

Temm.); (9) *Formicivora griseigula* Lawr., which proves to be "an immature *Thryothorus coraya* (Gm.)"; (10) *Peristera mondetoura* Bon., from Bogota.—R.R.

Allen on Individual and Seasonal Variation in the Genus *Elainea*.*—While the family Tyrannidae has been generally recognized as perhaps the most difficult to study of all the large distinctively American bird groups, the genus *Elainea* is admitted to be its most perplexing genus. In working up the very extensive 'Smith Collection' of birds from Chapada, Matto Grosso, Brazil, Mr. Allen found himself confronted by the not very pleasant or promising task of naming a series of 129 specimens "from an area of about five miles radius," representing several species, but how many only the most patient investigation could determine. The chief difficulty lay with specimens belonging to the *pagana-albiceps* group, of which, fortunately, no less than 116 specimens were present; but this richness of material for a while proved rather an embarrassment than an aid, a large proportion of the specimens being "referable to the true *E. pagana* of authors, and a still larger number to what is commonly recognized as *E. albiceps*, while the great bulk of the series" was "made up of specimens variously intermediate between these two forms." Mr. Allen found it desirable, "in order to satisfactorily determine the relationships of the puzzling birds represented in the Chapada series," to bring together as much material as possible; consequently, the *Elaineas* of the National Museum collection (numbering about 200 specimens), the Boston Society of Natural History, and the Museum of Comparative Zoölogy in Cambridge, were borrowed for the purpose. After patient study of this material Mr. Allen was enabled to reach definite conclusions, some of which were probably no less surprising to himself than to others who have read his excellent paper. "The Chapada series of *Elainea* referable to the *E. pagana-albiceps* group," says Mr. Allen "presents a wide range of variation, not only in size and coloration, but especially in the size and form of the bill. Were there fewer specimens, representing the same range of variation, but with most of the 'intermediates' left out, it would be quite easy to divide the series into several apparently well-marked species, and not hard to find names for them among the so-called species already described. Especially would this be the case were the specimens gathered from a wider geographical area, with the leading forms more or less localized. As the case stands, however, the specimens are all from a single very limited locality, and the gaps between the extreme forms are completely filled by specimens presenting every intermediate phase of variation. Besides, the variations in any other feature, — as in the form of the bill, in general size, the relative length of the outer primaries, or the relative length of wing to tail, — are found not to be correlated with varia-

* Remarks on Individual and Seasonal Variation in a large series of *Elainea* from Chapada, Matto Grosso, Brazil, with a Revision of the species of the restricted Genus *Elainea*. Bull. Am. Mus. Nat. Hist. Vol. II, No. 3, Article XVIII, Oct. 1889, pp. 183-208.

tions in other features; so that while the specimens may be somewhat arbitrarily divided into series on general size, or on the form of the bill, the important variations in other features are not correlated with them but present all sorts of combinations of characters. Indeed, division on either size alone or color alone, or exclusively on the form of the bill, cannot be made satisfactorily, since there is no point at which a separation can be made."

Part I of Mr. Allen's paper is devoted to a general discussion of individual variation, with special reference, of course, to the genus *Elainca* and the Chapada specimens in particular. Part II consists of a review of the species and subspecies, based on the material examined, the "*E. pagana-albiceps* group" receiving most attention. Of *E. pagana* several subspecies are recognized: *E. pagana* (Licht.) proper from Eastern South America, north to Trinidad; *E. pagana subpagana* from Central America and Mexico; *E. pagana martinica* (Linn.) from the Antilles and Cozumel, to which Mr. Allen refers *E. cinerascens* Ridgw. from Old Providence; and *E. pagana albiceps* (D'Orb. & Lafr.) from "the Andean region, from Colombia and Ecuador southward, including Peru, Bolivia, Paraguay, the extreme southern part of Brazil, and the region thence southward to the straits of Magellan." Regarding the Antillean form, Mr. Allen notes that "birds from different islands present much variation," and that "it is probable that large series from different islands, when compared, will be found to present slight average differences, as in case of other birds of similar distribution"; but he adds that at present lack of material renders an attempt to discriminate such forms impracticable. We trust the necessary material may soon be placed in Mr. Allen's hands, in order that he may be able to complete the work which he has so ably begun.—R. R.

Allen on the Maximilian Types of South American Birds.—In a paper of 68 pages, Mr. Allen has given a complete list of the Maximilian types of South American birds in the Museum of Natural History, New York City,* the names of Maximilian's new (actual or supposed) species being cited under their equivalent current names, the order of arrangement being that of Sclater and Salvin's 'Nomenclator Avium Neotropicalium.' The catalogue has to do with "only the South American birds, and more especially with the types of the species described as new by the Prince in his 'Reise nach Brasilien' and 'Beiträge zur Naturgeschichte von Brasilien,'" in which works "about 160 species were described as new, of which about three fourths are still represented in the Maximilian Collection by the original or 'type' specimens." Altogether about 183 Maximilian names are discussed, the list including others beside the species which he described as new. The whole number are arranged, at the end of the paper (pp. 273-276), in a most convenient and useful 'Con-

* On the Maximilian Types of South American Birds in the American Museum of Natural History. Bull. Am. Mus. Nat. Hist., Vol. II, No. 3, Article XIX, December, 1889, pp. 209-267.