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THE HUMMINGBIRDS OF THE SANTA MARTA REGION OF COLOMBIA.

BY OUTRAM BANGS.

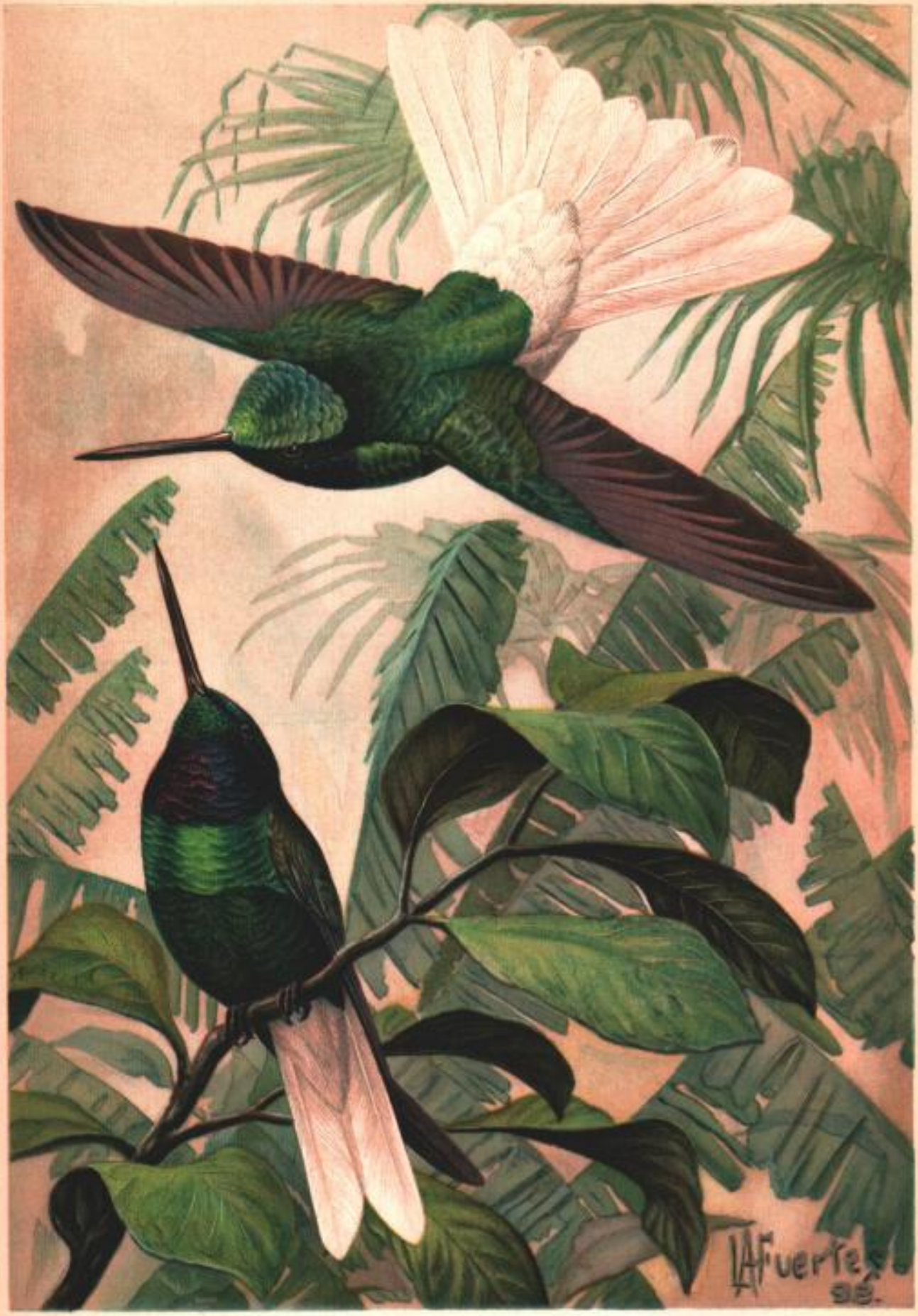
Plate II.

EVER since Messrs. Salvin and Godman published the results of their study of the collections of birds made by F. Simons in the Sierra Nevada de Santa Marta, the eyes of many American ornithologists and mammalogists have been turned in the direction of that "isolated mass of mountains, whose snowy peaks, visible from far out on the Caribbean Sea, form so striking a feature in the scenery of the northern coast of South America."[1]

In December, 1897, Mr. Wilmot W. Brown, Jr., an experienced and skilful field collector, started for an indefinitely long trip in this region in the interests of the Bangs Collection. In the summer of 1898 his trip was broken up by his having to return to Boston on account of sickness in his family, but he is now back again at work in the Santa Marta region.

Mr. Brown is peculiarly adapted by nature for out-door work in the tropics and throughout his trip in this unhealthy region never had a sick day.

[1] Salvin and Godman, Ibis, 1879, p. 196.



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LEUCURIA PHALERATA BANGS.

NATURAL SIZE.

For the first three months he worked in the vicinity of Santa Marta, collecting in the hot country and on some of the smaller mountains up to an elevation of 6000 feet. In March he left Santa Marta and travelled along the coast in an Indian dugout to Rio Hacha, from where roads lead in several directions into the higher mountains. Here he hired a pack mule, and taking along as a companion a shipwrecked sailor, started on foot up one of the mountain trails. After an arduous journey of several days he arrived at the Indian village of Pueblo Viejo, at about 8000 feet altitude. This was his first collecting ground in the higher sierra. Later he visited Macotama, 8000 feet, San Miguel, 7500 feet, San Franscisco, 6000 feet, and Palomina, 5000 feet, making collections at all these places, but on this trip got no higher than 8000 feet.

Travelling in the Sierra Nevada is at best slow and laborious and in the rainy season is harder still. Mr. Brown, in order to go as light as possible, carried no tent with him, and cut down his outfit in other ways till much too small for his comfort. Night after night he slept out with no shelter, wet to the skin by the terrific thunder storms that rage in these mountains nearly continuously throughout the spring. His one pair of shoes was soon worn out by the rough travelling, and for the greater part of the trip he went barefoot, his feet and legs exposed to the attacks of wood ticks and numerous insects, with every now and then a narrow escape from a fer-de-lance or a bushmaster.

Many of the trails are fairly good, being used by the Indians, but occasionally Mr. Brown had to cut his way through the forest, and the mountain streams, swollen by the continuous rains to raging torrents, were often very hard to ford. Under these conditions Mr. Brown made a very creditable collection, sending in over a thousand bird skins and about three hundred and fifty mammals as the results of his six and a half months work.

The Sierra Nevada de Santa Marta, with its highest peaks rising to 17,500 feet above sea level, forms an immense isolated mountain mass cut off from the other mountain ranges of northern South America by deep tropical valleys. In the hot, dry lowlands about Santa Marta the forest is stunted and brushy, but as one ascends the mountains the growth becomes more

luxuriant and the forest heavier. In places there are open grassy savannas, but most of the peculiar birds of the region dwell in the elevated mountain forest, cut off from their nearest relations in the elevated regions about Bogota and in the mountains of Venezuela by the intervening hot countries.

Many of the birds living in the Santa Marta mountains appear to be peculiar to them; a few species, however, occur both here and in the mountains about Merida, Venezuela, though absent in the intervening lowlands. Two good examples of such are the Parrot, *Pionus sordidus* (Linn.) and the Green Toucan, *Aulacorhamphus calorhynchus* Gould. On the other hand, we find in these two mountain districts instances of closely related representative species, as with the Flycatching Warblers — the golden-crowned *Setophaga flavivertex* Salv. being known only from the Santa Marta mountains, and the white-fronted *Setophaga albifrons* Scl. & Salv. inhabiting, so far as known, only the Merida region.

Compared with the birds of the Bogota region the difference is even greater, as most of the strictly mountain birds of the two regions prove at least subspecifically distinct.

Apart from the local forms there are of course a great many wide-ranging tropical species found in the Sierra Nevada, and a few Mexican and Central American birds, such as *Muscivora mexicana* Scl., push their ranges south to these mountains.

Before Simons made his famous collection several new species had been described from the Sierra Nevada de Santa Marta, or the hot countries about Santa Marta, generally from single specimens sent to England by orchid hunters or travellers. The more striking amongst these are the lovely little Hummingbird, the type of its genus, *Anthocephala floriceps* (Gould), the Motmot, *Momotus subrufescens* Scl., and the Oven-bird, *Furnarius agnatus* Scl. & Salv. Simons's collection added about nine more (not all described in the original reports on this collection). Since then one very distinct Flycatching Warbler, *Setophaga flavivertex* Salv., has been described, from two specimens contained in a small collection of birds made in these mountains. Mr. Brown's work, up to date, has yielded twenty-three additional new forms, most of them probably peculiar to the Santa Marta region.

These have been described by me in three papers in the Proceedings of the Biological Society of Washington, Vol. XII. (See Auk, XV, p. 339, and XVI, p. 90.)

Most interesting among the local birds of the Sierra Nevada de Santa Marta are the Hummingbirds. No less than six species peculiar to these mountains are now known. Most of these appear to be rare and local, and to breed high up in the mountains, migrating in winter down to lower altitudes. Mr. Brown took, in all, examples of seventeen species of Hummingbirds, and although he discovered one remarkable new species, secured examples of but two of the five local species previously known.

The species supposed to be peculiar to the Santa Marta Mountains are as follows:

Panychlora russata Salv. & Godm. Originally described from ten specimens collected by Simons in the Sierra Nevada de Santa Marta. Mr. Brown took six adults, at San Miguel and Palomina in May and June, and two females at Santa Marta in February, 1898. These last two I was unable to identify at the time and never recorded until now.

Anthocephala floriceps (Gould). Described from a specimen taken at San Antonio by an orchid collector. Simons took one at San José, and Brown one at Pueblo Viejo. These three specimens are I believe all that are known.

Another species of this genus, *A. berlepschi* Salv., is found in the Bogota region, differing from *A. floriceps* by having white instead of brown tips to the rectrices.

Oxypogon cyanolæmus Salv. & Godm. Described from five skins taken by Simons at 11,000 feet altitude in the Sierra. Not taken by Brown.

Rhamphomicron dorsale Salv. & Godm. Described from two specimens of Simons's collecting. Not taken by Brown.

Campylopterus phainopeplus Salv. and Godm. Described from Simons's ten specimens. Mr. Brown did not get this Hummer.

Leucuria phalerata Bangs. Described from one specimen taken by W. W. Brown, Jr., June 17, 1898, at Macotama. The type and only specimen is here figured (Plate II).

Of the capture of this beautiful Hummer Mr. Brown wrote me: "After a difficult march through the forest, the way barred by

swollen torrents and fallen trees, I arrived at the Argoneous town of San Miguel. Here Hummingbirds of many species were seen, and on that day [June 17] I collected the only specimen of this beautiful white-tailed species that I have seen in these mountains. I first detected it hovering above an orchid. Its flight was rapid and strong, and it uttered a twittering note as it darted from flower to flower in search of its food, its gorgeous plumage shining in the morning sun. As I only watched this little gem a few minutes before shooting it, I detected nothing in its habits to distinguish it from the numerous other Hummingbirds that were about me."

Another Hummingbird that may prove to be peculiar to the region is the *Metallura* that occurs in the Santa Marta Mountains. I recorded the pair collected by Mr. Brown, the male at Palomina and the female at San Miguel, as *M. smaragdinicollis*. To this species, also, Messrs. Salvin and Godman referred the one skin in Simons's collection, though with some misgiving. It would be very strange indeed if the Santa Marta bird is really *M. smaragdinicollis*, but my two specimens are so like skins from Bolivia and Peru that without much more material I cannot feel justified in separating it. There are slight differences, however, that may prove to be constant. The tail of the male is rather more of an auricula purple than in *M. smaragdinicollis*, and the rectrices seem to be wider; the luminous throat patch is also a darker green. The female is a paler buff below, much less spotted with green. These slight differences may or may not prove constant. On the other hand, *M. smaragdinicollis* is only found in the mountains of Bolivia and of Peru south of the equator; while in the mountains of northern Peru, Ecuador, Colombia, and Venezuela another species, *M. tyrianthina*, very different from it, occurs. Therefore, if *M. smaragdinicollis* really occurs in the Santa Marta mountains, it is wholly cut off from the main stock of its species by a wide area tenanted by a very different form. That such should be the case certainly seems improbable.