, 1851, p. 151 (note; based on *Fringilla crassirostris* Wied (not of Gmelin), Beitr. Naturg. Bras., III, (1), 1830, p. 564, Rio Espirito Santo, Caravellas, and Viçosa, Bahia, Brazil); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 368 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 369 (Matto Grosso).

Oryzoborus crassirostris PELZELN, 'Orn. Bras.,' III, 1870, p. 222 (part; Cuyabá). No specimens collected.

RANGE.—Brazil, in states of Bahia, Rio de Janeiro, São Paulo, Goyaz, and Matto Grosso (Cuyabá, Chapada).

(3733) *Sporophila leucoptera leucoptera* (Vieillot)¹

Coccothraustes leucoptera VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XIII, 1817, p. 521 (Paraguay; ex Pico Trigueno, Azara, No. 123).

Spermophila hypoleuca PELZELN, 'Orn. Bras.,' III, 1870, p. 223 (Cuyabá, Matto Grosso).

Sporophila hypoleuca ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 368 (Cachoeira, Corumbá, Matto Grosso).

Sporophila leucoptera GRANT, Ibis, 1911, p. 95 (Boca de Homiguera, Alto Paraguay); MÉNÉGAUX, 'Rev. Franc. d'Orn.,' V, 1917, p. 85 (Caceres).

Sporophila leucoptera hypoleuca IHERING, 'Cat. F. Braz.,' I, 1907, p. 373 (Matto Grosso).

Spermophila sp. SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 5 (Urucúm).

Agua Blanca de Corumbá, 1 ♂; Rio São Lourenço, 2 ♂, 1 ♀.

RANGE.—Central Brazil, in states of Minas Geraes, Goyaz, and Matto Grosso (Cuyabá, Corumbá, Agua Blanca de Corumbá, Rio São Lourenço, Caceres, Boca de Homiguera). Paraguay (Lambaré) and northern Argentina (Ocampo, Prov. Santa Fe; Colonia Mihanovitch, Formosa Territory).

Upon examination of a series of specimens in the Vienna Museum, I have ascertained that *Sporophila hypoleuca clara* Cherrie² is a synonym of *Sporophila leucoptera leucoptera*. Mr. Cherrie has compared the specimens from Matto Grosso to *Sporophila hypoleuca hypoleuca* [= *leucoptera cinereola*],³ giving a very good diagnosis, but he has overlooked the fact that the specimens from Corumbá and the Rio São Lourenço are indistinguishable from *Sporophila leucoptera leucoptera* of Paraguay.

¹Verh. Zool. Bot. Ges. Wien, LIV, 1904, p. 536.

²Bull. Amer. Mus. Nat. Hist., XXXV, 1916, p. 188.

³*Pyrrhula cinereola* Temminck ('Nouv. Rec. Pl. Col.,' livr. 2, 1820, Pl. II, fig. 1, Brésil = Bahia) has priority over *Fringilla hypoleuca* Licht. ('Verz. Doubl.,' 1823, p. 26) (see Chubb, Bull. B. O. C., XLI, 1920, p. 35).

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Sporophila leucoptera leucoptera</i>					
Brazil, Matto Grosso, Rio São Lourenço, 2 ♂ ¹ ; Agua Blanca de Corumbá, 1 ♂; Cuyabá, 3 ♂; Chapada, 1 ♂ ² 7 ♂					
		61.5	54.5	10.6	A. M. N. H. and Vienna
Goyaz, Araguaya	1 ♂	59.5	55	10.5	Vienna
“ Rio dos Piloens	juv. 1 ♂	60	54	11	“
Paraguay (Dr. Bohls)	1 ♂	64	58.5	11	Tring
“ “	1 ♀	63.5	55	11	“
Argentina, Ocampo	1 ♂	64	58.5	11	“
<i>Sporophila leucoptera cinereola</i>					
Brazil, Piauhy, Santa Philomena					
	1 ♂	57	51	10.5	Vienna
Brazil, Bahia (trade-skins)	3 ♂	57	52.5	11	Berlepsch Coll.
“ “ “ “	5 ♀	57.5	51.1	10.8	Berlepsch Coll.
“ Pernambuco, Pao d'Alho, near Recife	1 ♀	59	52.5	10.5	Vienna
Brazil, Pernambuco, Beberibé, near Recife	1 ♀	57	50	9.5	“
Brazil, Rio de Janeiro, Sapitiba	1 ♀	55	51	10.5	“

(3739) *Sporophila plumbea plumbea* (Wied)

Fringilla plumbea WIED, Beitr. Naturg. Bras., III, (1), 1830, p. 579 (“Campo Geral des innern Brasilien”).

Spermophila plumbea PELZELN, ‘Orn. Bras.,’ III, 1870, p. 223 (Cidade de Matto Grosso).

Sporophila plumbea ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 368 (Chapada, Matto Grosso); IHERING, ‘Cat. F. Braz.,’ I, 1907, p. 374 (Matto Grosso).

No specimens collected.

RANGE.—Eastern and central Brazil, from Piauhy to Paraná and Matto Grosso (Cidade de Matto Grosso, Chapada). Paraguay; eastern Bolivia.

(3743) *Sporophila castaneiventris castaneiventris* Cabanis

Sporophila castaneiventris CABANIS, in Schomburgk, ‘Reisen Brit. Guiana,’ III, 1848, p. 679 (“Cumaka,” British Guiana); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 428 (Amazonas e paizes vizinhos do N.); IHERING, ‘Cat. F. Braz.,’ I, 1907, p. 374 (Amazonas, Rio Juruá, Purús, Borba, Rio Negro).

Spermophila castaneiventris PELZELN, ‘Orn. Bras.,’ III, 1870, p. 225 (Borba, Rio Amazonas, Marabitanas).

¹One specimen, type of *Sporophila hypoleuca clara*, No. 128119, the other spec. juv.

²First annual plumage.

Calama, 1 ♂ (L. E. Miller, coll.).

RANGE.—Guiana; Brazil, throughout Amazonia from the Rio Tapajóz westward to the eastern foot of the Andes, south to the Rio Madeira (Calama and Marmellos).

I have compared our specimen with Amazonian birds that have been separated by Todd as *S. c. rostrata* (Proc. Biol. Soc. Wash., XXXV, 1922, p. 91, Santarém). "The heavier bill of this form is its best character," according to Mr. Todd. However, it was impossible to get sufficient material to decide this point. The ranges of the two forms must be carefully worked out.

(3746) *Sporophila hypoxantha* Cabanis

Sporophila hypoxantha CABANIS, 'Mus. Hein.,' I, 1851, p. 150 ("Montevideo"); IHERING, 'Cat. F. Braz.,' I, 1907, p. 374 (Matto Grosso).

Spermophila hypoxantha PELZELN, 'Orn. Bras.,' III, 1870, p. 225 (Poruti, Matto Grosso); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 5 (Urucúm, Carandasinho).

Paraguay: Puerto Pinasco, 2 ♂, 1 ♀; Rio Negro, 1 ♂. Matto Grosso: Urucúm, 1 ♂; Bocaina de Descalvados, 1 ♂.

RANGE.—Southern Brazil, in states of Paraná, São Paulo, and Matto Grosso (Poruti, Urucúm, Bocaina de Descalvados, Carandasinho). Paraguay (Puerto Pinasco, Rio Negro); Uruguay; northeastern Argentina (Chaco and Misiones); eastern Bolivia (Chiquitos).

Abundant in the Paraguayan Chaco and also at points visited in Matto Grosso from Corumbá to Descalvados.

This species was not previously represented in the Museum collection.

(3748) *Sporophila ruficollis* Cabanis

Sporophila ruficollis CABANIS, 'Mus. Hein.,' I, 1851, p. 150 (♂ juv., "Montevideo"); IHERING, 'Cat. F. Braz.,' I, 1907, p. 378 (Matto Grosso).

Spermophila ruficollis PELZELN, 'Orn. Bras.,' III, 1870, p. 225 (Engenho do Cap. Gama, Cidade de Matto Grosso).

No specimens collected.

RANGE.—Bolivia (Chiquitos); Uruguay ("Montevideo"); Brazil (Matto Grosso, Engenho do Cap. Gama); Paraguay (Sapucay); Argentina (Tucumán).

(3753) *Sporophila nigrorufa* (d'Orbigny and Lafresnaye)

Pyrrhula nigro-rufa D'ORBIGNY AND LAFRESNAYE, 'Syn. Av.,' I, in Mag. de Zool. VII, 1837, Cl. 2, p. 87 (Chiquitos, Bolivia).

Spermophila nigrorufa PELZELN, 'Orn. Bras.,' III, 1870, p. 226 (Poruti, Cidade de Matto Grosso); SHARPE, 'Cat. B. Brit. Mus.,' XII, 1888, p. 114 (Matto Grosso, Brazil, Bolivia).

Sporophila nigrorufa IHERING, 'Cat. F. Braz.,' I, 1907, p. 375 (Matto Grosso).

No specimens collected.

RANGE.—Central Brazil, in state of Matto Grosso (Poruti, Villa Bella) and eastern Bolivia.

(3758) *Sporophila melanocephala ochrascens* Hellmayr

Sporophila melanocephala ochrascens HELLMAYR, Verh. Zool. Bot. Ges. Wien, LIV, 1904, p. 534 (Rio Paraná, São Paulo); IHERING, 'Cat. F. Braz.,' I, 1907, p. 376 (Matto Grosso).

Spermophila cucullata SHARPE, 'Cat. B. Brit. Mus.,' XII, 1888, p. 116 (Cuyabá, Brazil; Natterer Coll.); PELZELN, 'Orn. Bras.,' III, 1870, p. 223 (Cuyabá, Rio Paraná); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 85 (Caceres).

Sporophila melanocephala ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 368 (Corumbá); SALAVDORI, Boll. Mus. Torino, XV, No. 378. 1900, p. 5 (Carandasinho, Urucú); IHERING, 'Cat. F. Braz.,' I, 1907, p. 375 (Matto Grosso).

Descalvados, 2 ♂, 1 ♀; Palmiras, 2 ♂.

RANGE.—Central Brazil, in states of Matto Grosso (Cuyabá, Descalvados, Palmiras, Corumbá, São Luiz de Caceres) and São Paulo (Rio Paraná); eastern Bolivia (Moxos).

Dr. Hellmayr states in his paper¹ describing this race, that one male from Cuyabá is referable to *Sporophila melanocephala melanocephala*. This, however, is erroneous, as results from an inspection of the bird in the Vienna Museum. Though slightly darker ochraceous in the color of the neck-band, the specimen is not as dark as the typical race, *S. melanocephala melanocephala*, and is only the extreme of individual variation of the paler northern form, *S. melanocephala ochrascens*.

	Measurements				MUSEUM
	SEX	WING	TAIL	CULMEN	
Brazil, Matto Grosso, Chapada, 4 ♂; Descalvados, 2 ♂; Palmiras, 2 ♂					A. M. N. H.
Brazil, Matto Grosso, 2 ♂ juv.					Munich
Brazil, Matto Grosso, Cuyabá 4 ♂	14 ♂	57.2	56.5	12.6	Vienna
Brazil, Matto Grosso, Descalvados 1 ♀ ²		55.5	46	3	A. M. N. H.
Brazil, São Paulo, Rio Paraná (type, No. 20376) 1 ♂		58.5	53	11.5	Vienna
Brazil, São Paulo, Rio Paraná 1 ♀		56	50	10.5	"

(3762) *Sporophila caerulescens caerulescens* (Vieillot)⁴

Pyrrhula caerulescens VIEILLOT, 'Tabl. Enc. Méth., Ornith.,' III, 1823, p. 1023 (Brésil); the type in the Paris Museum was collected by Delalande Jr., near Rio de Janeiro).

¹Verh. Zool. Bot. Ges. Wien, LIV, 1904, p. 534 (Cuyabá).

²First annual plumage.

³Culmen broken.

⁴Represented in Bahia by *S. c. ornata* (Lichtenstein).

Spermophila ornata (not of Lichtenstein) PELZELN, 'Orn. Bras.,' III, 1870, p. 224 (Poruti, Matto Grosso).

Sporophila caeruleascens ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 368 (Chapada, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 376 (Matto Grosso).

Spermophila caeruleascens SALVADORI, Boll. Mus. Torino, X, No. 208, 1895, p. 5 (Corumbá); idem, XV, No. 379, 1900, p. 5 (Urucúm, Matto Grosso).

Urucúm, 4 ♂, 1 ♀; Descalvados, 1 ♂. Adult males in life have the bill pale horn-color, feet dusky slate-gray.

RANGE.—Southeastern Brazil, from Rio de Janeiro and Minas Geraes south to Rio Grande do Sul, west to Matto Grosso (Poruti, Villa Bella de Matto Grosso, Chapada, Corumbá, Urucúm, Descalvados). Eastern Bolivia; Paraguay; northern Argentina.

A common species in the Urucúm region.

(3764) *Sporophila nigricollis nigricollis* (Vieillot)¹

Pyrrhula nigricollis VIEILLOT, 'Tabl. Enc. Méth., Orn.,' III, livr. 93, 1823, p. 1027 ("Brésil").

Spermophila gutturalis PELZELN, 'Orn. Bras.,' III, 1870, p. 225 (Cuyabá).

Sporophila gutturalis ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 369 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 377 (Matto Grosso).

No specimens collected.

RANGE.—Brazil, in states of Matto Grosso (Chapada, Cuyabá), São Paulo, Rio de Janeiro, Minas Geraes, Bahia, Pernambuco, Piauí, Ceará, Goyaz, and Amazonia (Rio Negro). Venezuela; Colombia; Guiana; Trinidad; Tobago.

(3769) *Sporophila lineola lineola* (Linnæus)

Loxia lineola LINNÆUS, 'Syst. Nat.,' I, 10th Ed., 1758, p. 174 ("Asia" = Guiana).

Spermophila lineola PELZELN, 'Orn. Bras.,' III, 1870, p. 224 (Matto Grosso).

Sporophila lineola ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 369 (Cachoeira, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 377 (Matto Grosso).

Urucúm, 1 ♂; Fazenda do São João, 2 ♂.

RANGE.—Brazil, in states of Matto Grosso (Urucúm, Fazenda do São João, Cachoeira, Villa Bella), Pará, Amazonas (Lamalonga), São Paulo, Bahia. Bolivia (San Francisco, Aguiarenda); Paraguay; Argentina (Tucumán); Venezuela; Guiana.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Brit. Guiana, Tumatumari	4 ♂	58.3	44.6	7.8	A. M. N. H.
" " "	4 ♀	56.5	45.2	8.5	"
Argentina, Embarcación	5 ♂	61.9	47.4	8.2	"
" " "	4 ♀	56.7	45.2	9.2	"
Brazil, Matto Grosso, Fazenda do São João	1 ♂	58.5	47.5	8	"

¹Cf. Hellmayr, Field Mus. Nat. Hist., Zool. Ser., XII, 1929, p. 296.

Average Measurements (*Continued*)

	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Matto Grosso, Uru- cúm	1 ♂	59.5	48	8	A.M.N.H.
Brazil, Matto Grosso, Uru- cúm	1 ♂	58	46.5	8	"

Specimens from Argentina average slightly larger.

(3788) *Tiaris fuliginosa fuliginosa* (Wied)

Fringilla fuliginosa WIED, Beitr. Naturg. Bras., III, (1), 1830, p. 628 (Camamú, Bahia).

Phonipara fuliginosa ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 369 (Chapada).

No specimens collected.

RANGE.—Campo region of eastern Brazil from Pernambuco to Rio de Janeiro (Cantagallo) west to Matto Grosso (Chapada).

The Smith Collection in The American Museum of Natural History contains an adult male and two females from Chapada, which seem to agree with Bahia skins. They constitute the only record of the species from the state of Matto Grosso.

(3789) *Volatinia jacarina jacarina* (Linnæus)

Tanagra jacarina LINNÆUS, 'Syst. Nat.,' I, 12th Ed., 1766, p. 314 ("Brasilia").

Volatinia jacarini ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 369 (Chapada); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 5 (Urucúm, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 379 (Matto Grosso).

Urucúm, 2 ♂; Tapirapoan, 1 ♂, 1 ♀; Calama, 2 ♂.

RANGE.—Brazil, in states of Matto Grosso (Urucúm, Tapirapoan, Calama), São Paulo, Rio de Janeiro, Bahia, Pará, and Amazonas. Argentina (Avia Terai, Chaco, Parotani); Guiana; Paraguay; Bolivia (Parotani).

(3796) *Pitylus grossus grossus* (Linnæus)

Loxia grossa LINNÆUS, 'Syst. Nat.,' I, 12th Ed., 1766, p. 307 (based on Brisson; Cayenne accepted as type-locality).

Pitylus grossus PELZELN, 'Orn. Bras.,' III, 1870, p. 220 (Salto Theotonio).

No specimens collected.

RANGE.—The greater part of northern South America, south to Bolivia and the confines of Matto Grosso, in the east as far south as Pará. This distributional area of the species just touches the northern boundary of the state, specimens having been secured by Natterer at Salto Theotonio, on the upper Rio Madeira.

(3803) *Saltator maximus maximus* (P. L. S. Müller)

Tanagra maxima P. L. S. MÜLLER, 'Syst. Nat., Suppl.,' 1776, p. 159 (based on Daubenton, 'Pl. Enl.,' 205; Cayenne).

Saltator maximus ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 364 (Chapada).

Saltator cayanus interjector CHUBB, Ann. and Mag. Nat. Hist., (9), VIII, 1921, p. 445 (Serra da Chapada, Matto Grosso).

Tapirapoan, 1 ♀; Utiarity, 1 ♂.

RANGE.—All of South America from the Caribbean coast south to Bolivia and southern Brazil, including Rio de Janeiro and Matto Grosso (Chapada, Tapirapoan, Utiarity).¹

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Brit. Guiana, Tumatumari	1 ♂	95	81	18	A. M. N. H.
“ “ Rockstone	1 ♂	95	81	19	“
“ “ “					
1 ♀; Potaro Landing, 2 ♀;					
Tumatumari, 1 ♀	4 ♀	89.6	82.7	18	“
French Guiana, Cayenne	?	96	83.5	18	Munich
Venezuela, Maipures, 1 ♂;					
La Union, Caura, 2 ♂	3 ♂	96	87.6	17.5	A. M. N. H.
Venezuela, Suapure	1 ♀	90.5	82.5	18.5	“
Brazil, Bahia	3 ♂	90.3	85.3	17.8	“
“ “	3 ♀	89.8	71	18.5	“
“ La Raiz, ft. of Organ					
Mts.	1 ♂	91.5	88	19	“
Brazil, La Raiz, ft. of Organ					
Mts.	1 ♀	91	91	19	“
Brazil, Matto Grosso,					
Utiarity	1 ♂	95.5	83.5	17.5	“
Brazil, Matto Grosso, Tapira-					
poan	1 ♀	92.5	86.5	18	“
Bolivia, Mission San Antonio	1 ♂	100	88.5	17	“
“ “ “	1 ♂	96.5	89.5	18	“
“ “ “					
2 ♀; Todos Santos, 1 ♀	3 ♀	94.3	87.5	19.1	“

Birds from Venezuela and Bolivia average larger in size. There seems to be a great deal of individual variation in this species as regards size, although in other characters it is very constant.

(3805) *Saltator similis similis* d'Orbigny and Lafresnaye

Saltator similis D'ORBIGNY and LAFRESNAYE, 'Syn. Av.,' I, in Mag. de Zool., VII, 1837, Cl. 2, p. 36 (Corrientes, Argentina); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 365 (Chapada, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 370 (Matto Grosso); GRANT, Ibis, 1911, p. 95 (Pan de Azucar, Matto Grosso).

No specimens collected.

RANGE.²—Eastern Brazil from Bahia south to São Paulo and west to Matto Grosso (Chapada, Pan de Azucar). Paraguay and northeastern Argentina (Corrientes, Misiones, Santa Fé, Formosa Territory, etc.).

¹Not yet recorded from São Paulo.

²Birds from Rio Grande do Sul to Paraná belong to *S. s. ochraceiventris*.

(3808) *Saltator caerulescens caerulescens* Vieillot

Saltator caerulescens VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XIV, 1817, p. 105 (ex Azara, No. 81, Paraguay).

Saltator azaræ (not of d'Orbigny) PELZELN, 'Orn. Bras.,' III, 1870, p. 219 (Cuyabá, Villa Bella and São Vicente, Matto Grosso).

Saltator caerulescens SALVADORI, Boll. Mus. Torino, X, No. 208, 1895, p. 4 (Corumbá); idem, XV, No. 378, 1900, p. 4 (Carandasinho, Urucúm, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 371 (Matto Grosso); GRANT, Ibis, 1911, p. 94 (Coimbrá, Matto Grosso); MÉNÉGAUX, 'Rev. Franc. d'Orn.,' V, 1917, p. 85 (Caceres, Poconé, Matto Grosso).

Descalvados, 1 ♂; Agua Blanca de Corumbá, 1 ♂; Rio São Lourenço, 2 ♀; Fazenda do São João, 1 ♂; Rio Cuyabá, 1 ♀.

RANGE.—Campos region of the interior of Brazil, in state of Matto Grosso (Cuyabá, Villa Bella, São Vicente, Carandasinho, Urucúm, Coimbrá), and thence to eastern Bolivia, Paraguay (Puerto Pinasco) and northern Argentina (Corrientes west to Tucumán, Salta, and Jujuy).

Three specimens from Paraguay in the Munich Museum are in freshly moulted plumage and have the lower belly and crissum strongly suffused with fulvous. They are much more intensely ochraceous on the lowerparts, even the throat being ochraceous instead of whitish. The difference seen in the Matto Grosso and Paraguay birds I consider to be seasonal, due to the condition of the plumage, as the Matto Grosso birds were taken in December, those from Paraguay in June.

A single specimen from Villa Bella, western Matto Grosso, forms the transition to *S. c. azaræ*.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Paraguay, Concepción	1 ♂	97	92.5	16.5	Munich
“ Bernalcué, near					
Asunción	1 ♀	103	99	18.5	“
Paraguay, Bernalcué, near					
Asunción	1 ♀	98.5	101	17.5	“
Brazil, Matto Grosso, Agua					
Blanca de Corumbá, 1 ♂;					
Descalvados, 1 ♂; São					
João, Rio Cuyabá, 1 ♂	3 ♂	107.8	99	19.1	A. M. N. H.
Brazil, Matto Grosso, Rio São					
Lourenço, 2 ♀; Rio					
Cuyabá, 1 ♀ ¹	3 ♀	106	97.8	19.3	“

(3813) *Saltator aurantirostris aurantirostris* Vieillot

Saltator aurantirostris VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XIV, 1817, p. 103 (based on Azara, No. 83; Paraguay); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 4 (Corumbá, Matto Grosso).

No specimens collected.

¹Tail moulting.

RANGE.—Brazil: Matto Grosso (Corumbá) and Rio Grande do Sul (São Lourenço). Uruguay (Montevideo); Paraguay; northern Argentina (Corrientes, Entrerios, Santa Fé, etc.).

(3816) *Saltator atricollis* Vieillot

Saltator atricollis VIEILLOT, 'Nouv. Diet. d'Hist. Nat.,' nouv. éd., XIV, 1817, p. 104 (based on Azara, No. 82; Paraguay); PELZELN, 'Orn. Bras.,' III, 1870, p. 219 (Villa Bella de Matto Grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 366 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 371 (Matto Grosso).

No specimens collected.

RANGE.—Campo region of Brazil, from Maranhão, Piauh, and Ceará south to northern São Paulo and Matto Grosso (Chapada, Villa Bella), extending into Paraguay and eastern Bolivia (Chiquitos).

A large series of this characteristic species is in the Smith Collection in The American Museum of Natural History.

(3833) *Spinus magellanicus alleni* Ridgway

Spinus alleni RIDGWAY, The Auk, XVI, 1899, p. 37 (Chapada, Matto Grosso).

Spinus yarrelli (not of Audubon) ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 375 (Chapada).

No specimens collected.

RANGE.—Campo region of Brazil in states of Piauh, Bahia, Goyaz, and Matto Grosso (Chapada, Estiva) and adjoining parts of Bolivia and Paraguay.

(3844) *Sicalis goeldii* Berlepsch

Sicalis goeldii BERLEPSCH, Bull. Brit. Orn. Club, XVI, 1906, p. 97 (Paricatuba, Santarém); IHERING, 'Cat. F. Braz.,' I, 1907, p. 381 (state of Pará, Santarém).

Sycalis goeldii SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 432 (Amazonia).

Calama, 1 ♂; Solimões, 1 ♂, 1 ♀; collected by Leo E. Miller.

RANGE.—Northern Brazil, on the banks of the Amazon and its tributaries from the delta region (Rio Maracá) to the Peruvian border, south to the Rio Madeira (Calama).

(3846) *Sicalis pelzelni* Sclater

Sicalis pelzelni SCLATER, Ibis, 1872, p. 42 (Buenos Ayres); IHERING, 'Cat. F. Braz.,' I, 1907, p. 381 (Matto Grosso).

Sycalis brasiliensis PELZELN, 'Orn. Bras.,' III, 1870, p. 232 (Cuyabá, Matto Grosso).

Sycalis pelzelni ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 375 (Cuyabá, Matto Grosso); SALVADORI, Boll. Mus. Torino, X, No. 208, 1895, p. 7 (Corumbá); idem, *op. cit.*, XV, No. 378, 1900, p. 6 (Urucúm, Carandasinho); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 86 (Poconé, Caceres).

Paraguay: Trinidad, 1 ♀; Fort Wheeler, 1 ♂; Puerto Pinasco, 5 ♂, ♀. Matto Grosso: Urucúm, 3 ♂, 2 ♀, 1 ?; Descalvados, 1 ♀; Palmiras, 1 ♂, 1 ♀.

RANGE.—Argentina (Los Yngleses, Ajó, Tala); Uruguay; Paraguay (Trinidad, Fort Wheeler, Puerto Pinasco); Bolivia; Brazil, Matto Grosso (Cuyabá, Poconé, Corumbá, Caceres, Urucúm, Carandasinho, Descalvados, Palmiras) and Rio Grande do Sul.¹

This finch was nesting in the neighborhood of Fort Wheeler, and about Puerto Pinasco, during September and October. A favorite nesting site was in old or abandoned nests of the ovenbird.

Average Measurements²

	SEX	WING	TAIL	CULMEN	MUSEUM
Argentina, Buenos Aires, 1 ♂;					
Rosario de Lerma, 3 ♂;					
Embarcación, 2 ♂	6 ♂	68.3	51.6	9.1	
Paraguay, Puerto Pinasco, 5					
♂; Fort Wheeler, 1 ♂	6 ♂	65	50.5	8.8	

(3848) *Sicalis luteiventris luteiventris* (Meyen)

Fringilla luteiventris MEYEN, 'Nov. Act. Acad. Leop. Carol.,' XVI, Suppl., 1834, p. 87, Pl. XII, fig. 3 (Altos de Toledo, Peru).

Sycalis hilarii PELZELN, 'Orn. Bras.,' III, 1870, p. 232 (Fazenda, Matto Grosso).

Sycalis arvensis ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 375 (Chapada, Matto Grosso); SHARPE, 'Cat. B. Brit. Mus.,' XII, p. 382 (spec. g, h, 1 ♂, 1 ♀ ad.; Matto Grosso, July 22, 1825; J. Natterer); IHERING, 'Cat. F. Braz.,' I, 1907, p. 382 (Matto Grosso).

RANGE.—Brazil from Minas Geraes to Rio Grande do Sul, west to Matto Grosso (Chapada). Argentina (Buenos Aires, Tala, Luiconia, Mendoza); Uruguay; Chile; etc.

(3855a) *Myospiza humeralis humeralis*³ (Bosc)

Tanagra humeralis BOSCH, Journ. d'Hist. Nat. (Choix de Memoires), II, No. 17, September 1, 1792, p. 179, Pl. XXXIV, fig. 4 (Cayenne, Coll. Le Blond).

Coturniculus manimbe PELZELN, 'Orn. Bras.,' III, 1870, p. 230 (Matto Grosso).

Ammodramus manimbe ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 374 (Chapada); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 6 (Carandasinho, Urucúm).

Myospiza manimbe IHERING, 'Cat. F. Braz.,' I, 1907, p. 385 (Matto Grosso).

Myospiza humeralis MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 87 (Caceres, Poconé).

Paraguay: Puerto Pinasco, 1 ♂. Matto Grosso: Urucúm, 2 ♂, 1 ♀; Tapiraipoan, 2 ♂, 2 ♀; Juruena, 1 ?; Rio Roosevelt, 1 ♀.

¹Within Brazilian territory *S. pelzelni* occurs only in Matto Grosso and Rio Grande do Sul. It inhabits, furthermore, the whole of northern Argentina.

²The Argentine birds average slightly larger than birds from Paraguay.

³As indicated by (Chubb, Bull. Brit. Orn. Club, XXXI, 1913, p. 39), *Tanagra humeralis* of Bosc, from Cayenne, has priority over *Fringilla manimbe* Lichtenstein.

RANGE.—Venezuela (Rio Caura, Orinoco); British Guiana; Surinam (District of Pará); French Guiana. Brazil, from the lower Amazon down to Rio Grande do Sul and Matto Grosso (Chapada, Carandasinho, Urucúm, Caceres, Poconé, Tapirapooan, Juruena, Rio Roosevelt). Bolivia (Santa Cruz de la Sierra, Chiquitos); Paraguay (Puerto Pinasco, Sapucay).

A specimen from Paraguay, No. 04.985, from Bernalcué, near Asunción (Munich Museum), and Bahia skins resemble those from Cayenne (typical) and British Guiana. I agree with Dr. Wetmore¹ for the present in believing that *manimbe* Lichtenstein (1823) be considered a synonym of *humeralis*. Birds from Santarém are gray, and I have seen two specimens from northern Brazil,² Island of Marajó, that are also gray above. It appears to me that *Myospiza manimbe nigrostriata* Cherrie³ is an individual variation of *Myospiza humeralis dorsalis* Ridgway,⁴ a subspecies described so many years ago that it has been entirely overlooked.

*Myospiza humeralis dorsalis*⁵ is also found in Paraguay (Puerto Pinasco).

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Brit. Guiana, Roraima	3♂	56.6	46	11.6	A. M. N. H.
French Guiana, Cayenne	7♂	54.9	42.2	12.1	Tring
“ “ “	6♀	52.5	41.9	11.4	“
Venezuela, Altagracia, Orinoco River, 3♂; Maipures, 1♂; Puerto Samora, 1♂; Ciudad Bolivar, 2♂	7♂	55.5	44.2	11.1	Munich and Tring
Venezuela, Altagracia, 2♀; Maipures, Rio Orinoco, 1♀; Suapure, 1♀; Ciudad Bolivar, 1♀	5♀	55	43	10.4	Tring
Brazil, Matto Grosso, Tapirapooan, 2♂; Urucúm, 2♂	4♂	57.1	44.6	10.5	A. M. N. H.
Brazil, Matto Grosso, Tapirapooan, 2♀; Rio Roosevelt, 1♀; Urucúm, 1♀; Juruena, 1♀	5♀	55.3	43	10.6	“
Paraguay, Puerto Pinasco	1♂	58	46.5	10	“

¹Bull. U. S. Nat. Mus., 133, pp. 427-341.

²Munich Museum.

³Bull. Amer. Mus. Nat. Hist., XXXV, 1916, p. 189 (Rio Negro, Paraguay, Chaco).

⁴Baird, Brewer and Ridgway, 'History of North American Birds,' I, 1874, p. 549, with type-locality Buenos Aires, based on a specimen collected by J. K. Townsend. Type in U. S. Nat. Mus., Wash.

⁵Among specimens in the Amer. Mus. Nat. Hist. (there is one numbered 149,755, a male taken Sept. 4, 1916, at Puerto Pinasco by Mr. Cherrie, that seems typical of *dorsalis*, while another that Dr. Wetmore took personally at the same point four years later represents the subspecies *humeralis*. Furthermore, *humeralis* is the form found at Sapucay, not far from Asunción. There are two explanations for the apparent inconsistency that occur to me: one is that Cherrie's specimen is a migrant from the south, which of course is not impossible, and the other is that in some way a label has been transposed so that a bird taken by Cherrie farther south has been wrongly marked.

Average Measurements (*Continued*)

	SEX	WING	TAIL	CULMEN	MUSEUM
Paraguay, Bernalcué, near Asunción	1 ♂	58.5	49	11	Munich
Brazil, Bahia	8 ♂	57.8	42.5	10.7	Munich, Berlepsch Coll.
Surinam, near Paramaribo	1 ♂	57.5	45.5	12	A. M. N. H. Tring
"	juv. 1 ♂	53	42	12	"
"	1 ♀	58	44.5	11.5	"

(3856) *Myospiza aurifrons aurifrons* (Spix)

Tanagra aurifrons SPIX, 'Av. Bras.,' II, 1825, p. 38, Pl. L, fig. 2 ("in provincia Bahia" errore; Fontebôa suggested as type-locality by Hellmayr, Abhandl. Bayr. Ak. Wiss., XXII, No. 3, 1906, p. 673).

Coturniculus peruanus (not of Bonaparte) PELZELN, 'Orn. Bras.,' III, 1870, p. 230 (Cachoeira de Guajarâ-Guaçú, Rio Mamoré, Matto Grosso).

Myospiza aurifrons IHERING, 'Cat. F. Braz.,' I, 1907, p. 385 (Matto Grosso).

No specimens collected.

RANGE.—The whole of the Amazon Valley, from Pará to eastern Peru, south to northern Matto Grosso (Cachoeira de Guajarâ-Guaçú, Rio Madeira).

(3870) *Poospiza melanoleuca* (Lafresnaye and d'Orbigny)

Emberiza melanoleuca LAFRESNAYE AND D'ORBIGNY, 'Syn. Av.,' I, in Mag. Zool., VII, 1837, p. 82 (Chiquitos, Bolivia).

Poospiza melanoleuca GRANT, Ibis, 1911, p. 98 (Pan de Azucar, Matto Grosso).

No specimens collected.

RANGE.—Eastern Bolivia; Paraguay; northern Argentina. Brazil in state of Matto Grosso (Pan de Azucar).

A single female taken on September 17, 1909, by C. B. Grant is the only record of this species from Matto Grosso.

(3871) *Poospiza cinerea* Bonaparte

Poospiza cinerea BONAPARTE, 'Consp. Av.,' I, 1850, p. 473 ("Brésil," type collected by Auguste Saint-Hilaire in Paris Museum); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 372 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 383 (Porto da Faya).

Poospiza schistacea PELZELN, 'Orn. Bras.,' III, 1870, p. 229 (Cuyabá).

No specimens collected.

RANGE.—Interior of Brazil in states of São Paulo, Minas Geraes, Goyaz, and Matto Grosso (Cuyabá, Chapada, Porto da Faya).

A characteristic species peculiar to the highlands of inner Brazil. Castelnau secured specimens at Santa Anna, near Cuyabá (Paris Museum).

(3880) *Brachyspiza capensis capensis* (P. L. S. Müller)

Fringilla capensis P. L. S. MÜLLER, 'Nat. Syst. Suppl.,' 1776, p. 165 (based on Daubenton, 'Pl. Enl.,' 386, fig. 2, "Cap. b. sp.," errore; type-locality is Cayenne (see Buffon, 'Hist. Nat. Ois.,' IV, p. 369).

Tapirapoan, 1 ♂; Juruena, 1 ♀; Utiarity, 1 ♀.

RANGE.—Brazil: northern Matto Grosso (Tapirapoan, Juruena, Utiarity) and Pará (Rio Acará, Monte Alegre). Guiana; Venezuela.

"An abundant species found at many places where we stopped. In February a nest and clutch of two eggs were taken at Juruena, Rio Juruena. The nest was on the ground partially concealed by a bunch of grass."

(3880a) *Brachyspiza capensis matutina* (Lichtenstein)

Fringilla matutina LICHTENSTEIN, 'Verz. Doubl.,' 1823, p. 25 (Bahia; type in Berlin Museum, No. 6064).¹

Zonotrichia pileata PELZELN, 'Orn. Bras.,' III, 1870, p. 229 (São Paulo, Rio de Janeiro, Ypanema, Sapitiba).

Zonotrichia capensis ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 372 (Chapada, Matto Grosso).

Brachyspiza pileata GRANT, Ibis, 1911, p. 98 (Villa Franca, Puerto Maria, Paraguay).

Brachyspiza capensis IHERING, 'Cat. F. Braz.,' I, 1907, p. 382 (part; Espirito Santo, Minas Geraes, Rio de Janeiro, São Paulo, Matto Grosso, Paraguay, Uruguay); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 86 (Poconé, Matto Grosso).

Matto Grosso: Urucúm, 1 ♀. Paraguay: Asunción, 1 ♂ juv.

RANGE.—Eastern Brazil, from Piahy and Ceará through Bahia to Rio de Janeiro, Espirito Santo, Minas Geraes, São Paulo, and Matto Grosso (Urucúm, Chapada, Poconé). Paraguay (Asunción, Villa Franca, Puerto Maria).

A large series from southeastern Brazil (Rio de Janeiro; Espirito Santo; Minas Geraes; Agua Suja; São Paulo) differs from *Brachyspiza capensis capensis* from French Guiana and Venezuela by their larger size and somewhat deeper rufous collar,² and appears to form a recognizable race of which the earliest name is *Fringilla matutina* Lichtenstein. An adult female in the Munich Museum from Paraguay (Bernalcué, near Asunción) is practically identical with a series from southeastern Brazil, so I doubt the possibility of separating *B. c. mellea* Wetmore,³ unless this form be restricted to Paraguay, west of the Rio Paraná. One female, from Urucúm, I refer also to *B. c. matutina* as it is in every respect an extreme example in color and in size.

¹Reiser found this bird at Queimadas, on the Rio Preto, Bahia.

²It may be that in the southern bird the upperparts are of a lighter, less rufescent brown tinge, but of this I am not sure, since most of our northern examples are in worn plumage.

³Proc. Biol. Soc. Wash., XXXV, 1922, pp. 39-40.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Brachyospiza capensis capensis</i>					
Venezuela, Cerro del Avila	3 ♂	62	58.1	12	Munich
“ “ “ “					
2 ♀; Cumbre de Valencia, 2 ♀	4 ♀	58.8	53.6	12	“
Venezuela, Cotiza, 2 ♂; Las Cienegas del Aquila, 1 ♂	3 ♂	60.1	53.5	11.1	A. M. N. H.
Brazil, Matto Grosso, Tapira- poan,	1 ♂	62	56	12	“
Brazil, Matto Grosso, Juruena	1 ♀	61.5		11	“
Brazil, Matto Grosso, Utiarity	1 ♀	59	56.5	10.5	“
<i>Brachyospiza capensis matutina</i>					
Brazil, Rio de Janeiro (type of <i>F. ruficollis</i> Spix) 1 ♂; Rio de Janeiro, Manguin- hos, 5 ♂	6 ♂	68	60.7	12.8	Munich
Brazil, Rio de Janeiro, Man- guinhos	1 ♀	65.5	56	12	“
Brazil, Rio de Janeiro, Man- guinhos	1 ♀	64	58	12	“
Brazil, Therezopolis, Organ Mts.	3 ♂	67.1	62.3	12.1	A. M. N. H.
Brazil, Therezopolis, Organ Mts.	3 ♀	65.1	60.6	12	“
Brazil, Espirito Santo, Victoria	1 ♂	66	60	12	Munich
Brazil, Espirito Santo, Victoria	1 ♂	65	59.5	11.5	“
Brazil, Espirito Santo, Victoria	1 ♀	65.5	60	11.5	“
Brazil, São Paulo	1 ♂	67	68	12	A. M. N. H.
“ Minas Geraes, Agua Suja, near Bagagem	1 ♀	64	59.5	11	Munich
Brazil, Matto Grosso, Urucúm	1 ♀	65.5	61.5	12	A. M. N. H.
Paraguay, Asunción	1 ♂	67.5	61.5	9.5	Munich

(3889) *Porphyrospiza caerulecens* (Wied)

Tanagra caerulecens WIED, Beitr. Naturg. Bras., III, (1), 1830, p. 541 (Campos Geraes of Brazil).

Cyanospiza cyanella PELZELN, 'Orn. Bras.,' III, 1870, p. 227 (Rio Bandeira, three miles north of Cuyabá, Matto Grosso).

Porphyrospiza caerulecens ALLEN, Bull. Amer. Mus. Nat. Hist., I', 1889, pp. 140,

225 (Chapada); idem, III, 1891, p. 371 (Chapada); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 5 (Urucúm); IHERING, 'Cat. F. Braz.,' I, 1907, p. 382 (Matto Grosso).

No specimens collected.

RANGE.—Campo region of Central Brazil, from Piauí and Maranhão through Goyaz and Minas Gerães to Matto Grosso (Chapada, Rio Bandeira, Urucúm).

A characteristic species of the Central Brazilian plateau.

(3898) **Coryphospiza melanotis** (Temminck)

Emberizoides melanotis TEMMINCK, 'Nouv. Rec. Pl. Col.,' livr. 19, 1822, Pl. cxiv, fig. 1 (Paraguay [ex Azara, No. 140] and Brazil; doubtless based on Nattererian specimens from Ypanema, São Paulo); BURMEISTER, 'Syst. Übers. Th. Bras.,' III, 1856, p. 226 (Matto Grosso).

Coryphospiza melanotis ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 375 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 388 (Matto Grosso).

No specimens collected.

RANGE.—Paraguay and northern Argentina (Chaco); southern Brazil in states of Minas Gerães, São Paulo, Paraná, and Matto Grosso (Chapada).

H. H. Smith obtained three specimens of this scarce species at Chapada, the only record from Matto Grosso.

(3900) **Emberizoides herbicola herbicola** (Vieillot)

Sylvia herbicola VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XI, 1817, p. 192 (based on Azara, No. 230, Paraguay).

Emberizoides sphenurus PELZELN, 'Orn. Bras.,' III, 1870, p. 230 (Cuyabá [Villa Bella de] Matto Grosso).

Emberizoides macrourus herbicola ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 375 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 388 (Matto Grosso).

No specimens collected.

RANGE.—Eastern and southern Brazil, from Pernambuco to Rio Grande do Sul, west to Matto Grosso (Cuyabá, Chapada, Villa Bella). Paraguay; eastern Bolivia; northwestern Argentina.

(3941) **Coryphospingus cucullatus** (P. L. S. Müller)

Fringilla cucullata P. L. S. MÜLLER, 'Naturesyst.,' Suppl., 1776, p. 166 (based on Daubenton, 'Pl. Enl.,' 181, fig. 1, Cayenne).

Coryphospingus cucullata ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 370 (Chapada, Matto Grosso).

Coryphospingus cucullatus SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 5 (Urucúm, Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 391 (Matto Grosso and Paraguay); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 86 (Caceres, Matto Grosso); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 434 (Pará, Benevides, Peixe-Boi, St. Antonio do Prata).

Coryphospingus cristatus GRANT, Ibis, 1911, p. 96 (Curuzú Chica, Colonia Rizzo, Paraguay).

Paraguay: Asunción, 1 ♂; Fort Wheeler, 1 ♂. Matto Grosso: Belvedere de Urucúm, 1 ♂, 2 ♀; Urucúm, 2 ♂; Descalvados, 1 ♂; Tapirapan, 1 ♂.

RANGE.—Brazil, from the lower Amazon south through Goyaz and Minas Geraes to Rio Grande do Sul and Matto Grosso (Chapada, Caceres, Urucúm, Belvedere de Urucúm, Descalvados, Tapirapoan). Paraguay (Asunción, Fort Wheeler, Curuzú Chica, Colonia Risso); Bolivia; Argentina; Guiana.

This species was abundant at all localities. A female taken at Trinidad, Paraguay, November 9, was nesting and a broken egg was taken from the oviduct. The following day a young bird in postjuvenile plumage was collected, indicating that there is an extended breeding season.

Two young birds, each in postjuvenile plumage, have the ground-color of the plumage similar to that of the adult female but with hardly a trace of the vinaceous wash so prominent in the adult.

(3945) *Charitospiza eucosma* Oberholser

Charitospiza eucosma OBERHOLSER, Smiths. Misc. Coll. (Quarterly), XLVIII, 1905, p. 67 (new name for *Fringilla ornata* Wied (not of Vieillot), 'Reise Bras.,' II, 1821, p. 191 ((Fazenda Valo, Bahia); IHERING, 'Cat. F. Braz.,' I, 1907, p. 391 (Matto Grosso).

Tiaris ornata PELZELN, 'Orn. Bras.,' III, 1870, p. 228 (Cuyabá, Matto Grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 372 (Chapada, Matto Grosso).

Rio do Color, 1 ♀ ad.; feet, pale horn-color; eye dark; maxilla blackish, mandible slate color.

RANGE.—Brazil: São Paulo (Nas Lages); Minas Geraes; Goyaz (Nas Furnas, on the border of Minas Geraes and Goyaz; Rio Araguaya); Bahia; Piauh (Santo Antonio de Gilboez); Maranhão; Matto Grosso (Chapada, Cuyabá, Rio do Color).

(3948) *Paroaria coronata* (Shaw)

Loxia coronata SHAW, in Miller and Shaw, 'Cimelia Physica,' 1796, p. 4, Pl. IIa (South America and particularly Brazil).

Paroaria cucullata SALVADORI, Boll. Mus. Torino, X, 1895, No. 208, p. 6 (Porto Pagni, Paraguay); IHERING, 'Cat. F. Braz.,' I, 1907, p. 392 (Paraguay); GRANT, Ibis, 1911, p. 96 (Bahia Negra, Alto Paraguay).

Paraguay: Puerto Pinasco, 1 ♀. Matto Grosso: Descalvados, 1 ♂.

RANGE.—South Brazil, in states of Rio Grande do Sul and Matto Grosso (Descalvados). Bolivia (Caiza, Trinidad, Mojos); Argentina; Paraguay (Puerto Pinasco, Alto Paraguay).

This species and the yellow-bellied cardinal were found in the same localities in the Paraguayan Chaco and in Matto Grosso, but not associating.

(3951) *Paroaria capitata* (d'Orbigny and Lafresnaye)

Figure 39

Tachyphonus capitatus D'ORBIGNY AND LAFRESNAYE, 'Syn. Av.,' I, in Mag. de Zool., VII, 1837, Cl. 2, p. 29 (Corrientes).

Paroaria capitata PELZELN, 'Orn. Bras.,' III, 1870, p. 228 (Cuyabá, Villa Maria,

Caiçara); SHARPE, 'Cat. B. Brit. Mus.,' XII, 1888, p. 812 (Cuyabá); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 369 (Corumbá, Uacuryzal, near Corumbá); IHERING, 'Cat. F. Braz.,' I, 1907, p. 392 (Matto Grosso); GRANT, Ibis, 1911, p. 97 (Puerto Pinasco, Sapateró Cué, Paraguay); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 86 (Cavallaria, Corumbá, Caceres, Matto Grosso).

Paraguay: Puerto Pinasco, 3 ♀. Matto Grosso: Agua Blanca de Corumbá, 1 ♂, 1 ♀; Descalvados, 1 ♂; Rio São Lourenço, 1 ♂; Fazenda do São João, 2 ♂; Matto Grosso, 1 ♂.



Fig. 39. Two nests of *Paroaria capitata* (d'Orbigny and Lafresnaye), Descalvados, Matto Grosso, Brazil. In a bush about 12 inches above water. The lower nest contained young, November 30. The upper, probably built by the same birds, was approaching completion on December 25.

RANGE.—Southwestern Brazil, in state of Matto Grosso (Cavallaria, Caceres, Agua Blanca de Corumbá, Descalvados, Rio São Lourenço, Fazenda do São João, Cuyabá, Villa Maria, Caiçara). Paraguay (Puerto Pinasco, Sapateró Cué); north-eastern Argentina.

“At all of these points this species was common, frequenting the more open woodlands and clearings. At Puerto Pinasco during September the yellow-billed cardinals were traveling about in pairs, evidently looking for nesting-sites. Later, in December, at Descalvados, the nesting season was at its height.

“Two eggs of a set collected November 27, at Descalvados, are ovate in form and measure 17×21.5 and 16×21 mm. In color they are a deep

olive-buff, rather thickly spotted and blotched, especially about the larger end, with wood-brown markings on which are superimposed spots and blotches of a dark olive-brown.

"A double nest or, more exactly, two nests one directly above the other and only about eight inches apart were found Christmas day, 1916. The lower of the two nests was occupied by a brood of young cardinals at the end of November. The second nest, the upper one, was just being completed December 25, by the same pair (?) of cardinals. The lower nest at that time was only about twelve inches above the surface of the water of the surrounding marsh."

(3952) *Paroaria gularis cervicalis* Sclater

Paroaria cervicalis SCLATER, 'Cat. Coll. Amer. Bds.,' 1862, p. 108 (Bolivia).

Paroaria gularis (not of Linnæus) PELZELN, 'Orn. Bras.,' III, 1870, p. 228 (Matto Grosso, near Rio Guaporé); IHERING, 'Cat. F. Braz.,' I, 1907, p. 392 (part; Matto Grosso).

RANGE.—Eastern Bolivia (Mojos, Reyes, Rio Beni) and adjacent districts of western Matto Grosso (Villa Bella de Matto Grosso).

(3957) *Arremon taciturnus taciturnus* (Hermann)¹

Tanagra taciturnus HERMANN, 'Tab. Affin. Anim.,' 1783, p. 214, note (based upon 'L'Oiseau Silentieux,' Buffon, 'Hist. Nat. Ois.,' IV, p. 304, and Daubenton, 'Pl. Enl.,' 742; Cayenne).

Arremon silens PELZELN, 'Orn. Bras.,' III, 1870, p. 216 (Engenho do Gama); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 363 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 386 (Matto Grosso).

Uturity, 1 ♀; Campos Novos, 1 ♀.

RANGE.—Guiana; Venezuela; Amazonia, from Pará to the Rio Branco and Rio Madeira, and through Brazil south to Bahia, Goyaz, and Matto Grosso (Engenho do Gama, Chapada, Uturity, Campos Novos).

(3960) *Arremon flavirostris devillii* Des Murs

Arremon devillii DES MURS (ex Bonaparte MS.), in Castelnau's 'Exp. Amér. Sud.,' Ois., p. 69, Tab. xx, fig. 2, June 30, 1856 (no locality); SCLATER, P. Z. S., 1856, p. 81 ("Prov. Goyaz in Brazil"; Castelnau and Deville Coll.—Mus. Paris).

Arremon polionotus (not of Bonaparte) PELZELN, 'Orn. Bras.,' III, 1870, p. 217 (Cuyabá); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 362 (Chapada); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 4 (Urucúm, Corumbá).

Arremon devillei + *A. polionotus* SCLATER, 'Cat. B. Brit. Mus.,' XI, 1886, pp. 274, 278 (Goyaz, Cuyabá, Brazil).

Arremon polionotus devillei IHERING, 'Cat. F. Braz.,' I, 1907, p. 387 (Goyaz, São Paulo, Matto Grosso); HELLMAYR, Nov. Zoöl., XIII, 1906, p. 312 (Central Brazil, eastern Bolivia); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 86 (Caceres).

Urucúm, 1 ♀; Belvedere de Urucúm, 1 ♀.

¹Nov. Zoöl., XXVII, 1920, p. 328.

RANGE.—Central Brazil: "Goyaz," Matto Grosso (Cuyabá, Chapada, Urucúm, Corumbá, Caceres). Eastern Bolivia (Chiquitos).

(4022) *Cœreba chloropyga chloropyga* (Cabanis)

Certhiola chloropyga CABANIS, 'Mus Hein.,' I, 1851, p. 97 (Bahia, Brazil); SCLATER, 'Cat. B. Brit. Mus.,' XI, 1886, p. 44 (Lower Amazonia, Pará, Pernambuco).

Cœreba chloropyga IHERING, 'Cat. F. Braz.,' I, 1907, p. 345 (part; Bahia, Pernambuco, Pará); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 467 (part; Pará, Rio Tocantins, Cametá, Arumatheua; Rio Xingú [Forte Ambé]; Rio Tapajóz [Boim, Goyana]; Rio Jamauchim [Conceição]).

Campos Novos, 1 ♀; Utiarity, 2 ♂.

RANGE.—Eastern Brazil, from the vicinity of Pará and the south bank of the lower Amazon (west to the Tapajóz) south to Rio Grande do Sul and northern Matto Grosso (Campos Novos, Utiarity). Paraguay; Argentina (Misiones); eastern Bolivia; eastern Peru.

Our three specimens have the mantle ashy brown and the pileum brownish black, and no wing-spot. With the material available I cannot separate these and Bolivian specimens from true *C. chloropyga*.

(4022a) *Cœreba chloropyga alleni* Lowe

Cœreba chloropyga alleni LOWE, Bull. Brit. Orn. Club, XXIX, 1912, p. 86 (Chapada, Brazil); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 86 (Poconé, Caceres, Matto Grosso).

Certhiola chloropyga ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 348 (Abrilongo, Cuyabá, Chapada, Matto Grosso).

No specimens collected.

RANGE.—Southern Matto Grosso (Poconé), Caceres, Chapada, Cuyabá, Abrilongo).

The pileum, mantle, and scapulars are pale olive-brown or brownish olive. The color of the throat-patch is ashy white as compared with grayish in typical *C. c. chloropyga*. Endemic to Matto Grosso.

It appears that Matto Grosso birds as a rule have the back of a lighter, more brownish-olive (less grayish) shade, when compared with specimens from eastern Brazil. A good many I know are indistinguishable, and Bolivian skins seem to agree with eastern Brazil birds. Even so, I believe that *Cœreba chloropyga alleni* is separable from typical *chloropyga*. I have seen a large series in The American Museum of Natural History from Chapada, Matto Grosso.

(4061) *Dacnis cayana cayana* (Linnæus)

Motacilla cayana LINNÆUS, 'Syst. Nat.,' I, 12th Ed., 1766, p. 336 (ex Brisson; Cayenne).

Dacnis cayana SCLATER AND SALVIN, P. Z. S., 1867, p. 570 (Pará); LAYARD, Ibis, 1873, p. 378 (Pará); HELLMAYR, Nov. Zoöl., XII, p. 271 (Igarapé-Assú); SNETH-

LAGE, Journ. f. Orn., 1907, p. 292 (Pará, Rio Mojú, S. Antonio do Prata); IHERING, 'Cat. F. Braz.,' I, 1907, p. 343 (part; Pará, Venezuela, Guiana).

Dacnis cayana cayana HELLMAYR, Nov. Zoöl., XIII, p. 356 (S. Antonio do Prata).

Dacnis cyanocephala PELZELN, 'Orn. Bras.,' I, 1868, p. 25 (Barra do Rio Negro, Forte do Rio Branco, Pará, Borba).

Rio Roosevelt, 6th of March Rapids, 1 ♂; wing, 64; tail, 42; culmen, 10 mm.

RANGE.—Guianas; Trinidad; all of Venezuela. Northern Brazil, throughout Amazonia, from northern Maranhão at least to the Rio Negro and Rio Madeira, south to the Rio Machados and Rio Roosevelt, northern Matto Grosso.

Males from Venezuela have a wing measurement of 62–64 mm., and a tail of 42–44 mm.

(4063) *Dacnis cayana paraguayensis* Chubb

Dacnis cayana paraguayensis CHUBB, Ibis, 1910, p. 619 (Sapucay, near Asunción, Paraguay).

Dacnis cayana ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 347 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 343 (part; Matto Grosso and Paraguay).

Dacnis cyanocephala PELZELN, 'Orn. Bras.,' I, 1868, p. 25 (part; Matto Grosso Engenho do Cap. Gama).

Tapirapoan, 1 ♂, 1 ♀; Utiarity, 1 ♂, 1 ♀.

RANGE.—Paraguay and all of eastern Brazil, from Maranhão, Piahy, and Ceará, south to Rio Grande do Sul and Matto Grosso (Utiarity, Tapirapoan, Chapada, Engenho do Gama).

Measurements

	SEX	WING	TAIL	CULMEN
<i>Dacnis cayana paraguayensis</i> ¹				
Matto Grosso, Tapirapoan	1 ♂	67	45	12
“ “ “	1 ♀			
“ “ Utiarity	1 ♂	65	47	13

Five males from Chapada agree in measurements of the wing with the Paraguayan bird.

(4067) *Dacnis lineata lineata* (Gmelin)²

Motacilla lineata GMELIN, 'Syst. Nat.,' I, (2), 1789, p. 990 (ex Buffon, 'Hist. Nat. Ois.,' V, p. 342, "Pipit à coiffe bleue"—typ. ex Cayenne. Gmelin's description is erroneous, but that of Buffon is quite recognizable).

Dacnis cayana PELZELN, 'Orn. Bras.,' I, 1868, p. 25 (Engenho do Cap. Gama, Salto do Girão, Matto Grosso).

Dacnis angelica IHERING, 'Cat. F. Braz.,' I, 1907, p. 343 (Matto Grosso); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 464 (Amazonia).

Rio Roosevelt, Panda Rapids, 1 ♂; Utiarity, 1 ♀.

¹Matto Grosso birds tend somewhat in the direction of *D. c. glaucogularis* but are best referred to *paraguayensis*.

²This is the earliest name for *Dacnis angelica angelica* Bonaparte, Atti Sesta Riun. Sc. Ital., 1844 (1845), p. 404, note (descr. ♂ ad.; "ex Brasilia").

RANGE.—Guiana; northern Brazil, from Pará to the Rio Purús, south to Matto Grosso (Engenho do Cap. Gama, Salto do Girão, Rio Roosevelt, Utiarity); eastern Peru; and Bolivia.

(4070) *Dacnis flaviventer* d'Orbigny and Lafresnaye

Dacnis flaviventer D'ORBIGNY AND LAFRESNAYE, 'Syn. Av.,' I, in Mag. de Zool. VII, 1837, Cl. 2, p. 21 ("Yuracares, Rep. Bolivia").

Dacnis flaviventris PELZELN, 'Orn. Bras.,' I, 1868, p. 25 (Barra do Rio Negro); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 464 (Amazonia, Bolivia, Peru, Ecuador). Rio Roosevelt, Panda Rapids, 1 ♀.

RANGE.—Bolivia; Peru; Ecuador; eastern Venezuela (Rio Caura). Brazil, from the Xingú to the Peruvian border, south to northern Matto Grosso (Rio Roosevelt).

(4074) *Ateleodacnis speciosa speciosa* (Temminck)

Sylvia speciosa TEMMINCK, 'Nouv. Rec. Pl. Col.,' livr. 49, 1824, Pl. CCXCIII (Rio de Janeiro; type in Amer. Mus. Nat. Hist.).

Dacnis speciosa PELZELN, 'Orn. Bras.,' I, 1868, p. 26 (Cuyabá); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 346 (Chapada and Corumbá); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 3 (Carandasinho).

Ateleodacnis speciosa IHERING, 'Cat. F. Braz.,' I, 1907, p. 334 (Matto Grosso, Corumbá, Paraguay).

Paraguay: Fort Wheeler, 1 ♀. Trinidad, 1 ♀. Matto Grosso: Urucúm, 5 ♂, 1 ♀; Rio São Lourenço, 2 ♂.

RANGE.—Campo region of Brazil, from Marajó and the interior of Maranhão and Piahy south to Rio de Janeiro, São Paulo, and Matto Grosso (Chapada, Corumbá, Carandasinho, Urucúm, Rio São Lourenço). Paraguay (Fort Wheeler, Trinidad); Misiones, Argentina.

These specimens are in bright new plumage and the sexual organs show approaching activity.

Immature males, showing traces of the plumage of the female, have the chin and upper throat and middle of the abdomen much paler grayish white than in fully adult birds.

In life these birds acted more like small vireos (*Pachysylvia*) or warblers (Mniotiltidæ) than like honey-creepers; and Mr. Ridgway has pointed out that the members of the genus *Ateleodacnis* are more closely related to the warblers than they are to the honey-creepers (Cœrebidæ).

(4076) *Dacnis bicolor* (Vieillot)¹

Sylvia bicolor VIEILLOT, 'Hist. Nat. Ois. Amér. Sept.,' II, 1807, p. 32, Pl. xc bis (Cayenne).

Dendroeca bicolor PELZELN, 'Orn. Bras.,' II, 1868, p. 71 (Rio Madeira).

Ateleodacnis bicolor IHERING, 'Cat. F. Braz.,' I, 1907, p. 334 (Matto Grosso).

¹Equal to *Dacnis plumbea* Auct.

Dacnis bicolor SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 465 (Ilha das Onças, Marajó, Mexiana, Ilha de Aequi, Aramanduba).

No specimens collected.

RANGE.—Venezuela; Guiana; Peru; Colombia; Brazil, along the east coast to São Paulo, and throughout Amazonia, south to the Matto Grosso border line.

(4077) *Cyanerpes cyaneus cyaneus* (Linnæus)

Certhia cyanea LINNÆUS, 'Syst. Nat.,' I, 12th Ed., 1766, p. 188 (ex Edwards, Brisson, etc.). Dr. Hellmayr¹ fixes Surinam (ex Edwards, whom Linnæus quotes first) as type-locality.

Arbelorhina cyanea ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 347 (Chapada).

Tapirapoan, 2 ♂, 1 ♀.

RANGE.—Trinidad; Guiana; northern and eastern Brazil, from the lower Amazon and Pará south to Bahia and Matto Grosso (Chapada, Tapirapoan).

Specimens from various Brazilian localities seem to have a slightly shorter culmen.

Noted at several points. A young male secured January 12 is in the plumage of the adult female. A female (adult) taken on January 15 has evidently just completed a moult, and is in splendid new dress, but the condition of the ovaries gives no indication of an approaching breeding season.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
British Guiana, Demerara, 1 ♂; Minnehaha Creek, 1 ♂; Tumatumari River, 1 ♂	3 ♂	65	37.1	17.1	A. M. N. H.
Panama, Chepigana, 2 ♂; Canal Zone, Farfan, 2 ♂; Balboa, 1 ♂; Porto Bello trail, 1 ♂	6 ♂	61.4	38	15.8	"
French Guiana, Cayenne	4 ♂	62	35.3	17.1	Munich
Island of Trinidad, Caparo	4 ♂	64.1	38.1	17.3	"
Brazil, Colonia do Veado, Rio Amazonas	1 ♂	63.5	39	15.5	A. M. N. H.
Brazil, Maranhão, Miritiba	1 ♂	64	36.5	15	"
" Matto Grosso, Tapirapoan	1 ♂	66	35.5	12?	"
Brazil, Matto Grosso, Chapada	1 ♂	66	40	14	"

¹Nov. Zoöl., XIII, 1906, p. 8.

(4082) *Cyanerpes cæruleus cherriei* Berlepsch and Hartert

Cyanerpes cærulea cherriei BERLEPSCH AND HARTERT, Nov. Zoöl., IX, 1902, p. 16 (Munduapo, Orinoco, Venezuela).

Cæreba cærulea PELZELN, 'Orn. Bras.,' I, 1868, p. 25 (Salto do Girão).
Morinho Lyra, 1 ♂, 1 ♀.

RANGE.—Venezuela (Munduapo, Orinoco); central and eastern Peru; Brazil, from the Rio Negro south to northern Matto Grosso (Salto do Girão, Morinho Lyra).

(4084) *Cyanerpes nitidus* (Hartlaub)

Coereba nitida HARTLAUB, Rev. Zool., X, 1847, p. 84 ("Peru").

Cyanerpes nitidus IHERING, 'Cat. F. Braz.,' I, 1907, p. 344 (Amazonia).

Cyanerpes nitida SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 467 (Amazonia).
Rio Roosevelt, 1 ♂, 1 ♀.

RANGE.—Colombia; Venezuela; eastern Peru; northern Brazil, in states of Amazonas (Rio Negro, Teffé, Rio Solimões) and Matto Grosso (Rio Roosevelt).

(4085a) *Chlorophanes spiza spiza* (Linnæus)¹?

Motacilla spiza LINNÆUS, 'Syst. Nat.,' I, 10th Ed., 1758, p. 188 (Surinam).

Dacnis atricapilla PELZELN, 'Orn. Bras.,' I, 1868, p. 26 (Engenho do Cap. Gama, Salto do Girão, Matto Grosso).

Chlorophanes spiza IHERING, 'Cat. F. Braz.,' I, 1907, p. 344 (Matto Grosso); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 465 (Amazonia).

Rio Roosevelt, 2 ♀.

RANGE.—Venezuela; Guiana. Northern Brazil [(Pará, Peixe-Boi; Rio Tocantins, Arumatheua; Rio Jamauchim, Sta. Helena); (?) Matto Grosso (Rio Roosevelt, Engenho do Cap. Gama; Salto do Girão)].

(4092) *Tersina² viridis viridis* (Illiger)

Hirundo viridis ILLIGER, 'Prodr. Syst. Mamm. and Av.,' 1811, p. 229 (based on "L'Hirondelle verte" Temminck, 'Cat. Syst.,' 1807, p. 245, No. 986; Brasilia; ♀).

Procnias tersa PELZELN, 'Orn. Bras.,' II, 1868, p. 132 (Cuyabá).

Procnias viridis ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 349 (Chapada).

Procnias cærulea IHERING, 'Cat. F. Braz.,' I, 1907, p. 345 (part; Matto Grosso).
No specimens collected.

RANGE.—East Brazil, from Pernambuco and Bahia south to Rio Grande do Sul (Porto Alegre) and southern Matto Grosso (Chapada, Cuyabá). Eastern Bolivia (Santa Cruz); Paraguay (Alto Paraná); Argentina (Misiones).

(4093) *Tersina viridis occidentalis* (Sclater)

Procnias occidentalis SCLATER, P. Z. S. Lond., XXII, 1854, (pub. April, 1855), p. 249 "Nova Grenada" = Bogotá); PELZELN, 'Orn. Bras.,' II, 1868, p. 132 (Villa Bella de Matto Grosso).

¹Dr. Hellmayr agrees with the writer in thinking that birds from Matto Grosso might belong to *C. s. cærulescens*. It is impossible to decide from females alone, and I have never been able to examine male birds.

²For change of generic name, see Ridgway, Bull. U. S. Nat. Mus., No. 50, part 4, p. 880, footnote b; also Allen, Bull. Amer. Mus. Nat. Hist., II, 1889, p. 69.

Procnias viridis occidentalis HELLMAYR, Nouv. Zoöl., XVII, 1910, p. 271 (Maroins, Rio Machados).

No specimens collected.

RANGE.—Guiana; Venezuela; Colombia (except Santa Marta region); Ecuador; Peru; northwestern Brazil from the Rio Negro and Rio Madeira westward, south to northern Matto Grosso (Villa Bella, Rio Guaporé) and the north foot of the Bolivian Andes (Yungas of La Paz).

This form which represents typical *viridis* in the Amazonian section of Matto Grosso was secured by Natterer at Villa Bella de Matto Grosso, on the Guaporé. Afterward W. Hoffmanns met with it at Maroins on the Rio Machados, and on the Rio Preto, an easterly tributary of the upper Rio Madeira.

(4103) *Tanagra aureata aureata*¹ Vieillot

Tanagra aureata VIEILLOT, 'Tabl. Enc. Méth.,' Ornith., II, livr. 91, 1822, p. 782 based on Azara, No. 99; Paraguay).

Tanagra nigricollis VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXXII, 1819, p. 412 ("Brésil"; is preoccupied by *T. nigricollis* Gmelin, 'Syst. Nat.,' I, 2, 1789, p. 894; ex Daubenton, 'Pl. Enl.,' 720, fig. 1, Cayenne).

Euphonia nigricollis SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 4 (Urucúm); IHERING, 'Cat. F. Braz.,' I, 1907, p. 346 (Matto Grosso).

Euphonia cyanocephala aureata HELLMAYR, Nov. Zoöl., XXX, 1923, pp. 231, 232 (Matto Grosso).

No specimens collected.

RANGE.—Southern Brazil, from Bahia to Rio Grande do Sul, west to Matto Grosso (Urucúm). Paraguay; northern Argentina (Rincon de Luna, south Corrientes; Tucumán).

(4106) *Tanagra chlorotica chlorotica* Linnæus

Tanagra chlorotica LINNÆUS, 'Syst. Nat.,' I, 12th Ed., 1766, p. 317 (ex Brisson, "Cayania").

*Euphonia aurea*² IHERING, 'Cat. F. Braz.,' I, 1907, p. 346 (part; Pará); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 438 (Amazonia; Guiana); BERLEPSCH, 'Verh. 5th Internat. Ornith. Kongr. Berlin,' 1912, p. 1013 (northern Brazil, etc.).

Tapirapoan, 1 ♀; Juruena, 1 ♂.

RANGE.—Cayenne; Surinam; British Guiana (Demerara). Northern Brazil, in states of Pará (Pará, Monte Alegre, Marajó Island) and Matto Grosso (Tapirapoan, Juruena).

Without a series from Cayenne I cannot decide whether *Tanagra aurea violaceicollis* Cabanis is separable from *Tanagra chlorotica chlorotica*. Our male from Juruena is a very small specimen of the northern race. It differs from two specimens from Cayenne and the Island of Marajó by being more violaceous, less steel-blue on the upperparts, and by having the yellow of the forehead paler and less extended.

¹*Pipra cyanocephala* Vieillot, 1818, now belonging to the genus *Tanagra*, is rendered invalid by *Tanagra cyanocephala* F. L. S. Müller, 1776.

²*Parus aureus* Vroeg cannot be accepted, being non-binomial, cf. Stone, Auk, 1912, p. 207.

Measurements					
	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Matto Grosso,					
Juruena	♂	55	32.5	6	A. M. N. H.
French Guiana, Cayenne	♂	50.5	32	8	Munich
Brazil, Marajó Island	♂	54.5	32.5	7	"
" Monte Alegre	♂	51	29	6.5	A. M. N. H.
" Tapirapoan	♀	52	32	7	"
" Santarém	♀	52.5	30.5	7.5	"

(4108) *Tanagra chlorotica violaceicollis* (Cabanis)

Acroleptes violaceicollis CABANIS, Journ. f. Ornith., XIII, 1865, p. 409 ("Brasilien").

Euphonia chlorotica violaceicollis ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 350 (Chapada, Matto Grosso); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 4 (Carandasinho, Matto Grosso).

Euphonia aurea IHERING, 'Cat. F. Braz.,' I, 1907, p. 346 (part; Bahia, Pernambuco).

Euphonia aurea violaceicollis MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 87 (Poconé, Matto Grosso); BERLEPSCH, 'Verh. 5th Internat. Ornith. Kongr. Berlin,' 1912, p. 1014 (central and west Brazil).

Paraguay: Trinidad, 1♂. Matto Grosso: Descalvados, 2♂, 1♀; Agua Blanca de Corumbá, 1♂.

RANGE.—Central and eastern Brazil, from Maranhão, Piauhy and Ceará south to São Paulo (Ypanema, Rio Paraná) and Matto Grosso (Descalvados, Chapada, Corumbá, Agua Blanca de Corumbá, Poconé, Carandasinho). Paraguay (Trinidad).

These specimens agree with a series from Chapada, Matto Grosso. The males have the two outermost pairs of rectrices with good-sized spots on the inner webs. Without a series from Cayenne and Bahia it is difficult to come to any definite conclusions concerning the races of this species.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Paraguay, Trinidad	1♂	53	33.5	7.5	A. M. N. H.
Brazil, Matto Grosso, Descalvados	1♂	54	33.5	7.5	"
Brazil, Matto Grosso, Descalvados	1♂	55	31.5	8.5	"
Brazil, Matto Grosso, Agua Blanca de Corumbá	1♂	55.5	32	7.5	"
Brazil, Matto Grosso, Chapada	5♂	57.5	33.5	7.8	"
Brazil, Matto Grosso, Chapada	5♀	54.2	32.3	7.2	"

(4111) *Tanagra xanthogaster xanthogaster* (Sundevall)

Euphonia xanthogaster SUNDEVALL, Vet. Ak. Handl., 1833, p. 310, Pl. x, fig. 1 1834 (♂; Brazil).¹

Euphonia ochrascens PELZELN, 'Orn. Bras.,' III, 1870, pp. 202, 328 (Registro do Sai, Prov. Rio).

Rio Roosevelt, Broken Canoe Rapids, 1 ♂.

RANGE.—Eastern Brazil, from Bahia to Rio de Janeiro (Registro do Sai, Nova Friburgo); also in states of Pará (Rio Jamauchim), Amazonas (Maroins, Rio Machados; Rio Juruá) and Matto Grosso (Rio Roosevelt).

Specimens from British Guiana may differ from both *E. x. xanthogaster* and *E. x. brevirostris*, and birds from Amazonas (Rio Juruá, Rio Machados) may belong to yet another race. However, I have not seen sufficient material to come to a definite conclusion.

(4119) *Tanagra minuta minuta* (Cabanis)²

Euphonia minuta CABANIS, in Schomburgk, 'Reisen Brit. Guiana,' III, 1848, p. 671 (British Guiana; ♀).

Euphonia minuta PELZELN, 'Orn. Bras.,' III, 1870, p. 203 (Engenho do Cap. Gama, Matto Grosso).

Euphonia olivacea IHERING, 'Cat. F. Braz.,' I, 1907, p. 347 (Matto Grosso); BERLEPSCH, 'Verh. 5th Internat. Ornith. Kongr. Berlin,' 1912, p. 1015 (Engenho do Gama, Matto Grosso); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 439 (Amazonia e paizes visinhos do Nord).

RANGE.—Brazil: Matto Grosso (Engenho do Gama); Barra do Rio Negro; Rio Purús³; Rio Tapajóz (Boim, Pinhel); Rio Tocantins (Baião). Venezuela; Surinam; Cayenne; Peru; Bolivia.

(4125) *Tanagra laniirostris laniirostris* (d'Orbigny and Lafresnaye)

Euphonia laniirostris D'ORBIGNY AND LAFRESNAYE, 'Syn. Av.,' I, in Mag. de Zool., VII, 1837, Cl. 2, p. 30 (descr. orig. typ. ex Yuracares, Bolivia); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 351 (Abrilongo, Chapada, Matto Grosso).

Euphonia laniirostris PELZELN, 'Orn. Bras.,' III, 1870, p. 204 (Villa Maria, Matto Grosso; São Vicente).

Tapirapoan, 2 ♂.

RANGE.—Bolivia (Yuracares, Guarayos, Sta. Cruz de la Sierra, Omeja, Songo, Suapi, Espirito Santo); central Brazil, in states of Amazonas (Calama, Humaythá, Rio Madeira) and Matto Grosso (Tapirapoan, Chapada, Abrilonga, Villa Maria, São Vicente).

These specimens agree with others from Chapada that were collected by H. H. Smith.

¹Hellmayr (Archiv. f. Naturg., LXXXV, Abt. A, Heft 10, 1920, p. 15) designates Rio de Janeiro as type-locality.

²Cf. Oberholser, Proc. Biol. Soc. Wash., XXXI, p. 126.

³*Tanagra minuta* from the Rio Purús and the Rio Solimões is indistinguishable from French Guiana specimens, and I doubt very much if *T. olivacea mellea* of Bangs and Penard (Bull. M. C. Z., LXII, 1918, p. 87) can be maintained, though I have seen no specimens from the type-locality.

(4130) *Tanagra rufiventris rufiventris* Vieillot

Tanagra rufiventris VIEILLOT, 'Nouv. Dict. d'Hist. Nat., 'nouv. éd., XXXII, 1819, p. 426 (*loc. ignot.*).

Euphonia rufiventris PELZELN, 'Orn. Bras.,' III, 1870, p. 205 (Marabitanas, Rio Içanna, Barcellos).

Euphonia rufiventris IHERING, 'Cat. F. Braz.,' I, 1907, p. 348 (Amazonia sup. ao Rio Negro); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 440 (Rio Xingú).

Tanagra rufiventris colorata TODD, Proc. Biol. Soc. Wash., XXVI, 1913, p. 169 (Rio Surutú, Prov. del Sara, Bolivia).

Mouth of Rio Cherrie (Rio Roosevelt), 1 ♂; Monte Cristo, 1 ♂ (collected by Leo E. Miller).

RANGE.—Northern Brazil, from the lower Amazon (Rio Xingú) to the Peruvian border, south to northern Matto Grosso (Monte Cristo, Rio Roosevelt). Peru; eastern Ecuador; Venezuela; Bolivia.

Both agree in detail with two examples from Ecuador. I believe this is the first record from the Matto Grosso region.

Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Rio Cherrie	♂	62	36	9.5	A. M. N. H.
" Monte Cristo	♂	59.5		10	"
Ecuador	♂	60	35.5	10.5	"
"	♂	61	36	8.5	"

(4135) *Tanagra chrysopasta chrysopasta* (Sclater and Salvin)

Euphonia chrysopasta SCLATER AND SALVIN, P. Z. S., 1869, p. 438, Pl. xxx, figs. 1 and 2 (*deser. orig.* ♂ and ♀, ex Rio Ucayali); IHERING, 'Cat. F. Braz.,' I, 1907, p. 349 (Amazonia, Rio Negro); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 441 (Santo Antonio da Cachoeira, Rio Jary).

Euphonia chlorotica PELZELN, 'Orn. Bras.,' III, 1870, p. 202 (Salto do Girão, Barra do Rio Negro).

Rio Roosevelt, 1 ♂.

RANGE.—North Brazil, west from the Rio Jary and the Rio Madeira, south to northern Matto Grosso (Rio Roosevelt). Venezuela; Colombia; Peru; Bolivia.

Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Peru, Astillero	1 ♂	57.5	35.5	8.5	A. M. N. H.
" "	1 ♂	60.5	37.5	10.5	"
" "	1 ♀	58	37	10	"
" Carabaya, Yahuarimayo	1 ♀	56.5	37	10	Munich
Venezuela, Rio Caura	1 ♂	56	36	9	"
" "	1 ♂	57	35.5	8.5	"
" "	1 ♂	58.5	37.5	9	"
Colombia, Bogotá	1 ♂	58.5	37	8.5	"
" "	1 ♀	57	33	10.5	"
Brazil, Rio Roosevelt	1 ♂	55.5	35	9	A. M. N. H.

A large series of Bogota skins were also examined and measured.

(4148) *Pipraeidea melanonota melanonota* (Vieillot)

Tanagra melanonota VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXXII, 1819, p. 407 (descr. orig.; type ex "Brésil," hab. restr. Rio de Janeiro).

Pipraeidea melanonota ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 351 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 350 (Matto Grosso); BERLEPSCH, 'Verh. 5th Internat. Ornith. Kongr. Berlin,' 1912, p. 1024 (central, eastern, and southeastern Brazil).

No specimens collected.

RANGE.—Eastern Brazil, from Bahia to Rio Grande do Sul, west to Matto Grosso (Chapada). Paraguay and northeastern Argentina (Misiones).

(4155) *Tangara chilensis* (Vigors)

Aglaia chilensis VIGORS, P. Comm. Sci. Corr. Z. S. London., II, 1832, p. 3 (descr. orig. habitat "Chile"—errore; habit. subst. Bolivia).

Calliste yeni PELZELN, 'Orn. Bras.,' III, 1870, p. 206 (Engenho do Cap. Gama).

Calospiza chilensis IHERING, 'Cat. F. Braz.,' I, 1907, p. 351 (Matto Grosso); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 443 (Rio Purus, Cachoeira, Bom Lugar); BERLEPSCH, 'Verh. 5th Internat. Ornith. Kongr. Berlin,' 1912, p. 1026 (Engenho do Gama, Matto Grosso).

Rio Roosevelt, 1 ♂, 1 ♀.

RANGE.—Western Brazil, in states of Amazonas (Rio Purus; Rio Juruá; Calama, Rio Madeira) and Matto Grosso (Engenho do Gama, Rio Roosevelt). Bolivia; Colombia; Ecuador; Peru.

The male was taken at the point "Rio Duvida" where the national telegraph line crosses the river, the female at a point seventy-five miles farther south. They agree with Bolivian specimens in the collection.

(4183) *Tangara flava margaritæ* (Allen)

Calliste margaritæ ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 351 (Chapada, Matto Grosso).¹

Calliste flava margaritæ HELLMAYR, Nov. Zoöl., XV, 1908, p. 28 (Chapada, Matto Grosso).

Calospiza margaritæ BERLEPSCH, 'Verh. 5th Internat. Ornith. Kongr. Berlin,' 1912, pp. 1041, 1134 (Chapada, Prov. Matto Grosso).

Uturity, 1 ♂.

RANGE.—Matto Grosso (Chapada, Uturity).

This is the most common tanager of this group in the Matto Grosso region. Dr. Allen, in his paper giving the original description, also describes very fully the various phases of plumage due to age, sex, and season. Up to the time of writing this paper the above species has been known only from Chapada.

Endemic to Matto Grosso.

¹Type in American Museum of Natural History.

(4193) *Tangara albertinæ* (Pelzeln)

Calliste albertinæ PELZELN, Ibis, 1877, p. 337 (Salto do Girão, Rio Madeira, Brazil).

Calliste gyroloides PELZELN, 'Orn. Bras.,' II, 1870, p. 207 (part; Salto do Girão).

Calospiza albertinæ HELLMAYR, Nov. Zoöl., XII, 1905, p. 273 (Igarapé-Assú, Pará); XVII, 1910, p. 273 (Maroins, Rio Machados); IHERING, 'Cat. F. Braz.,' I, 1907, p. 354 (Matto Grosso); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 446 (Amazonia).

Barão Melgaço, 3 ♂, 1 ♀. Collected by Leo E. Miller.

RANGE.—Northern Brazil, throughout the Amazon Valley and on its southerly tributaries from Pará to the Rio Madeira, south to northern Matto Grosso (Maroins, Rio Machados; Barão Melgaço).

(4200) *Tangara mexicana boliviana* (Bonaparte)

Calospiza boliviana BONAPARTE, Compt. Rend. Ac. Sci. Paris, XXII, 1851, p. 80 (Guarayos, Bolivia).

Calliste flaviventris PELZELN, 'Orn. Bras.,' III, 1870, p. 207 (part; Ponte do Rio Guaporé, Matto Grosso).

No specimens collected.

RANGE.—Eastern Colombia, Ecuador and Peru; northern and eastern Bolivia; western Brazil, east to the Rio Madeira and south to western Matto Grosso (Ponte do Rio Guaporé).

The only record of this upper Amazonian form for Matto Grosso is the taking of specimens by Natterer at Ponte do Rio Guaporé as reported by Pelzeln.

(4211b) *Tangara cyaneicollis melanogaster* Cherrie and Reichenberger

Tangara cyaneicollis melanogaster CHERRIE AND REICHENBERGER, Amer. Mus. Novitates, No. 58, 1923, p. 1 (Utiarity, near Salto Bello, Papagaio River, Matto Grosso).

Calliste cyanicollis PELZELN, 'Orn. Bras.,' III, 1870, p. 208 (Engenho do Gama).

Calospiza cyaneicollis IHERING, 'Cat. F. Bras.,' I, 1907, p. 355 (part; Matto Grosso).

Utiarity, 1 ♂, 3 ♀; Tapirapoan, 1 ♀; Doze Octubre, 1 ♀ (1st annual plumage).

RANGE.—Western section of Matto Grosso (Engenho do Gama, Utiarity, Tapirapoan, Doze Octubre).

Peculiar to Matto Grosso.

(4272) *Thraupis episcopus caelestis*¹ (Spix)

Tanagra caelestis SPIX, 'Av. Bras.,' II, 1825, p. 42, Pl. LV, fig. 2 (part; ad flum. Solimões prope pagum Fontebda); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 447 (Rio Purús); BERLEPSCH, 'Verh. 5th Internat. Ornith. Kongr. Berlin,' 1912, p. 1051 (northern Brazil).

Tanagra episcopus PELZELN, 'Orn. Bras.,' III, 1870, p. 208 (part; Borba).

¹A synonym is *Tanagra ehrenreichi* Reichenow ('Orn. Monatsber.,' XXIII, 1915, p. 15, Rio Purús, Brazil) = worn plumage of *Thraupis episcopus caelestis* Spix. Cf. Hellmayr, Arch. f. Naturg., LXXXV, Abt. A, Heft 10, 1920, p. 24.

Tanagra episcopus caelestis IHERING, 'Cat. F. Braz.,' I, 1907, p. 356 (Amazonas, Fontebôa, Rio Juruá).

Solimões, 1 ♂; Porto Velho, 1 ♂; Calama, 1 ♀. The specimen from Porto Velho, Rio Madeira, agrees in every respect with the topotype from Solimões.

RANGE.—Within Brazil extends from the Rio Solimões and the Rio Madeira westward (Fontebôa; Calama, Borba; Rio Purús, Cachoeira, Bom Lugar; Rio Juruá). Eastern Peru; eastern Ecuador; Colombia.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Fontebôa, Rio					
Solimões (type)	1 ♂	90.5	64	10	Munich
" Solimões (topotype)	1 ♂	91	61.5	12	A. M. N. H.
" Porto Velho, Rio					
Madeira	1 ♂	87.5	62.5	13	"
Ecuador, El Loreto, 1 ♂;					
Napo, 2 ♂; Rio Napo, 1 ♂	4 ♂	90.7	64.3	12.6	Munich

(4278) *Thraupis sayaca sayaca* (Linnæus)

Tanagra sayaca LINNÆUS, 'Syst. Nat.,' I, 12th Ed., 1766, p. 316 ("Brasilia"); PELZELN, 'Orn. Bras.,' III, 1870, p. 208 (Cuyabá, Engenho do Gama); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 354 (Chapada); SALVADORI, Boll. Mus. Torino, X, No. 288, 1895, p. 4 (Corumbá); idem, *op. cit.*, XV, No. 378, 1900, p. 4 (Urucúm); IHERING, 'Cat. F. Braz.,' I, 1907, p. 357 (Matto Grosso); BERLEPSCH, 'Verh. 5th Internat. Ornith. Kongr. Berlin,' 1912, p. 1052 (Cuyabá, Engenho do Gama).

No specimens examined.

RANGE.—Confined to Brazil and Paraguay, occurring from Matto Grosso (Cuyabá, Engenho do Gama, Urucúm, Corumbá) to Ceará, Pernambuco, Bahia, Rio de Janeiro (Cantagallo, Rio de Janeiro, Sapitiba), São Paulo (S. Sebastião, Piquete Itararé), and Rio Grande do Sul (Taquara). Paraguay (Fort Wheeler and Trinidad).

(4280) *Thraupis palmarum palmarum* (Wied)

Tanagra palmarum WIED, 'Reise Bras.,' II, 1821, p. 76 (Canavieras, Bahia); PELZELN, 'Orn. Bras.,' III, 1870, p. 209 (part; Cuyabá and Villa Maria); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 355 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 357 (Matto Grosso, in part); BERLEPSCH, 'Verg. 5th Internat. Ornith. Kongr. Berlin,' 1912, p. 1053 (part; Cuyabá).

Tanagra palmarum melanoptera (not of Selater) MÉNÉGAUX, Rev. Franç. d'Orn., V, 1917, p. 87 (Caceres, Matto Grosso).

Urucúm, 1 ♂.

RANGE.—Eastern Brazil, from Pará to Santa Catharina, west to southern Matto Grosso (Cuyabá, Chapada, Villa Maria, Urucúm) and eastern Bolivia (Santa Cruz).

Birds from the southern part of Matto Grosso (Cuyabá, Chapada, Urucúm) agree in every particular with a series from eastern Brazil.

(4281) *Thraupis palmarum melanoptera* (Sclater)

Tanagra melanoptera SCLATER, P. Z. S., XXIV, 1856, pub. Jan., 1857, p. 235 (eastern Peru).

Tanagra palmarum PELZELN, 'Orn. Bras.,' III, 1870, p. 209 (part; Engenho do Cap. Gama); IHERING, 'Cat. F. Braz.,' I, 1907, p. 357 (Matto Grosso, in part); BERLEPSCH, 'Verh. 5th Internat. Ornith. Kongr. Berlin,' 1912, p. 1053 (part; Engenho do Gama).

Tanagra palmarum melanoptera SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 448 (part; Amazonia).

Tapirapoan, 1 ♂, 2 ♀; Carapanha, Rio Roosevelt, 1 ♂ juv.; Calama, 2 ♂.

RANGE.—Guiana; Trinidad; Venezuela; Colombia (except west coast); Ecuador; Peru. Northern (Amazonian) Brazil, from the Tapajóz westward, and south to northern Matto Grosso (Carapanha, Rio Roosevelt, Engenho do Gama, Rio Guaporé) and northern Bolivia.

I consider *Thraupis palmarum duvida* Cherrie¹ to be inseparable from *Thraupis palmarum melanoptera*. A female from northeastern Venezuela (Bermudez) in the Munich Museum is also conspicuous by the absence of a well-defined yellowish-olive area at the base of the remiges. Our bird from Carapanha is a juvenile bird in moult, and that from Venezuela is an adult female, thus helping to prove that this character is one of individual variation. One female of *Thraupis palmarum melanoptera*, No. 170210, in The American Museum of Natural History, from Tulumayo, Dept. Junín, Peru, has the greater wing-coverts grayish blue-violet instead of yellowish olive, just as in Mr. Cherrie's type; and this character is also exhibited by a specimen from Chocó, Nóvita, western Colombia, in the Munich Museum, again showing that this character, too, is due to individual variation.

(4297) *Ramphocelus carbo carbo* (Pallas)

Lanius carbo PALLAS, Vroeg's 'Cat. Rais. d'Ois., Adumbrat.,' 1764, p. 2 (Surinam).

Ramphocelus carbo IHERING, 'Cat. F. Braz.,' I, 1907, p. 359 (Pará, Amazonas); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 448 (Amazonia e paizes visinhos do Nord); BERLEPSCH, 'Verh. 5th Internat. Ornith. Kongr. Berlin,' 1912, p. 1057 (northern Brazil, Pará, Mexiana, Manáos, Fontebôa, etc.).

São João (lower Rio Roosevelt), 1 ♂.

RANGE.—Cayenne; Surinam; British Guiana; lower and upper Amazonia (Pará, Manáos, Mocajatuba, Providencia, Ananindeua, Benevides, St. Antonio do Prata, Rio Mojú, Rio Tocantins [Cametá, Arumatheua], Rio Xingú [Victoria, Forte Ambé], Rio Tapajóz [Boim, Goyana], Rio Madeira, Rio Purús [Bom Lugar], Marajo, Mexiana, Monte Alegre, Rio Jary, Rio Roosevelt [São João], Obidos, Maranhão). Northern Peru; eastern Ecuador; Venezuela.

¹Bull. Amer. Mus. Nat. Hist., XXXV, 1916, p. 190.

(4298) *Ramphocelus carbo centralis* Hellmayr

Ramphocelus carbo centralis HELLMAYR, Arch. für Naturg., LXXXV, A, Heft 10, 1920, p. 26 (Agua Suja, near Bagagem, western Minas Geraes, Brazil; type in Zool. Museum, Munich, No. 11, 1481. ♂ ad., Odilo Alves de Carvalho coll.).

Ramphocelus atrosericeus PELZELN, 'Orn. Bras.,' III, 1870, p. 211 (Cuyabá, Villa Maria, Engenho do Gama, Matto Grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 356 (Chapada); GRANT, Ibis, 1911, p. 94 (Passage de Nigre, Alto Paraguay and off Rabicho).

Rhamphocelus carbo connectens IHERING, 'Cat. F. Braz.,' I, 1907, p. 359 (Matto Grosso, Chapada).

Ramphocelus carbo connectens BERLEPSCH, 'Verh. 5th Internat. Ornith. Kongr. Berlin,' 1912, p. 1058 (part; western Brazil, Chapada, Descalvados, in Matto Grosso).

Descalvados, 2 ♂, 1 ♀; Urucúm, 2 ♂, 2 ♀; Palmiras, 1 ♂; Tapirapoan, 3 ♂, 2 ♀; Fazenda do São João, 1 ♂; Rio São Lourenço, 4 ♂; Campos Novos, 2 ♂; Juruena, 1 ♂; Siete de Setembro, 1 ♀; Barão Melgaço, 1 ♂, 1 ♀.

RANGE.—Plateau of central Brazil, from western Minas Geraes (Sete Lagóas, Agua Suja, Rio Jordão) and southern Goyaz (city of Goyaz) west to Matto Grosso (Cuyabá, São Luiz de Cáceres, Villa Bella, Villa Maria, Engenho do Gama, Chapada, Corumbá, Urucúm, Descalvados, Palmiras, Tapirapoan, Fazenda do São João, Rio São Lourenço, Rabicho, Campos Novos, Juruena, Siete de Setembro, Barão Melgaço), south to the northern part of São Paulo (Rio Paraná, Rio das Pedras, Batataes, Jaticabal, Baurú, Barretos, Rio Feio).

A good series from various points in Matto Grosso agree in detail with the large series (already in the Museum collection) collected by H. H. Smith at Chapada. The faint admixture of crimson on the back and belly of adult male birds of this race, giving an indescribable slight purplish sheen to the plumage, serves to distinguish it from examples of *R. atrosericeus*, having the back deep velvety black.

(4310) *Piranga flava saira* (Spix)

Tanagra saira SPIX, 'Av. Bras.,' II, 1825, p. 35, Pl. XLVIII, fig. 1 ("♂" errore = ♀; loc. ignot., habit. subst. "Rio de Janeiro" type in Mus. Munich).

Piranga saira PELZELN, 'Orn. Bras.,' III, 1870, p. 211 (Cuyabá); BERLEPSCH, 'Verh. 5th Internat. Ornith. Kongr. Berlin,' 1912, p. 1063 (Cuyabá, Chapada).

Piranga saira ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 357 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 359 (Matto Grosso, Porto da Faya).

Belvedere de Urucúm, 4 ♂, 2 ♀.

RANGE.—Eastern and central Brazil, in states of Maranhão, Piauhy, Bahia. "Rio de Janeiro," São Paulo (Itararé, Ypanema), Rio Grande do Sul (Linha Pirajá), Goyaz, and Matto Grosso (Cuyabá, Chapada, Belvedere de Urucúm).

At Belvedere (near Urucúm) in a sparsely wooded savanna region the *saira* red tanager was not uncommon during the third week in December. At that time all seemed to be in transitional plumage.

(4321) *Habia*¹ *rubra peruviana* (Taczanowski)

Phaenicothraupis peruvianus TACZANOWSKI, 'Orn. Pérou,' II, 1884, p. 498 (Peru Yurimaguas and Monterico).

Phaenicothraupis rubra PELZELN, 'Orn. Bras.,' III, 1870, p. 212 (Engenho do Gama, Borba).

Phaenicothraupis rubra peruviana HELLMAYR, Nov. Zoöl., XIV, 1907, p. 44 (Matto Grosso and Borba); IHERING, 'Cat. F. Braz.,' I, 1907, p. 361 (Matto Grosso); BERLEPSCH, 'Verh. 5th Internat. Ornith. Kongr. Berlin,' 1912, p. 1070 (Engenho do Gama, Matto Grosso); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 450 (Amazonia).

RANGE.—Northwest Brazil: Teffé, Rio Juruá¹; Rio Purús (Cachoeira); Matto Grosso (Engenho do Gama); Rio Madeira; Santarém; Rio Tapajoz (Boim, Villa Braga); Rio Jamauchim (Sta. Helena, Tucunaré). Peru (Chyavetas, Chamicuros, Yurimaguas, Xeveros).

(4330) *Lanio versicolor versicolor* (d'Orbigny and Lafresnaye)

Tachyphonus versicolor D'ORBIGNY AND LAFRESNAYE, 'Syn. Av.,' I, in Mag. de Zool., VII, 1837, Cl. 2, p. 28 (descr. orig. typ. ex Yuracares, Bolivia).

Lanio versicolor SCLATER, 'Cat. B. Brit. Mus.,' XI, 1886, p. 204 (Rio Javari); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 450 (Amazonia, Peru, Bolivia); BERLEPSCH, 'Verh. 5th Internat. Ornith. Kongr. Berlin,' 1912, p. 1073 (North Brazil).

Rio Roosevelt, 1 ♂, 2 ♀; Monte Cristo, 1 ♂, 2 ♀. Adult males have the bill black; feet slate; females have the bill blackish above, pale below; feet slate-gray.

RANGE.—North Brazil (Rio Javari; Humaythá and Allianca, Rio Madeira; Monte Cristo, Rio Roosevelt). Bolivia (Yuracares, San Mateo); Peru.

Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Bolivia, mouth of Rio San Antonio, Rio Espirito Santo	1 ♂	81.5	68.5	12.5	A. M. N. H.
Bolivia, mouth of Rio San Antonio, Rio Espirito Santo	1 ♀	75	65	14.5	"
Bolivia, Rio Beni	1 ♂	87	74.5	15	"
Brazil, Matto Grosso, Monte Cristo	1 ♂	80	71	13	"
Brazil, Matto Grosso, Monte Cristo	1 ♀	75	67	13	"
Brazil, Matto Grosso, Monte Cristo	1 ♀	72	63		"
Brazil, Rio Roosevelt	1 ♀	73	65	12	"
" "	1 ♀	72	66	13	"

(4333) *Tachyphonus rufus* (Boddaert)

Tanagra rufa BODDAERT, 'Tabl. Pl. Enl.,' 1783, p. 44 (based on "Le Tangaroux de Cayenne," Daubenton, 'Pl. Enl.,' Pl. 711; = adult female).

Tachyphonus melaleucus PELZELN, 'Orn. Bras.,' III, 1870, p. 212 (Engenho do Gama, São Vicente, Tapajóz, Pará).

¹*Habia* replaces *Phaenicothraupis*, cf. Oberholser, Proc. Biol. Wash., XXXV, 1922, p. 79.

²Ihering, Revist. Mus. Paul., VI, 1905, p. 432, *P. rhodinolæma*.

Tachyphonus rufus ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 359 (Chapada, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 361 (Matto Grosso); BERLEPSCH, 'Verh. 5th Internat. Ornith. Kongr. Berlin,' 1912, p. 1074 (Matto Grosso).

Paraguay: Fort Wheeler, 1 ♂, 1 ♀. Matto Grosso: Tapirapoan, 4 ♂.

RANGE.—Brazil: Pará (Benevides, Quati-Purú); Rio Guamá (Ourém); Rio Capim; Rio Mojú; Rio Tocantins (Baião, Arumatheua); Bahia; extreme western Minas Geraes; Goyaz; extreme northern São Paulo; Matto Grosso (Chapada, Engenho do Gama, Tapirapoan, São Vicente). Paraguay (Fort Wheeler, Puerto Pinasco, Lambaré, Colonia Risso). Argentina: Riacho Ancho, Mocovi (Santa Fé); Resistencia and Las Palmas (Chaco); Riacho Pelago (Formosa); etc.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
British Guiana, Wismar	3 ♂	82.1	78.1	16.1	A. M. N. H.
" " "	1 ♀	83	77	18	"
Venezuela, Mérida	3 ♂	88.1	82.1	18.5	"
Brazil, Tapirapoan	4 ♂	83.6	82.6	16.5	"
Paraguay, Fort Wheeler	1 ♂	87	88.5	17	"
" " "	1 ♀	87.5	86	17	"

(4334) *Tachyphonus luctuosus luctuosus* d'Orbigny and Lafresnaye

Tachyphonus luctuosus D'ORBIGNY AND LAFRESNAYE, 'Syn. Av.,' I, in Mag. de Zool., VII, 1837, Cl. 2, p. 29 (Guarayos, Bolivia); PELZELN, 'Orn. Bras.,' III, 1870, p. 213 (Villa Maria, Engenho do Gama, Salto do Girão, Borba); HELLMAYR, Nov. Zool., XIV, 1907, p. 349 (Humaythá, Borba); IHERING, 'Cat. F. Braz.,' I, 1907, p. 361 (Matto Grosso, Amazonas, Borba); BERLEPSCH, 'Verh. 5th Internat. Ornith. Kongr. Berlin,' 1912, p. 1074 (Villa Maria, Engenho do Gama, Matto Grosso; Borba, Humaythá, Calama, on the Rio Madeira).

Rio Roosevelt, 6th of March Rapids, 1 ♂; Broken Canoe Rapids, 1 ♂.

RANGE.—Brazil: Amazonia (Rio Guamá, São Miguel); Rio Tocantins (Arumatheua); Rio Tapajóz (Villa Braga); Rio Jamauchim (Sta. Helena); Rio Purús (Bom Lugar, Monte Verde); Rio Jary; Rio Maecurú; Rio Jamundá (Faro); Borba; Humaythá, Calama, Salto do Girão (on the Rio Madeira); Matto Grosso (Engenho do Gama, Villa Maria, Rio Roosevelt, 6th of March Rapids, Broken Canoe Rapids). Venezuela; Bolivia (Guarayos); British Guiana; Ecuador; etc.

Birds from Matto Grosso and northern Brazil (Rio Tocantins, Rio Maecurú) are slightly smaller than others from Todos Santos, Bolivia; not enough, however, to warrant the consideration of a new race. I believe material from Todos Santos to be essentially topotypical.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Bolivia, Todos Santos, 5 ♂;					
Mission San Antonio, 5 ♂	10 ♂	64.6	55.8	11.3	A. M. N. H.
Bolivia, Todos Santos, 3 ♀;					
Todos Santos, 2 ♀	5 ♀	59.7	53.8	11.6	"

Average Measurements (*Continued*)

	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Matto Grosso, 6th of March Rapids	1 ♂	63.5	54	11	A. M. N. H.
Brazil, Matto Grosso, Broken Canoe Rapids	1 ♂	58.5	52.2	9	"
Brazil, Rio Tocantins	1 ♂	62.5	57.5	10.5	Munich
" Muira Cachoeira, R. Maecurú	1 ♀	58.5	53	11.5	"

(4335) *Tachyphonus phœnicus* Swainson

Tachyphonus phœnicus SWAINSON, 'Anim. in Menag.,' 1837, p. 311 (loc. ign. hab. substit., East Peru auct. von Berlepsch).

Tachyphonus phœniceus PELZELN, 'Orn. Bras.,' III, 1870, p. 214 (Borba); IHERING, 'Cat. F. Braz.,' I, 1907, p. 361 (Amazonas, Borba, Rio Negro); BERLEPSCH, 'Verh. 5th Internat. Ornith. Kongr. Berlin,' 1912, p. 1075 (Borba, on the Rio Madeira); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 452 (Boim, Rio Tapajóz).

Vilhena, 1 ♂; eye dark; feet black; maxilla black; mandible plumbeous with black tip.

RANGE.—Northern Brazil, Amazonia: Rio Tapajóz (Boim); Borba on the Rio Madeira; Matto Grosso (Vilhena, Barão Melgaço); Rio Negro. British Guiana (Roraima, Merumé Mts.); northeastern Peru (Xeveros).

This record is, I believe, the first from Matto Grosso.¹ This species was not previously represented in the museum collection.

(4338) *Tachyphonus cristatus madeiræ* Hellmayr

Tachyphonus cristatus madeiræ HELLMAYR, Nov. Zoöl., XVII, 1910, p. 277 (Calama, Rio Madeira); BERLEPSCH, 'Verh. 5th Internat. Ornith. Kongr. Berlin,' 1912, p. 1075 (Engenho do Gama, Rio Guaporé, in Matto Grosso); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 453 (Rio Madeira, Matto Grosso).

Tachyphonus cristatus (not of Linnæus) PELZELN, 'Orn. Bras.,' III, 1870, p. 213 (part; Engenho do Cap. Gama; Borba, right bank of the Rio Madeira); IHERING, 'Cat. F. Braz.,' I, 1907, p. 362 (Borba).

Tachyphonus cristatus subspecies HELLMAYR, Nov. Zoöl., XIV, 1907, p. 349 (Humaythá).

Rio Roosevelt, 1 ♂; Barão Melgaço, 1 ♂, 1 ♀ (Leo E. Miller).

RANGE.—Central Brazil: Madeira Valley and its headwaters, Rio Guaporé, etc., south to western Matto Grosso (Engenho do Gama, Rio Roosevelt, Barão Melgaço).

The Madeira red-crested tanager was previously known only from the valley of the Madeira River and Engenho do Gama, Matto Grosso. The specimens secured serve to extend the range much to the eastward—the valley of the Rio Roosevelt. The race was not before represented in the Museum collection. Specimens from the Rio Negro (Barcellos, Marabitanas, and northern Peru (Loretoyacu) agree in every respect with Bogotá skins, the typical form (*T. cristatus cristatus*).

¹Nov. Zoöl., XIV, 1907, p. 276.

(4343) *Tachyphonus nattereri* Pelzeln

Tachyphonus nattereri PELZELN, 'Orn. Bras.,' III, 1870, pp. 214,328 (descr. orig., type ex Villa Maria, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 363 (Matto Grosso); BERLEPSCH, 'Verh. 5th Internat. Ornith. Kongr. Berlin,' 1912, p. 1076 (Villa Maria, in Matto Grosso).

No specimens collected.

RANGE.—Central Brazil: Matto Grosso (Villa Maria).¹

Endemic to Matto Grosso.

(4351) *Eucometis penicillata albicollis* (Lafresnaye and d'Orbigny)

Pyrranga albicollis LAFRESNAYE AND D'ORBIGNY, 'Syn. Av.,' I, in Mag. de Zool., VII, 1837, Cl. 2, p. 33 (descr. orig., type ex Chiquitos, Bolivia).

Eucometis albivollis PELZELN, 'Orn. Bras.,' III, 1870, p. 212 (Sangrador, Cuyabá, Villa Maria, Engenho do Gama, Matto Grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 358 (Chapada, Matto Grosso); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 4 (Urucúm); BERLEPSCH, 'Verh. 5th Internat. Ornith. Kongr. Berlin,' 1912, p. 1079 (Cuyabá, Villa Maria, Engenho do Gama, Chapada).

Eucometis penicillata albicollis IHERING, 'Cat. F. Braz.,' I, 1907, p. 363 (Matto Grosso); HELLMAYR, 'Revis. Spix.,' p. 671 (Sangrador, Matto Grosso).

Descalvados, 1 ♂; Urucúm, 1 ♂, 2 ♀; Belvedere de Urucúm, 1 ♂, 1 ♀; Rio São Lourenço, 1 ♂. Feet pale; mandible pale drab; maxilla dusky drab.

RANGE.—Bolivia (Chiquitos) and central Brazil, in states of Matto Grosso (Sangrador, Cuyabá, Villa Maria, Engenho do Gama, Chapada, Descalvados, Urucúm, Belvedere de Urucúm, Rio São Lourenço, Sangrador), Goyaz, and São Paulo (Itapura).

Not uncommon. Found in the heavy forest. Dr. Allen, in his paper on the Birds of Chapada, Matto Grosso, has given a very full description of the various phases of plumage of this bird. From the material he had in hand of specimens in immature plumage, his conclusions were that the breeding season was "considerably protracted from early October into November." This time must be extended into December, for a nest was collected together with the parent bird and three eggs, at Urucúm, December 3, 1914.

"The female parent when flushed from the nest remained near, keeping quiet and not showing excitement. The nest was loosely placed between the leaf-stems of a small palm about four feet from the ground. It is a slight affair constructed of small plant-stems loosely woven together and lined with small, almost hair-like plant-stems or fibres. On one side of the nest the walls are so thin and so loosely woven that it is possible to see the eggs through the nest-walls. The nest cavity is about 30 mm. in depth and 75 mm. in diameter at the top.

¹The supposed female of *Tachyphonus nattereri* Pelzeln was secured at Salto do Girão by Natterer. It is, however, doubtful whether it really belongs to *T. n. nattereri* or to *T. cristatus madeiræ*. The question must be left unsettled until adult males from that locality can be examined.

“There were three eggs, with incubation well advanced. The ground-color is a pale pinkish buff, but almost completely hidden by several superimposed layers of irregular spots and blotches (covering the entire surface) that successively grow darker from cinnamon-buff (the innermost) to blackish brown for the outermost. In form the eggs are ovate and measure 22×17 , 22×16.5 , and 22×16.5 , respectively.”

(4358) *Cypsnagra hirundinacea hirundinacea* (Lesson)

Tanagra hirundinacea LESSON, ‘Traité d’Orn.,’ 1831, p. 460 (descr. orig., type ex Brazil; habit. restr. São Paulo).¹

Cypsnagra ruficollis PELZELN, ‘Orn. Bras.,’ III, 1870, p. 214 (Cuyabá); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 360 (Chapada); IHERING, ‘Cat. F. Braz.,’ I, 1907, p. 364 (Porto da Faya, Matto Grosso); HELLMAYR, Nov. Zoöl., XIV, 1907, p. 350 (São Paulo, Goyaz, Matto Grosso); BERLEPSCH, ‘Verh. 5th Internat. Ornith. Kongr., Berlin,’ 1912, p. 1086 (east, central, and southern Brazil).

No specimens collected.

RANGE.—Southern Brazil, from southern Bahia (Caravellas), southern Goyaz (Fazenda Esperança; Goyaz City), and southern Matto Grosso (Chapada; Cuyabá; Porto da Faya) through Minas Geraes (Lagôa Santa; Sete Lagôas; Paracatú; Agua Suja, near Bagagem) south to São Paulo; and adjacent parts of Bolivia (Chiquitos)

(4359) *Cypsnagra hirundinacea pallidigula* Hellmayr

Cypsnagra ruficollis pallidigula HELLMAYR, Nov. Zoöl., XIV, 1907, p. 350 (Humaythá, Rio Madeira); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 457 (Amazonia occidental).

Campos Novos, 1 ♂.

RANGE.—Northern Brazil, in states of Ceará, Piauí, and Maranhão, extending through northern Goyaz (Philadelphia) west to the banks of the Rio Madeira (Humaythá) and south to northern Matto Grosso (Campos Novos), and in the east as far south as northern Bahia; (?) northern Bolivia.

Although both races are found in Bahia trade collections it appears that *Cypsnagra hirundinacea pallidigula* is the northern form, since specimens obtained by Reiser² at Santo Antonio de Gilboez, near Santa Philomena, southern Piauí, as well as another from Ceará, are referable to the pale-throated race.

Our specimen from Campos Novos is slightly intermediate. The throat is of a darker shade than in two specimens from Bahia, but is still very much paler than in numerous specimens of the typical race.

¹Dr. Hellmayr suggests São Paulo as the most likely type-locality.

²These specimens were examined by Dr. Hellmayr, who has kindly given us his notes.

Average Measurements					
	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Cypsnagra hirundinacea hirundinacea</i>					
Brazil, Matto Grosso, Chapada	5 ♂	77.1	64.9	14.5	Berlepsch Coll.
Brazil, Minas Geraes, Agua Suja, near Bagagem	1 ♂	78	63.5	14	Munich
Brazil, Minas Geraes, Agua, Suja, near Bagagem	1 ♀	77.5	66	13.5	"
São Paulo, Cimiterio	1 ♂	78.5	63	15.5	"
<i>Cypsnagra hirundinacea pallidigula</i>					
Bolivia, "Yungas" ¹	1 ♂	82		14	A. M. N. H.
Matto Grosso, Campos Novos	1 ♂	78.5	65.5	13.5	"
Bahia (trade-skin)	1 ♂	79	68	14	Berlepsch Coll.
" "	1 ♂	75.5	65	13.5	Berlepsch Coll.

(4362) *Nemosia pileata paraguayensis* Chubb

Nemosia pileata paraguayensis CHUBB, Ibis, 1910, p. 629 (Sapucay, Paraguay); BERLEPSCH, 'Verh. 5th Internat. Ornith. Kongr. Berlin,' 1912, p. 1084 (Paraguay, Sapucay; Bolivia, San Miguel and San José, Chiquitos).

Nemosia pileata PELZELN, 'Orn. Bras.,' III, 1870, p. 214 (Cuyabá); SCLATER, 'Cat. F. Brit. Mus.,' XI, p. 223 (Paraguay, Araguaya, Brazil); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 361 (Chapada, Corumbá); IHERING, 'Cat. F. Braz.,' I, 1907, p. 364 (Matto Grosso).

Paraguay: Trinidad, 2 ♂. Matto Grosso: Urucúm, 2 ♂, 4 ♀; Belvedere de Urucúm, 1 ♀. In life the bill is black, feet and eye yellow; the bright yellow eye being very conspicuous.

RANGE.—Paraguay; Argentina; eastern Bolivia, and the southwestern portion of Brazil (Matto Grosso and adjoining districts of Goyaz, Minas Geraes, and São Paulo).

Nemosia pileata paraguayensis is an exceedingly poor race, differing from the typical bird of more northern countries by being generally larger, although it must be admitted that many examples do not differ in size at all.

A series of twenty-two specimens from the states of Bahia and Piahy, although some of them are hardly smaller than the average of *Nemosia pileata paraguayensis*, agrees in measurements, on the whole, better with *Nemosia pileata pileata* from the Guianas and northern Brazil. Maximum and minimum of wing and tail are exactly the same in both series, while the birds which I refer to *Nemosia pileata paraguayensis*

¹The specimen bearing the locality, "Yungas, Bolivia," collected by Rusby, is no doubt wrongly labeled, as the species does not occur in the tropical forest, it being a bird of the campo.

show larger figures. I am unable to follow Messrs. Bangs and Penard in recognizing a race, *Nemosia pileata cærulea* (Weid),¹ since I do not see any difference either in the shade of the upperparts, or in the extent of the white margins on the upper wing-coverts. As compared to *Nemosia pileata pileata*, the typical race, *Nemosia pileata nana* of which I have seen one male, the type, from Samiria, and a female from Nauta, northeastern Peru, appears to be a fairly good race. In measurements it resembles the smallest specimens of *Nemosia pileata pileata*, but has a much more slender bill and the back, especially in the male sex, of a decidedly darker, more purplish blue.

Nemosia pileata hypoleuca Todd, from the north coast of Colombia, differs from all other races in the pure white color of the underparts, without any grayish wash on the flanks.

Average Measurements					
	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Nemosia pileata pileata</i>					
Dutch Guiana, Paramaribo	1 ♂	68	45	10.5	A. M. N. H.
“ “ “	1 ♂	68	47	12	“
North Brazil, Monte Alegre, 1 ♂; Mexiana Island, 1 ♂; Marajó Island (Livramento), 1 ♂; Marmellos, left bank, Rio Madeira, 1 ♂	4 ♂	69.8	47.8	12	Munich
North Brazil, Marajó Island (S. Natal), 1 ♀; Forte do Rio Branco, 2 ♀; Marmellos, left bank, Rio Madeira, 1 ♀; Maranhão, Miritiba, 1 ♀; Rio Amazon, 1 ♀	6 ♀	66.6	45.8	12	Munich and Vienna
Bahia (trade-skins), 8 ♂; Carnahyba, Joazeiro, 1 ♂; Santa Rita, Rio Preto, 1 ♂; Porto da Pedra, Rio Preto, 1 ♂; Solidade, 1 ♂	12 ♂	68.5	46.8	12.2	Vienna and Munich
Bahia (trade-skins), 7 ♀; Carnahyba, Joazeiro, 1 ♀; Lake of Boqueirão, Rio Grande, 1 ♀	9 ♀	70.2	48.1	11.5	“
Piahy, near Castelliano, Rio Parnahyba	1 ♂	72.5	47.5	11.5	Vienna

¹*Hylophilus cæruleus* Wied, Beitr. Naturg. Bras., III, (2), 1831, p. 731 (descr. ♀; Bahia).

Average Measurements (*Continued*)

	SEX	WING	TAIL	CULMEN	MUSEUM
Piauhy, Bandeira, near Santo Antonio de Gilboez	1 ♀	70	50	12.5	Vienna
Piauhy, Buriti, near Parnaguá	1 ♀	71	1	13	"
<i>Nemosia pileata paraguayensis</i>					
Minas Geraes, Pirapora	1 ♂	74	52.5	12	A. M. N. H.
Matto Grosso, Urucúm, 2 ♂; Chapada, 2 ♂; Cuyabá, 3 ♂	7 ♂	72.1	59.5	12	A. M. N. H. and Vienna
Matto Grosso, Urucúm, 4 ♀; Belvedere de Urucúm, 1 ♀; Chapada, 2 ♀; Cuyabá, 2 ♀	9 ♀	70.6	48.2	11.7	A. M. N. H. and Vienna
Goyaz, Araguaya	1 ♂	73.5	51	12.5	Vienna
" "	1 ♀	70.5	48	11.5	"
" "	1 ♀	72	50	12.5	"
Bolivia, Prov. Cochabamba, Todos Santos	1 ♂	74	47	11	A. M. N. H.
Bolivia, Prov. Cochabamba, Todos Santos	1 ♂	73	49	12	"
Bolivia, Prov. Cochabamba, Todos Santos	1 ♀	73.5	47.5	12.5	"
São Paulo, Itararé	1 ♀	72	51	12	"
Paraguay, Trinidad	1 ♂	75.5	50.5	12	"
" Bernalcué, near Asunción	1 ♀	74	49.5	12.5	Berlepsch Coll.
Argentina, Embarcación	1 ♂	73	51.5	11.5	A. M. N. H.
<i>Nemosia pileata hypoleuca</i>					
Colombia, Carthagena	3 ♂	70.1	58.1	11.6	A. M. N. H. and Berlepsch Coll.
<i>Nemosia pileata nana</i>					
N. E. Peru, Samiria (type)	1 ♂	67	44	12	Berlepsch Coll.
N. E. Peru, Nauta	1 ♀	63.5	41.5	12.5	Berlepsch Coll.

(4370) *Hemithraupis flavicollis*² *centralis* (Hellmayr)

Nemosia flavicollis centralis HELLMAYR, Nov. Zoöl., XIV, 1907, p. 350 (Humaythá, Rio Madeira).

Nemosia flavicollis (not of Vieillot) PELZELN, 'Orn. Bras.,' III, 1870, p. 215 (Engenho do Gama); IHERING, 'Cat. F. Bras.,' I, 1907, p. 365 (Matto Grosso).

¹Tail moulting.

²*Tanagra speculifera* Temminck ('Nouv. Rec. Pl. Col.,' livr. 6, 1821, Tab. 36, figs. 1, 2—"A la Guyane et au Brésil") apparently covers both *N. f. flavicollis* and *N. f. insignis*, but cannot be referred with certainty to either.

Hemithraupis flavicollis centralis BERLEPSCH, 'Verh. 5th. Internat. Orn. Kongr. Berlin,' 1912, p. 1082 (Humaythá on the Rio Madeira; Engenho do Gama, Matto Grosso); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 456 (Alto Amazonas).

Uturity, 1 ♂, 1 ♀; iris dark, maxilla black, mandible yellowish horn-color; feet slate-gray; Rio Duvida, Camp 1, 1 ♂; Rio Roosevelt, Camp 21, 1 ♂.

RANGE.—Western Brazil, in states of Amazonas (Humaythá and Calama, Rio Madeira) and Matto Grosso (Engenho do Gama, Rio Guaporé, Utiarity, Rio Duvida, Rio Roosevelt). Northeastern Bolivia (Tilotilo, Simacu).

(4375) *Hemithraupis guira guira* (Linnæus)

Motacilla guira LINNÆUS, 'Syst. Nat.,' I, 12th Ed., 1766, p. 335 (based on Brisson), ex Maregrave,¹ "Guiraguaçu-beraba"; northeast Brazil.

Nemosia guira PELZELN, 'Orn. Bras.,' III, 1870, p. 215 (Engenho do Cap. Gama); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 361 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 365 (Matto Grosso).

Hemithraupis guira BERLEPSCH, 'Verh. 5th Internat. Ornith. Kongr. Berlin,' 1912, p. 1083 (southwestern Brazil, Matto Grosso).

Urucúm, 4 ♂, 2 ♀. Colors noted from fresh birds were: eye dark; feet slate-gray; maxilla blackish; mandible yellowish.

RANGE.—Eastern Brazil, in states of Piauhy (Therezina, Buriti, near Parnaguá), Maranhão, Pernambuco, Bahia (near Santa Rita, Faz. de Santo Antonio, Rio Preto), São Paulo (Rio Paraná), Goyaz, Minas Geraes (Agua Suja, near Bagagem), and Matto Grosso (Urucúm, Belvedere de Urucúm, Chapada, Engenho do Cap. Gama, Rio Guaporé). Bolivia (Todos Santos).

Matto Grosso specimens agree well with others from Minas Geraes, Goyaz, northern São Paulo, and Bahia. These birds show a tremendous amount of individual variation as regards size, shade of the chest, and extent of yellow about the head. Some of the six specimens from Bolivia (Todos Santos) sometimes have the chest darker orange and may be slightly larger on an average, although the smallest specimen is by no means larger than the largest from Brazil. The typical race appears to range all over the Brazilian plateau from Bahia to Maranhão in the east, to Matto Grosso in the west, south to the northern districts of São Paulo. In Paraguay and Misiones it is represented by *Hemithraupis guira fosteri* (Sharpe), which merely differs by having the eyebrow and the patch of yellow on the sides of the head more extended, and the forehead more or less tinged with yellow; besides it averages larger. The northern limit of the range of *Hemithraupis guira guira* I am unable to properly define through lack of sufficient material. A male from Manãos and another from the island of Mexiana appear to be indistinguishable from southern examples, while a second male from the island of Mexiana closely resembles *Hemithraupis guira nigrigula* from French and Dutch

¹Maregrave traveled only in the northeastern provinces of Brazil.

Guiana. Birds from the north coast of Venezuela (Bermudez, Carabobo and Caracas) I should be inclined to refer to *Hemithraupis guira nigrigula* rather than to the typical race as has been done by authors.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Hemithraupis guira guira</i>					
N. Brazil, Manáos, Rio Negro	1 ♂	60	46	11	Munich
N. Brazil, Mexiana Island	1 ♂	64.5	50.5	12.5	"
" " "	1 ♂	61.5	50	11.5	"
Brazil, Minas Geraes, Agua Suja, near Bagagem	1 ♂	67.5	54.5	12	"
Brazil, Minas Geraes, Agua Suja, near Bagagem	1 ♂	73	61	11	"
Brazil, Matto Grosso, Uru- cúm, 1 ♂; Belvedere de Urucúm, 3 ♂; Chapada,					Munich and
1 ♂	5 ♂	63.2	51.3	11.5	A. M. N. H.
Matto Grosso, Urucúm	1 ♀	63.5	50	10.5	"
" " "	1 ♀	60.5	49	10	"
Goyaz, Goyaz City	1 ♂	66	55	13	Vienna
" " "	1 ♂	65	52	11	"
São Paulo, Rio Paraná (source)	1 ♂	65	51.5	13	"
São Paulo, Rio Paraná (source)	1 ♂	66	54	13	"
São Paulo, Rio Paraná (source)	1 ♀	65	53.5	11	"
Bahia, near Santa Rita	1 ♂	66	54	12	Vienna
" " " "	1 ♀	61.5	48.5	11 ¹	"
" Fac. de S. Antonio, Rio Preto	1 ♂	64	48.5		"
Bahia, Fac. de S. Antonio, Rio Preto	1 ♀	62	48.5	11.5	
Piahy, Therezina	1 ♂	64.5	51.5	10	"
" Buriti, near Parna- guá, 2 ♀; Queimadas, on the Parnahyba, 1 ♀; Cas- telliano, on the Parnahyba,					
1 ♀	4 ♀	61	49.8	11.2	"
Bolivia, Dept. Cochabamba, Todos Santos	6 ♂	66	53.5	11.5	A. M. N. H.
Bolivia, Dept. Cochabamba, Todos Santos	3 ♀	63.3	51	11.1	"

¹Defective culmen.

Average Measurements (*Continued*)

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Hemithraupis guira nigrigula</i>					
Venezuela, El Pilar, 2 ♂;					
Cumbre de Valencia, San					
Esteban, 4 ♂; Caracas,					A. M. N. H.
Loma Redonda, 1 ♂	7 ♂	63.6	51.5	11.5	and Munich
Venezuela, El Liman	1 ♀	61	51.5	12	A. M. N. H.
“ “ “	1 ♀	58.5	49	10.5	“
French Guiana, Cayenne, 1					
♂; St. Laurent du Maroni,					
2 ♂	3 ♂	61.8	48.6	11.1	Munich
<i>Hemithraupis guira fosteri</i>					
Paraguay, Sapucay	1 ♂	68.5	56	12	“

SPECIMENS EXAMINED

Hemithraupis guira quirina.—Colombia: Rio Frio, Cauca, 1 ♂, 1 ♀; Antioquia, 1 ♂; La Candela, Huila, 1 ♀; (within 20 miles of Honda), Tolima, 1 ♂; Bogotá, 1 ♂. Ecuador: Napo, 2 ♂.

(4380) *Thlypopsis sordida sordida* (d'Orbigny and Lafresnaye)

Nemosia sordida D'ORBIGNY AND LAFRESNAYE, 'Syn. Av.,' I, in Mag. de Zool., VII, 1837, Cl. 2, p. 28 (Yuracares, Bolivia); PELZELN, 'Orn. Bras.,' III, 1870, p. 216 (Cuyabá).

Nemosia fulvescens PELZELN, 'Orn. Bras.,' III, 1870, p. 215 (part; Cidade de Goyaz and Cuyabá).

Thlypopsis sordida ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 361 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 366 (Matto Grosso); MÉNÉGAUX, 'Rev. Franç. d'Orn.,' V, 1917, p. 87 (Poconé); BERLEPSCH, 'Verh. 5th Internat. Orn. Kongr. Berlin,' 1912, p. 1085 (Cuyabá, in Matto Grosso).

Agua Blanca de Corumbá, 1 ♀.

RANGE.—Brazil, in states of Goyaz, Minas Geraes (Lagôa Santa, Sete Lagôas), Matto Grosso (Cuyabá, Chapada, Poconé), Bahia, Pernambuco, Piauhy, and Ceará; Venezuela (Orinoco River, El Traile, Capuchin, Altagracia); eastern Bolivia (Yuracares, San Mateo); northwestern Argentina.

No specimens were collected on the original expedition, and only one on the supplementary trip. A female in juvenal plumage was taken at Agua Blanca de Corumbá, November 5. Wing, 58; tail, 49; bill, 10.5 mm.

Thlypopsis sordida sordida, originally described from Bolivia, ranges all over central and eastern Brazil from Matto Grosso to Ceará and Piauhy, and has also been found in northern Argentina¹ and on the banks of the Orinoco in Venezuela.

¹Dr. Hellmayr examined these specimens in the Tring Museum, from São Vicente, Terr. del Chaco, and Tañ Viejo, Prov. of Tucúman, Argentina.

(4381) *Thlypopsis sordida amazonum* Sclater

Thlypopsis amazonum SCLATER, 'Cat. B. Brit. Mus.,' XI, 1886, p. 229 (lower Ucayali); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 457 (Alto Amazonas, Peru).

Nemosia fulvescens PELZELN, 'Orn. Bras.,' III, 1870, p. 215 (part; Rio Madeira).

Thlypopsis sordida amazonum HELLMAYR, Nov. Zoöl., XVII, 1910, p. 278 (Maroins, Rio Machados); BERLEPSCH, 'Verh. 5th Internat. Ornith. Kongr. Berlin,' 1912, p. 1085 (northeast and central Peru).

Calama, 1 ♂; collected by Leo E. Miller.

RANGE.—The range given by Sclater in the 'Catalogue of Birds of the British Museum' is altogether erroneous. *Thlypopsis sordida amazonum* is restricted to Upper Amazonia ranging from the north bank of the Marañón (Pebas, Nauta) south to the Chanchamayo district, Dept. Junin, Peru, and east to the Rio Madeira. It is found nowhere in Bolivia, which is the type-locality of *Thlypopsis sordida sordida*, and the Cuyabá birds, one of which was referred by Sclater to *Thlypopsis sordida amazonum*, turn out to belong to *Thlypopsis sordida sordida*.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Thlypopsis sordida sordida</i>					
Bolivia, Todos Santos, 4 ♂;					
Mission San Antonio, 1 ♂	5 ♂	68.7	59.3	10.9	A. M. N. H.
Bolivia, Todos Santos, 4 ♀;					
Mission San Antonio, 2 ♀	6 ♀	63.5	56	10.9	"
Brazil, Matto Grosso,					
Chapada	1 ♂	63.5	54	10.5	"
Brazil, Matto Grosso,					
Chapada	1 ♂	67.5	60	11	"
Brazil, Matto Grosso, Agua					
Blanca de Corumbá,	1 ♀	58	50	10.5	"
Brazil, Minas Geraes, Agua					
Suja, near Bagagem	1 ♂	74	67	11.5	Munich
Brazil, Minas Geraes, Agua					
Suja, near Bagagem	4 ♀	68.6	61.8	12.2	"
Venezuela, Rio Orinoco,					
Ciudad Bolivar	1 ♂	65.5	54	11.5	"
Brazil, Bahia (trade-skins)	7?	66.5	56.9	10.8	Berlepsch Coll.
<i>Thlypopsis sordida amazonum</i>					
Brazil, Calama, 1 ♂;					
Maroins, Rio Machados, 1					A. M. N. H.
♂; São João do Crato, Rio					Munich
Madeira, 1 ♂	3 ♂	65.3	52.6	10.6	Vienna
Central Peru, La Merced,					Berlepsch
Chanchamayo	1 ♂	69	56.5	11.5	Coll.

(4424) *Diucopsis fasciata* (Lichtenstein)

Tanagra fasciata LICHTENSTEIN, 'Verz. Doubl. Berlin Mus.,' 1823, p. 32 (São Paulo).

Diucopsis fasciata PELZELN, 'Orn. Bras.,' III, 1870, p. 219 (Cuyabá); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 366 (Chapada); IHERING, 'Cat. F. Braz.,' I, 1907, p. 387 (Porto da Faya); BERLEPSCH, ('Verh. 5th Internat. Ornith. Kongr. Berlin,' 1912, p. 1107 (Chapada).

No specimens collected.

RANGE.—Campo region of Brazil, from the interior of Maranhão and Piauí south to São Paulo, west to Matto Grosso (Cuyabá, Chapada, Porto da Faya).

A characteristic species of the Central Brazilian tableland.

(4429) *Lamprospiza melanoleuca* (Vieillot)

Saltator melanoleucus VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XIV, 1817, p. 105 ("l'Amérique méridionale"; the type is from Cayenne).¹

Lamprospiza melanoleuca PELZELN, 'Orn. Bras.,' III, 1870, p. 218 (Pará); IHERING, 'Cat. F. Braz.,' I, 1907, p. 366 (Guyana, Amazonia inferior, Pará); SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 458 (Amazonia, Guyana); HELLMAYR, Nov. Zoöl., XII, 1905, p. 276 (District of Pará, Brazil).

Rio Roosevelt, at the mouth of the Rio Cherrie, 1 ♂, 1 ♀.

RANGE.—French and Dutch Guiana. Brazil, in states of Pará (Pará, Peixe-Boi, Igarapé-assú, Ananindena, Rio Guamá, Rio Acará. Santarém and Villa Braga, Rio Tapajoz; Rio Jamundá, Faro) and Matto Grosso (Rio Roosevelt, at mouth of Rio Cherrie). Southeastern Peru (Yahuarimayo, Carabaya).

They agree exactly in size and color with specimens from the vicinity of Pará.

(4433) *Cissopsis leveriana leveriana* (Gmelin)

Lanius leverianus GMELIN, 'Syst. Nat.,' I, (1), 1788, p. 302 (*loc. ign.*; = Cayenne).

Cissopsis leveriana SNETHLAGE, Bol. Mus. Goeldi, VIII, 1914, p. 459 (Rio Purús and Maranhão).

Tapirapoan, 1 ♂, 1 ♀.

RANGE.—West Brazil, in states of Matto Grosso (Tapirapoan), Amazonas, Rio Purús (Cachoeira, Bom Lugar, Monte Verde), and Maranhão. Guiana; Venezuela; Colombia; Ecuador; Peru; Bolivia.

I have compared our two specimens from Tapirapoan with two (not sexed) specimens of typical *leveriana* from British Guiana (lower Demerara River) and have also seen topotypical material of *C. l. minor* from Peru. Adding to this material specimens from Venezuela, Colombia, Bolivia, and Brazil, I can discover no differences between the two races. *C. l. major* from eastern Brazil, however, is easily distinguishable.

¹See Ménégaux, Bull. Mus. Hist. Nat. Paris, XIV, 1908, p. 10.

	Measurements				MUSEUM
	SEX	WING	TAIL	CULMEN	
<i>Cissopis leveriana leveriana</i>					
Brit. Guiana, Lower Demerara River	1?	108	132	15.5	A. M. N. H.
Brit. Guiana, Lower Demerara River	1?	111.5		16	"
Brazil, Matto Grosso, Tapirapoan	1 ♂	112.5	137	15.5	"
Brazil, Matto Grosso, Tapirapoan	1 ♀	108	136.5	15.5	"
<i>Cissopis leveriana "minor"</i>					
Peru, Perené, Prov. Junin, 1 ♂; La Merced, 1 ♂; Tulumayo, 1 ♂; Rio Tavara, 1 ♂; Astillero, 2 ♂	6 ♂	111.3	130.8	16.7	"
Peru, Tulumayo, Prov. Junin, 1 ♀; La Pampa, 1 ♀; Candamor, 1 ♀	3 ♀	111.8	138.6	15.3	"

(4437) *Schistochlamys melanopis*¹ *olivina* (Sclater)²

Tanagra olivina SCLATER, P. Z. S., 1864, p. 607 (Brazil, Cuyabá; = juv.); PELZELN, 'Orn. Bras.,' III, 1870, p. 210 (Cuyabá).

Orchesticus ater PELZELN, 'Orn. Bras.,' III, 1870, p. 220 (Cuyabá, São Vicente).

Schistochlamys atra ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 367 (Chapada); SCLATER, 'Cat. B. Brit. Mus.,' XI, 1886, p. 301 (Cuyabá); BERLEPSCH, 'Verh. 5th Internat. Ornith. Kongr. Berlin,' 1912, p. 1109 (Cuyabá, in Matto Grosso).

Schistochlamys ater IHERING, 'Cat. F. Braz.,' I, 1907, p. 367 (Matto Grosso).

Tapirapoan, 2 ♂ ad., 2 ♂ in postjuvénal plumage.

RANGE.—Table-land of central Brazil, in states of Goyaz, Matto Grosso (Cuyabá, Chapada, São Vicente, Tapirapoan), Minas Geraes (Paracatú) and São Paulo. Eastern Bolivia.³

(4444) *Gymnostinops yuracares yuracares* (Lafresnaye and d'Orbigny)

Cassicus yuracares LAFRESNAYE AND D'ORBIGNY, 'Syn. Av.,' II, in Mag. de Zool., VIII, 1838, Cl. 2, p. 2 ("Yuracares, Rep. Boliviana").

Ostinops yuracarium PELZELN, 'Orn. Bras.,' III, 1870, p. 192 (Engenho do Cap. Gama, Matogrosso)

Gymnostinops yuracarium SCLATER, 'Cat. B. Brit. Mus.,' XI, 1886 p. 314 (Engenho do Gama, Matogrosso).

Gymnostinops yuracares IHERING, 'Cat. F. Braz.,' I, 1907, p. 393 (Matto Grosso); HELLMAYR, Nov. Zoöl., XVII, 1910, p. 282 (Maroins, Rio Machados).

Campos Novos, 2 ♂ im.; collected by L. E. Miller.

¹*Tanagra atra* Gmelin, 1789, is preoccupied by *Tanagra atra* Meuschen (Mus. Gevers., 1787, p. 52). See Mathews, 'Aust. Av. Rec.,' V, 1926, p. 92.

²Ann. Carn. Mus., VIII, 1912, p. 203.

³Birds from eastern Brazil (Parahyba to Rio de Janeiro) probably belong to the same race.

RANGE.—Brazil, in states of Matto Grosso (Engenho do Cap. Gama, Villa Bella de Matto Grosso, Campos Novos, Maroins), Amazonas (Rio Purús, Rio Javary, Rio Negro). Bolivia, Peru; Ecuador; Colombia.

(4445) *Ostinops decumanus maculosus* Chapman

Ostinops decumanus maculosus CHAPMAN, Proc. Biol. Soc. Wash., XXXIII, 1920, p. 26 (Yungas, alt. 3600 ft., Prov. Cochabamba, Bolivia).

Ostinops cristatus PELZELN, 'Orn. Bras.,' III, 1870, p. 191 (Cuyabá).

Ostinops decumanus ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 376 (Chapada); SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 6 (Urucúm); IHERING, 'Cat. F. Braz.,' I, 1907, p. 393 (Matto Grosso).

No specimens collected.

RANGE.—Brazil: Matto Grosso (Chapada, Cuyabá, Urucúm, near Corumbá, Descalvados). Bolivia (Yungas of Cochabamba, Puerto Suarez, 350 miles east of Santa Cruz de la Sierra, on the Brazilian border); Paraguay; Peru.

Amazonian birds are possibly to be referred to *decumanus* rather than to *maculosus*.

(4454) *Cacicus cela cela* (Linnæus)

Parus cela LINNÆUS, 'Syst. Nat.,' I, 10th Ed., 1758, p. 191 (in Indiis, errore; Surinam substit. als terra typica auct. Hellmayr).

Cassicus persicus PELZELN, 'Orn. Bras.,' III, 1870, p. 193 (Cuyabá, Villa Maria, Matto Grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 377 (Abrilongo, Chapada).

Cacicus cela IHERING, 'Cat. F. Braz.,' I, 1907, p. 394 (Matto Grosso).

Rio São Lourenço, 1 ♂; Solimões, 1 ♂, 1 ♀; collected by L. E. Miller.

RANGE.—Guiana; Venezuela; Trinidad; Colombia; eastern Ecuador and Peru; Bolivia. The whole of Brazil, south to São Paulo and Matto Grosso (Cuyabá, Villa Maria, Abrilongo, Chapada, Rio São Lourenço).

I have seen only two females from British Guiana. Venezuelan birds average larger in size, particularly in the length of the bill. There appears, however, to be a great amount of individual variation in this wide-spread bird.

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM	
<i>Cacicus cela cela</i> ¹						
Venezuela, Cristóbal Colón,						
	2 ♂; Boca de Sina, Cunucunuma River, 4 ♂	6 ♂	157.2	106.5	37.2	A. M. N. H.
	N. E. Venezuela, Bermudez	1 ♂	155.5	111.5	41.5	"
	Brit. Guiana, Potaro Landing	1 ♀	154.5	2	36.5	"
	" " Rockstone	1 ♀	128.5	85.5	31.5	"

¹5 ♂, 5 ♀, measured and examined, from Ecuador, Rio Napo.

²Tail moulting.

Average Measurements (*Continued*)

	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Matto Grosso, Rio São Lourenço 1 ♂; Chapada, 4 ♂	5 ♂	152.6	104.3	31.5	"
Brazil, Rio Solimões	1 ♂	155.5	105	32	"
" "	1 ♀	130	90	30	"
" "	1 ♀	143	93	35.5	"
Isl. of Trinidad, Caparo	3 ♂	131	89.8	33.6	Munich
" " "	1 ♀	125	89	30.5	"
" Marajó, Natal	6 ♂	137.8	93.7	32.1	"
" " "	6 ♀	140.8	93.9	32.3	"
Brazil, Pará, Utinga	1 ♂	149	97.5	35	"
" " "	1 ♂	153	100.5	34.5	"
" Pará, Ipitanga, Rio Acará	1 ♀	125	85.5	31	"
" Maranhão, Miritiba	1 ♂	160	106	34.5	"
" " "	1 ♂	158	106	35.3	"
" Bóavista	1 ♂	149.5	99	31	"

(4464) *Archiplanus solitarius* (Vieillot)

Figures 40 and 41

Cassicus solitarius VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., V, 1816, p. 364 (part; based on Azara, No. 58; Paraguay).

Cassiculus solitarius PELZELN, 'Orn. Bras.' III, 1870, p. 194 (Cuyabá, Barbado, Matto Grosso).

Amblycercus solitarius ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 379 (Corumbá, Matto Grosso; Piedra Blanca, Bolivia); SALVADORI, Bull. Mus. Torino, X, No. 208, 1895, p. 8 (Corumbá); IHERING, 'Cat. F. Braz.,' I, 1907, p. 395 (Matto Grosso).

Urucúm, 1 ♂, 1 ♀; Fazenda do São João, 1 ♂; Rio Cuyabá, 1 ♂, 2 ♀.

RANGE.—Brazil, from the banks of the Amazon (Pará; Marajó; Arumanduba; Monte Alegre; Rio Jamundá, Faro; Teffé, Rio Solimoes), Maranhão and Ceará south to Goyaz, and Matto Grosso (Cuyabá, Barbado, Corumbá, Urucúm, Fazenda do São João). Northern Argentina; Paraguay; Bolivia; Peru.

"The black caciques do not nest in colonies, but alone. The nests are usually suspended at the tip of some small branch of a low tree or shrub, that overhangs some stream or pond. A nest and set of two fresh eggs of this species were collected on the Rio São Lourenço, Matto Grosso, January 3, 1914.

"The eggs are elongate-ovate, and measure 29×19 mm. and 29×20 mm., respectively. They are pure white in color (before the contents were removed they had a vinaceous tinge) with specks, dots, and blotches sparsely and irregularly scattered over the entire surface, but most

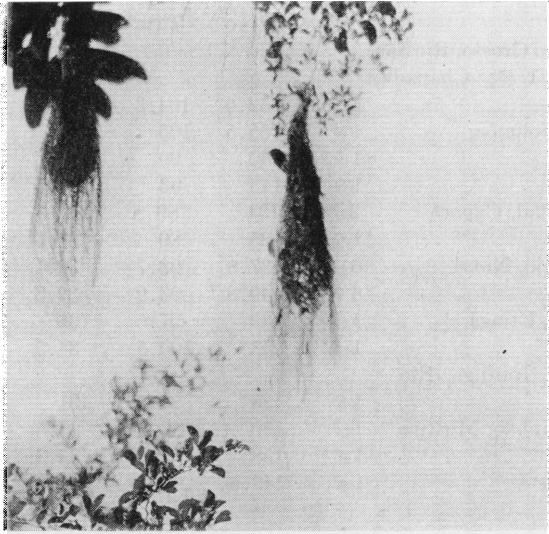


Fig. 40. Nest of *Archiplanus solitarius* (Vieillot), Fedegoso, Brazil.

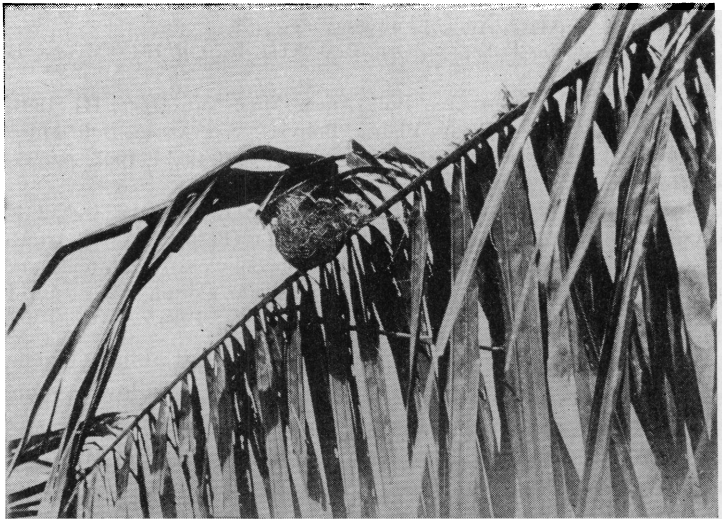


Fig. 41. Nest of *Archiplanus solitarius* (Vieillot), Fedegoso, Brazil.

abundantly about the larger end. The markings vary in color from lavender to dark chestnut and black, the darker colors being superimposed on the white ground and lavender.

"The nest is a long bag or purse-shaped pocket, woven of coarse, harsh grasses and vegetable fibres about two feet long. It was suspended from the extreme tip of an overhanging branch, and hung out over the marsh about twenty-eight feet from the ground. The supporting branch had a fork at the tip, the arms of which served for the attachment of the nest-walls and to keep these walls separated, thus forming the open top to the entrance-slit which extends down for about nine inches. The outside diameter of the nest near the bottom is about six inches and about four inches at the entrance. There was a lining of the nest-cavity that resembled flakes of half-dried banana stalks. The parent bird was seen to enter and leave this nest several times."

(4466) *Psomocolax¹ oryzivorus oryzivorus* (Gmelin)

Oriolus oryzivorus GMELIN, 'Syst. Nat.,' I, (1), 1788, p. 386 (ex Latham; Cayenne).

Cassidix ater PELZELN, 'Orn. Bras.,' III, 1870, p. 201 (Cuyabá, Caiçara, Lagôa do Chacururé, Engenho do Gama, Nos Puritis, Matto Grosso).

Cassidix oryzivora IHERING, 'Cat. F. Braz.,' I, 1907, p. 396 (Matto Grosso).

No specimens collected.

RANGE.—Eastern South America, from Trinidad, Guiana, and Venezuela through the greater part of Brazil south to Santa Catharina and Matto Grosso (Cuyabá, Caiçara, Lagôa do Chacururé, Nos Puritis, Engenho do Gama); also Paraguay, Bolivia, etc.

(4468) *Dolichonyx oryzivorus* (Linnæus)

Fringilla oryzivora LINNÆUS, 'Syst. Nat.,' I, 10th Ed., 1758, p. 179 ("Cuba").

Dolichonyx oryzivorus PELZELN, 'Orn. Bras.,' III, 1870, p. 199 (Cidade de Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 396 (Matto Grosso).

Dolychonyx oryzivorus ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 379 (Corumbá).

Agua Blanca de Corumbá, 2 ♂, 1 ♀.

RANGE.—Wintering in South America generally, south to Paraguay and Matto Grosso (Matto Grosso, Corumbá, Agua Blanca de Corumbá).

They were first noted on the ninth of November when hundreds were to be seen in company with cowbirds (*Molothrus*) and marshbirds (*Agelaius*), an active, noisy assembly of restless flocks alternately rising from and settling among the reeds of the pantanales.

¹See Peters, Proc. Biol. Soc. Wash., XLII, 1929, p. 123.

(4470b) *Molothrus bonariensis milleri* Naumburg and Friedmann

Molothrus bonariensis milleri NAUMBURG AND FRIEDMANN, Auk, XLIV, 1927, p. 494 (Urucúm, near Corumbá, Matto Grosso, Brazil).

Molothrus sericeus PELZELN, 'Orn. Bras.,' III, 1870, p. 200 (part; Cuyabá).

Molothrus bonariensis SALVADORI, Boll. Mus. Torino, XV, No. 378, 1900, p. 6 (Urucúm); IHERING, 'Cat. F. Braz.,' I, 1907, p. 396 (part; Matto Grosso).

Urucúm, near Corumbá, 4 ♂, 3 ♀; Descalvados, 1 ♀; Cuyabá, 1 ♂.

RANGE.—Brazil, Matto Grosso (Urucúm, Descalvados, Cuyabá). Endemic.

This race seems to be more closely allied to the western *M. b. equatorialis*.¹

Average measurements for males of this subspecies: wing, 105; tail, 71.5; culmen, 18.2 mm.

(4477) *Agelaioides badius badius* (Vieillot)

Agelaius badius VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXXIV, 1819, p. 535 (based on Azara, No. 63; Paraguay et Rio de la Plata).

Molothrus badius BERLEPSCH, Journ. f. Ornith., XXXV, 1887, p. 11 (Lambaré, Paraguay); IHERING, 'Cat. F. Braz.,' I, 1907, p. 397 (Paraguay); GRANT, Ibis, 1911, p. 104 (Villa Mortero, Paraguay).

Paraguay: Puerto Pinasco, 2 ♀. Matto Grosso: Fazenda do São João, 1 ♂.

RANGE.—Brazil, in states of Rio Grande do Sul (Jaguarão) and Matto Grosso (Fazenda do São João). Paraguay; Uruguay; northern Argentina.

This cowbird was common at the various points visited in Paraguay, the Paraguayan Chaco, and Matto Grosso. First record from Matto Grosso.

(4481) *Agelaius cyanopus* Vieillot

Figure 42

Agelaius cyanopus VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXXIV, 1819, p. 552 (based on Azara, No 71; Paraguay); PELZELN, 'Orn. Bras.,' III, 1870, p. 196 (Cuyabá, Matto Grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 379 (Corumbá, Cachoeira, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 398 (Matto Grosso and Paraguay).

Paraguay: Fort Wheeler, 2 ♀; Puerto Pinasco, 2 ♂; Rio Negro, 1 ♂, 2 ♀. Matto Grosso: Agua Blanca de Corumbá, 1 ♀; Descalvados, 1 ♂; Palmiras, 2 ♀; Fazenda do São João, 2 ♂, 1 ♀.

RANGE.—Paraguay (Fort Wheeler, Puerto Pinasco, Rio Negro, Lambaré). Brazil, Matto Grosso (Agua Blanca de Corumbá, Corumbá, Cachoeira, Descalvados, Palmiras, Cuyabá, Fazenda do São João); São Paulo (Porto do Rio Paraná, Itapura); Goyaz (Porto do Rio Araguay). Northern Argentina; eastern Bolivia.

"Nesting was in progress on the Rio Negro in November, a female taken on the thirteenth having an egg in the oviduct, and on the second

¹For further remarks, see Auk, 1927, p. 503.

trip many nests were seen in the marshes about Descalvados. The nests resemble those of our red-winged blackbird but are slightly less bulky. They are placed in a crotch supported by surrounding twigs and firmly



Fig. 42. Nest of *Agelaius cyanopus* Vieillot, Descalvados, Brazil.

held in place by the interweaving of the stems of the dead rushes that form the body of the nest. Ordinarily they are from a foot to two feet above the water."

(4487) *Agelaius ruficapillus ruficapillus* Vieillot

Agelaius ruficapillus VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXXIV, 1819, p. 536 (based on Azara, No. 72; Paraguay); IHERING, 'Cat. F. Braz.,' I, 1907, p. 398 (Paraguay, Rio Grande do Sul, São Paulo, Goyaz).

Agelæus ruficapillus GRANT, Ibis, 1911, p. 105 (Mortero, Paraguay).

Paraguay: Fort Wheeler, 1 ♂, 2 ♀. Matto Grosso: Palmiras, 1 ♂.

RANGE.—Brazil, in states of Matto Grosso (Palmiras), São Paulo, Goyaz, and Rio Grande do Sul. Paraguay (Fort Wheeler, Mortero); Argentina.

This species was found in company with other marshbirds, cowbirds, and marsh-frequenting species, but did not seem abundant in individuals. First record from Matto Grosso.

(4488) *Leistes militaris militaris* (Linnæus)

Emberiza militaris LINNÆUS, 'Syst. Nat.,' I, 10th Ed., 1758, p. 178 (habitat in America, Asia; Surinam subst. as type-locality by Berlepsch and Hartert, Nov. Zoöl., IX, 1902, p. 33).

Leistes militaris IHERING, 'Cat. F. Braz.,' I, 1907, p. 399 (Matto Grosso); HELLMAYR, Nov. Zoöl., XVII, 1910, p. 283 (Maroins, Rio Machados).

Leistes erythrothorax PELZELN, 'Orn. Bras.,' III, 1870, pp. 197, 326 (Rio Madeira). No specimens collected.

RANGE.—Panama; Colombia; Venezuela; Trinidad; Guiana. Brazil, from the northern boundary south to northern Maranhão, Pará, Amazonas, and Matto Grosso (Maroins, Rio Machados).

This species belongs to the Guianan-Amazonian subregion, and just enters the northern section of Matto Grosso, the only published record for that state being Maroins, Rio Machados.

(4489) *Leistes militaris superciliaris* (Bonaparte)

Trupialis superciliaris BONAPARTE 'Consp. Avium,' II, 1850, p. 430 ("Mexico" —errore!; hab. subst. Matto Grosso. See Berlepsch, Nov. Zoöl., XV, 1908, p. 123).

Leistes superciliaris PELZELN, 'Orn. Bras.,' III, 1870, p. 196 (Matto Grosso, Nos Puritis, Caiçara, Pansecco, Engenho do Gama, Xavier); IHERING, 'Cat. F. Braz.,' I, 1907, p. 399 (Matto Grosso and Paraguay).

Paraguay: Puerto Pinasco, 1 ♀.

RANGE.—Brazil: Rio Grande do Sul; Santa Catharina; São Paulo; Bahia; Pernambuco; Ceará; Matto Grosso (Nos Puritis, Caiçara, Pansecco, Engenho do Gama, Xavier). Paraguay (Puerto Pinasco); Bolivia (Caiza, Alto Paraguay); Uruguay; Argentina; Peru.

Common at Fort Wheeler and at Puerto Pinasco during September and October.

(4490) *Amblyramphus holosericeus* (Scopoli)

Xanthornus (holosericeus) SCOPOLI, 'Del. Fauna et Fl. Ins.,' II, 1786, p. 88 (based on "Le Troupiale rouge d'Antigue," Sonnerat, Voyage à la Nouv. Guinée, 1776, p. 113, Pl. LXVIII).

Amblyramphus holosericeus, PELZELN, 'Orn. Bras.,' III, 1870, p. 198 (Cuyabá, Barro do Jaurú, Pansecco); SALVADORI, 'Boll. Mus. Torino,' XV, No. 378, 1900, p. 6 (Carandasinho, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 399 (Matto Grosso, Paraguay).

Paraguay: Puerto Pinasco, 1 ♀. Matto Grosso: Palmiras, 1 ♂.

RANGE.—Brazil, in states of Rio Grande do Sul and Matto Grosso (Cuyabá, Barra do Jaurú, Pansecco, Palmiras, Carandasinho). Paraguay (Puerto Pinasco, Colonia Risso); Uruguay; Argentina; eastern Bolivia (Mojos).

While single birds were seen at almost all points, it was nowhere noted as abundant.

(4503) *Icterus pyrrhopterus pyrrhopterus* (Vieillot)

Agelaius pyrrhopterus VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXXIV, 1819, p. 543 (based on Azara, No. 74; Paraguay).

Icterus pyrrhopterus ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 378 (part; Corumbá, Matto Grosso; Piedra Blanca, Bolivia); SALVADORI, Boll. Mus. Torino, X, No. 208, 1895, p. 8 (Corumbá); GRANT, Ibis, 1911, p. 109 (Villa Franca, Puerto Maria, Rio Paraguay).

Xanthornus pyrrhopterus IHERING, 'Cat. F. Braz.,' I, 1907, p. 401 (Matto Grosso).

Paraguay, Trinidad, 1 ♂, 2 ♀; Rio Negro, 1 ♀. Matto Grosso: Urucúm, 1 ♂, 4 ♀; Belvedere de Urucúm, 2 ♀.

RANGE.—Paraguay (Trinidad, Rio Negro, Lambaré, Sapucay, Villa Franca); southwestern Brazil, in state of Matto Grosso (Urucúm, Corumbá); extreme southeastern Bolivia (Piedra Blanca).

"An abundant species about Asunción (Trinidad), Paraguay, and near the Rio Pilcomayo (Paraguayan Chaco), also in the neighborhood of Corumbá. Specimens collected at Trinidad are in immature plumage (probably post-juvenal), smoky black without lustre, and have the shoulder-patch cinnamon-brown (instead of chestnut, as in the adult).

"A nest and set of eggs of this species were collected at Trinidad (Paraguay), November 10, 1913. The nest, made of almost thread-like vegetable fibres, was suspended below the midrib of a banana leaf; it is a slight, loosely woven, rather deeply hollowed hammock-shaped affair, suspended along the sides by some of the nest-fibres being woven in and out through slits worked in the veins of the leaf that envelop it. The nest hung at about the middle of the leaf, the leaf itself being alive and green and about ten feet from the ground.

"There were two eggs in the set. Incubation was so far advanced that only one was preserved. It is ovate in form, measuring 16 × 22 mm. It is white, rather thickly marked with irregular spots and specks of brown overlying one another, and varying in shade from lavender, the innermost or deepest, to chestnut, the outermost. The markings are thickest about the larger end. The eggs of this species differ in markings from those of most other members of the genus in the absence of irregular lines and figures.

"The parent bird was not secured but was frequently observed entering and leaving the nest.

"A nest, found at Descalvados in December, 1916, was in the details of its construction and the materials employed similar to that described above; but, instead of being suspended beneath the midrib of a banana leaf, it was suspended beneath the rachis of a palm leaf.

"The nest, 'seven inches deep, composed of lichens ingeniously woven together and suspended from the twigs and leaves at the extremity of a

branch,' described by Hudson (Argentine Ornithology), may have pertained to some other species."

Measurements					
	SEX	WING	TAIL	CULMEN	MUSEUM
Bolivia, Piedra Blanca	1 ♂	85	92	16.5	A. M. N. H.
Brazil, Matto Grosso, Corumbá, 4 ♂; Urucúm, near Corumbá, 1 ♂	5 ♂	86.8	89.6	16.1	"
Brazil, Matto Grosso, Corumbá, 4 ♀; Belvedere de Urucúm, 2 ♀; Corumbá, 1 ♀	7 ♀	84.7	88	16.5	"
Paraguay, Trinidad	1 ♂	90	97	15.5	"
" " "	1 ♂	83	91.5	15	"
" " "	1 ♀	82.5	90	15.5	"
" Rio Negro	1 ♀	85	85.5	15	"

(4505) *Icterus pyrrhopterus compsus* Oberholser

Icterus pyrrhopterus compsus OBERHOLSER,¹ Proc. U. S. Nat. Mus., XXV, 1902, p. 68 (Cuyabá, Matto Grosso).

Hyphantes pyrrhopterus PELZELN, 'Orn. Bras.,' III, 1870, p. 194 (part; Cuyabá and Rio das Flechas, Matto Grosso).

Icterus pyrrhopterus ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 378 (part; Chapada, Abrilongo, Matto Grosso).

Icterus cayanensis valenciobuenoi (not of Ihering) MÉNÉGAUX, 'Rev. Franc d'Orn.,' V, 1917, p. 88 (Caceres, Poconé).

No specimens collected.

RANGE.—Central Brazil, Matto Grosso (Chapada, Cuyabá, Rio das Flechas, Abrilongo, Caceres, Poconé).

Average Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Matto Grosso, Chapada	3 ♂	92.3	95	17.5	A. M. N. H.
" " Abrilongo	1 ♂	90	93	17	"
" " "	1 ♂	93.5	96	17	"
" " "	1 ♀	85	85.5	16.5	"
" " Chapada	1 ♀	87	92	18	"

(4522a) *Icterus croconotus strictifrons* Todd

Icterus croconotus strictifrons TODD, Proc. Biol. Soc. Wash., XXXVII, 1924, p. 122 (Palmairito, Bolivia).

Icterus croconotus PELZELN, 'Orn. Bras.,' III, 1870, p. 195 (Cuyabá, Rio das Flechas, Matto Grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 378 (Uacuryzal, Rio Paraguay, and Cachoeira, Matto Grosso); SALVADORI, Boll. Mus. Torino, X, No 208, 1895, p. 8 (Corumbá).

¹*Icterus pyrrhopterus compsus* averages larger in the measurement of the wing and tail than the typical form. Mr. Oberholser makes no mention of this.

Xanthornus croconotus IHERING, 'Cat. F. Braz.,' I, 1907, p. 402 (Matto Grosso).
 Agua Blanca de Corumbá, 1 ♂, 1 ♀, Descalvados, 1 ♀.

RANGE.—Brazil, in states of Matto Grosso (Cuyabá, Rio das Flechas, Cachoeira, Descalvados, Uacuryzal, Corumbá) and eastern Bolivia (Palmarito).

This oriole is unusually wary. As a consequence, while they may not be uncommon, it is rare that a good series is brought together. A laying female was collected at Descalvados, November 17.

(4525) *Lampropsar tanagrinus violaceus* Hellmayr

Lampropsar tanagrinus violaceus HELLMAYR, Abhandl. 2. Kl. Bayr. Akad. Wiss., XXII, pt. 3, p. 616, 1906 (Rio Guaporé, western Brazil); IHERING, 'Cat. F. Braz.,' I, 1907, p. 403 (Matto Grosso, Rio Guaporé).

Lampropsar tanagrinus PELZELN, 'Orn. Bras.,' III, 1870, p. 200 (Rio Guaporé no braço do Jaracatea, Matto Grosso).

No specimens collected.

RANGE.—Western Brazil, Matto Grosso (Rio Guaporé, near the Bolivian border).

(4533) *Gnorimopsar chopi chopi* (Vieillot)

Figure 43

Agelaius chopi VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXXIV, 1819, p. 537 (based on *Chopi*, Azara, Apunt., I, 1802, p. 282, No. LXII; part—adult); PELZELN, 'Orn. Bras.' III, 1870, p. 195 (Villa Bella de Matogrosso).

Aphobus chopi BERLEPSCH, Journ. f. Orn., 1887, p. 117 (Paraguay); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 379 (Chapada, Matto Grosso); GRANT, Ibis, 1911, p. 109 (Santa Rosa, Paraguay).

Aptus chopi IHERING, 'Cat. F. Braz.,' I, 1907, p. 403 (Matto Grosso); CHUBB, Ibis, 1910, p. 645 (Sapucay, Paraguay).

Paraguay: Puerto Pinasco, 2 ♂ 1 ♀. Matto Grosso: Palmiras, 3 ♂. Collected by Leo E. Miller.

RANGE.—Brazil, in states of Matto Grosso (Chapada, Palmiras, Rio Manso), São Paulo (Quartel da Posse, Ypanema, Mattodentro, Rio Paraná, Itararé) and Minas Geraes, north to central Bahia, south to Rio Grande do Sul. Paraguay; northern Argentina.

"It was an abundant species at Fort Wheeler and in the neighborhood of Puerto Pinasco where it was breeding in October. It was found in great numbers at Fedegoso, Matto Grosso, late in November. That seemed to be the height of the breeding season and many nests were located in holes in palm-stubs and other natural cavities. In some cases only a very little nesting material is taken into the cavities occupied, and in one instance the four eggs had been deposited on the bits of rotten wood forming the floor of the cavity of the nest.

"Four eggs, with incubation just begun, were collected at Fedegoso, November 24. They were at the bottom of a cavity in the top of one of

the corral posts, about two feet down. They are ovate in shape. In color they are a pale pearl-gray with irregular black lines and scratches massed about the larger end. In a post not over eighteen inches from the one occupied by the nest of the grackle was another containing a nest of the hooded parrot."

Hudson (Argentine Ornithology) states that the eggs are "white," but Mr. Cherrie always found them as described above.

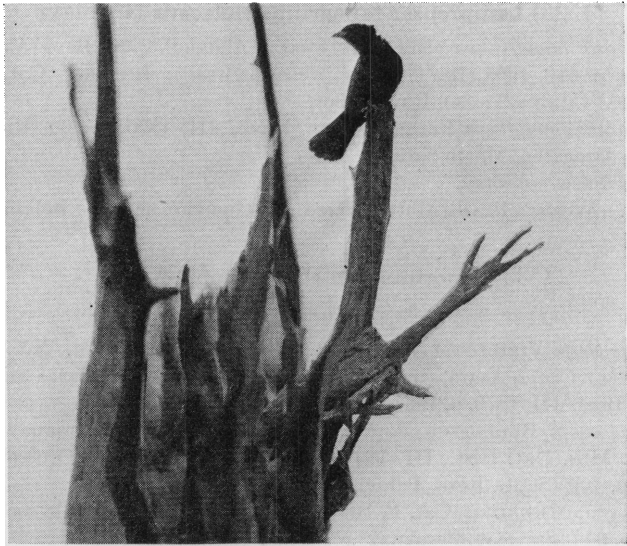


Fig. 43. *Gnorimopsar chopi chopi* (Vieillot), Palmiras, Matto Grosso, Brazil.

	Average Measurements				MUSEUM
	SEX	WING	TAIL	CULMEN	
Brazil, Matto Grosso, ■ Palmiras	3 ♂	118.1	85.3	21.6	A. M. N. H.
Brazil, Matto Grosso, Chapada	5 ♂	117.3	86.6	21.8	"
Paraguay, Puerto Pinasco	1 ♂	123	92	23	"
" " "	1 ♀	121	89	21	"

There is little or no difference in the wing measurement of birds from Palmiras and Chapada, while those from Paraguay appear to be rather larger. More material should be examined.

(4537) *Cyanocorax chrysops tucumanus* Cabanis

Cyanocorax tucumanus CABANIS, Journ. f. Ornith., XXXI, 1883, p. 216 (Tucumán).

Cyanocorax chrysops ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 379 (Corumbá, Matto Grosso); SALVADORI, Boll. Mus. Torino, XII, No. 292, 1897, p. 11 (Caiza, Bolivia); IHERING, 'Cat. F. Braz.,' I, 1907 p. 404 (Matto Grosso).

Urucúm, 2 ♂ im.; eye bright yellow; bill and feet black.

RANGE.—Brazil, in state of Matto Grosso (Corumbá, Urucúm); northwestern Argentina; eastern Bolivia (Caiza).

Birds from Urucúm are more or less intermediate, connecting typical *Cyanocorax chrysops* with *tucumanus*. In development of the culmen and the nasal plumes they approach *tucumanus*, while in small size and pale coloration of underparts they are like the typical race.

Measurements					
	SEX	WING	TAIL	CULMEN	MUSEUM
Brazil, Matto Grosso, Urucúm, near Corumbá, 2 ♂;					
Chapada, 3 ♂	5 ♂	145.7	154.7	21.5	A. M. N. H.
Argentina, Prov. Tucumán, above San Pablo	1 ♂	159	175	22.5	"
Argentina, Prov. Tucumán, above San Pablo	1 ♂	165	179	20.0	"

(4544) *Cyanocorax cyanomelas cyanomelas* (Vieillot)

Pica cyanomelas VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., XXVI, 1818, p. 127 (based on Azara, No. 54; Paraguay).

Cyanocorax cyanomelas PELZELN, 'Orn. Bras.,' III, 1870, p. 190 (Cuyabá, Engenho do Pari, Jacobina, Caiçara, Matto Grosso); ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 379 (Chapada, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 404 (Matto Grosso and Paraguay).

Paraguay: Fort Wheeler, 1 ♂, 1 ♀; Trinidad, 2 ♀; Rio Negro, 1 ♂. Matto Grosso: Urucúm, 2 ♀.

RANGE.—Brazil, in state of Matto Grosso (Chapada, Urucúm, Cuyabá, Engenho do Pari, Jacobina, Caiçara). Bolivia; Paraguay (Fort Wheeler, Trinidad, Rio Negro); Argentina (Chaco).

An adult female taken at Trinidad was brooding.

(4561) *Uroleuca cristatella* (Temminck)

Corvus cristatellus Temminck, 'Nouv. Rec. Pl. Col.,' livr. 33, 1823, Pl. cxciii ("Brésil").

Cyanocorax cyanoleucus PELZELN, 'Orn. Bras.,' III, 1870, p. 189 (Mattodentro, Ypanema, Cimeterio, Irisanga, São Paulo).

Uroleuca cyanoleuca ALLEN, Bull. Amer. Mus. Nat. Hist., III, 1891, p. 380 (Chapada, Matto Grosso); IHERING, 'Cat. F. Braz.,' I, 1907, p. 405 (São Paulo, Bahia, Minas Geraes, Matto Grosso).

No specimens collected.

RANGE.—The central Brazilian tableland, from the extreme south of Piauhly and Maranhão south to Matto Grosso (Chapada) and São Paulo.

ADDENDA

(127a) *Aramus scolopaceus carau* Vieillot

Aramus carau VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., VIII, 1817, p. 300 (based on Azara, No. 366; Paraguay).

Aramus scolopaceus PELZELN, 'Orn. Bras.,' III, 1870, p. 314 (Caiçara); SALVADORI, Boll. Mus. Torino, X, No. 208, 1895, p. 24 (Corumbá); GRANT, Ibis, 1911, p. 463 (Pan de Azucar).

No specimens collected.

RANGE.—Southern Brazil, in states of Rio Grande do Sul, Matto Grosso (Caiçara, Corumbá, Pan de Azucar) and probably other districts.¹ Paraguay; Argentina.

(145) *Columba picazuro* Temminck

Columba picazuro TEMMINCK, 'Hist. Nat. Fig. et Gall.,' I, 1813, p. 111, 449 (based on Azara, No. 317, Paraguay); GRANT, Ibis, 1911, p. 459 (Porto Esperança); MÉNÉGAUX, Rev. Franç. d'Orn., V, 1917, p. 25 (Caceres).

Crossophthalmus gymnophthalmus PELZELN, 'Orn. Bras.,' II', 1870, p. 274 (Cuyabá, Sangrador, Engenho do Gama).

No specimens collected.

RANGE.—Brazil, from Piahy and Parahyba south to Rio Grande do Sul and Matto Grosso (Cuyabá, Sangrador, Engenho do Gama, Porto Esperança). Uruguay; Paraguay; northern Argentina; eastern Bolivia.

(172) *Columbina picui picui* (Temminck)

Columbula picui TEMMINCK, 'Hist. Nat. Fig. et Gall.,' I, 1813, pp. 435, 498 (based on Azara, No. 324; Paraguay); PELZELN, 'Orn. Bras.,' III, 1870, p. 276 (Cuyabá, Villa Maria, Caiçara); GRANT, Ibis, 1911, p. 460 (Boca de Homiguera); MÉNÉGAUX, Rev. Franc. d'Orn., V, 1917, p. 38, (Caceres, Cuyabá, Chapada).

No specimens collected.

RANGE.—Brazil, in states of Matto Grosso (Boca de Homiguera, Cuyabá, Villa Maria, Caiçara), Rio Grande do Sul, and São Paulo (Porto do Piahy, Iguapé). Paraguay; Uruguay; Argentina; Bolivia; central Chile.

(387) *Himantopus melanurus melanurus* Vieillot

Himantopus melanurus VIEILLOT, 'Nouv. Dict. d'Hist. Nat.,' nouv. éd., 1817, p. 42 (based on "Zancudo," Azara, No. 393; Paraguay); SHARPE, 'Cat. B. Brit. Mus.,' XXIV, 1896, p. 316 (Caiçara); IHERING, 'Cat. F. Braz.,' I, 1907, p. 49 (Fazenda da Faya, Matto Grosso).

Himantopus nigricollis PELZELN, 'Orn. Bras.,' 1870, p. 310 (Caiçara, Pansecco).

No specimens collected.

RANGE.—Southern Brazil, from Minas Geraes and Rio de Janeiro to Rio Grande do Sul and Matto Grosso (Caiçara, Pansecco, Fazenda da Faya). Paraguay; Uruguay; Argentina; central Chile.

¹See Peters, 'Occas. Pap. Boston Soc. Nat. Hist.,' V, 1925, pp. 141-144.

(680) *Rhinoptynx clamator* (Vieillot)

Bubo clamator VIEILLOT, 'Ois. Am. Sept.,' I, 1807, p. 52, Pl. xx ("depuis Caienne jusqu'à la baied' Hudson," type-locality as designated by Hellmayr, "Spix's types," 1906, p. 574, Cayenne).

Otus mexicanus (not *Strix mexicana* Gmelin) PELZELN, 'Orn. Bras.,' I, 1868, p. 10 (Engenho do Pari); GRANT, Ibis, 1911, p. 329 (Passage de Bugre).

Asio mexicanus ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 142 (Chapada).

Otus clamator IHERING, 'Cat. F. Braz.,' I, 1907, p. 100 (Matto Grosso).

No specimens collected.

RANGE.—Central America; Colombia; Ecuador (Chimbo); Peru; Venezuela; Guianas; and throughout Brazil south to Rio Grande do Sul and Matto Grosso (Chapada, Engenho do Pari; Passage de Bugre); Paraguay; Uruguay; Argentina.

Southern specimens are larger and if separable will have to be called *R. c. midas* (Schlegel).

Measurements

	SEX	WING	TAIL	CULMEN	MUSEUM
<i>Rhinoptynx clamator</i>					
Brazil, Matto Grosso, Chapada,	1 ♂	251	152	34	A. M. N. H. Smith Coll.

(895) *Streptoceryle torquata torquata* (Linnæus)

Alcedo torquata LINNÆUS, 'Syst. Nat.,' I, 12th Ed., 1766, p. 180 (based on "Martin-pescheur huppé du Mexique," Brisson, Orn., IV, 1760, p. 518, Pl. xli, fig. 1, Mexico).

Ceryle torquata ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 125 (Chapada).
No specimens collected.

RANGE.—From eastern Mexico throughout Central America and over the greater part of South America, south to Matto Grosso (Chapada), Bolivia, Peru, and Argentina.

(898) *Chloroceryle amazona* (Latham)

Alcedo amazona LATHAM, 'Ind. Orn.,' I, 1790, p. 257 (based on "Amazonian Kingfisher," 'Gen. Syn. Birds,' Suppl. I, p. 116, Cayenne).

Ceryle amazona ALLEN, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 125 (Chapada); SALVADORI, Boll. Mus. Torino, X, No. 208, 1895, p. 16 (Corumbá); MÉNÉGAUX, Rev. Franç. d'Orn., V, 1917, p. 38 (Caceres, Poconé).

No specimens collected.

RANGE.—Tropical America, from southern Mexico to Argentina, Uruguay, and throughout Brazil to Rio Grande do Sul and Matto Grosso (Chapada, Caceres, Poconé, Corumbá).

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