

Vernet very kindly presented me with a specimen of this bird, taken by himself at Point Saline; it was the only one he ever saw.

It is abundant on all the Grenadines.

Besides these forms, I failed to find the following on St. Vincent, although I explored almost the whole island very carefully. Possibly they still exist in limited numbers in certain remote localities.

Catharopeza bishopi (Lawr.).

Cinclocerthia ruficauda tenebrosa Ridgw.

Cinchlerminia sanctæ-luciæ (Scl.).

Alenia albiventris (Lawr.), which became a common resident on Union Island and Carriacou, Grenadines, after the great hurricane at St. Vincent in 1898, has now entirely disappeared from those islands.

THE LESSER ANTILLEAN MACAWS.

BY AUSTIN H. CLARK.

WE FIND mentioned by the earlier writers who dealt with West Indian ornithology, a number of birds which are not known to inhabit the islands at the present day, and which have been extinct for many years. In this paper I shall bring together all the evidence existing as to the presence of Macaws in the Lesser Antilles, in the islands of Guadeloupe, Dominica, and Martinique.

These three islands collectively show affinities to the Greater Antilles and to South America, at the same time having genera and species peculiar to themselves. For instance, a species of *Mimocichla* (Dominica) and a species of *Melanerpes* (Guadeloupe), together with the fact that *Guara alba* is a breeding resident on Dominica, appear to show a Greater Antillean relationship; *Dendroica rufigula* (Martinique), *Stenopsis cayenensis* (Martinique), *Ceryle stictipennis* (Guadeloupe and Dominica), and *Rup-*

*ornis magnirostris*¹ (Martinique) seem to ally them with South America; while *Cinchlerminia*² (Guadeloupe, Dominica, and Martinique), *Rhamphocinclus brachyurus* (Martinique and St. Lucia), *Saltator guadeloupensis* (Guadeloupe, Dominica, and Martinique), and *Thalurania bicolor* (Dominica) demonstrate that as a group they are distinct from the islands around them.³

We must admit, then, the possibility of these three islands having had upon them species of the genus *Ara* (which is found in the Greater Antilles, Central, and South America), even although it is unknown from any of the other Lesser Antilles.

Dutertre (1654) is the first to give an account in detail of the ornithology of these islands. Under the heading "*De l' Arras*" (p. 294) he says: "We have in Guadeloupe three of the parrot kind, viz: — Macaws, Parrots, and Parrakeets, each different from those which inhabit the neighboring islands; for each has its parrots different from those of the others in size, voice, and color.

"The Macaw is the largest of all the parrot tribe; for although the parrots of Guadeloupe are larger than all other parrots, both of the islands and of the main land, the Macaws are a third larger than they.

"The head, neck, underparts, and back are flame color. The wings are a mixture of yellow, azure, and scarlet. The tail is wholly red, and a foot and a half long. The natives hold the feathers of the tail in great esteem; they stick them in their hair, and pass them through the lobe of the ear and the septum of the nose to serve as mustaches, and consider themselves then much more genteel and worthy of the admiration of Europeans.

"This bird lives on berries, and on the fruit of certain trees, but principally on the apples of the manchioneel (!), which is a powerful and caustic poison to other animals. It is the prettiest sight in the world to see ten or a dozen Macaws in a green tree.

¹ *Vide* Gurney, *Ibis*, 1876, p. 482.

² One species is found on St. Lucia also.

³ St. Lucia, with a resident South American species (*Anrostomus rufus*) and two peculiar genera (*Melanospiza* and *Leucopeza*), together with a species of *Cinchlerminia*, is most nearly allied to them.

Their voice is loud and piercing, and they always cry when flying. If one imitates their cry, they stop short. They have a grave and dignified demeanor, and so far from being alarmed by many shots fired under a tree where they are perched, they gaze at their companions who fall dead to the ground without being disturbed at all, so that one may fire five or six times into the same tree without their appearing to be frightened.

“The natives make use of a stratagem to take them alive ; they watch for a chance to find them on the ground, eating the fruit which has fallen from the trees, when they approach quietly under cover of the trees, then all at once run forward, clapping their hands and filling the air with cries capable not only of astounding the birds, but of terrifying the boldest. Then the poor birds, surprised and distracted, as if struck with a thunderbolt, lose the use of their wings, and, making a virtue of necessity, throw themselves on their backs and assume the defensive with the weapons nature has given them — their beaks and claws — with which they defend themselves so bravely that not one of the natives dares to put his hand on them. One of the natives brings a big stick which he lays across the belly of the bird, who seizes it with beak and claws ; but while he is occupied in biting it, the native ties him so adroitly to the stick that he can then do with him anything he wishes.

“The flesh of this bird is very tough, and considered by many unwholesome, and even poisonous. I never had any ill effects from it, although we inhabitants often eat it.”

In a later work (1667) Dutertre gives practically the same account, but he says that the Macaws only eat the manchioneel apples in case of necessity (II, p. 247). He says further (II, p. 249), “The male and the female are inseparable companions, and it is rare that one is seen singly. When they wish to breed (which they do once or twice a year) they make a hole with their beaks in the stump of a large tree, and construct a nest with feathers from their own bodies. They lay two eggs, the size of those of a partridge (*Perdix cinerea*). The others of the parrot kind make their nests in the same way, but lay green eggs. . . . The Macaws are much larger than the large parrots of Guadeloupe or Grenada, and live longer than a man ; but they are almost all subject to a falling sickness.”

In the "Histoire Naturelle et Morale des Isles Antilles de l'Amérique" (1658; 1665) we find the following (p. 154, 2nd ed., p. 170):—

"The Macaws are preëminently beautiful birds, the size of a pheasant; but they resemble parrakeets in the shape of their body. Their head is large, their eyes bright and bold, their beak hooked, and they have a long tail composed of beautiful feathers which are of different colors in the different islands where they live. There is a kind which has the head, the back, and the wings pale yellow, and the tail entirely red. Others have nearly the whole body flame color, except that they have in their wings feathers of yellow, blue, and red. Still others are found which have the whole plumage a mixture of red, white, blue, green, and black; that is, five colors, which forms a very pleasing combination. They commonly fly in flocks. One judges by their actions that they are bold and resolute, for they are not alarmed by the report of fire-arms, and if none are wounded at the first discharge, they await a second without moving from the place where they are; but there are many who attribute this boldness to their natural stupidity rather than to their courage. They tame very easily, but their tongue is too thick to enable them to speak as well as parrots and the smaller parrakeets. They are so sensitive to cold that it is difficult to bring them across the sea."

Labat (1742) says (II, p. 211): "The Macaw, which I place at the head of the parrots, is the largest of all the parrot tribe, either in these islands or on the mainland. It is the size of a full grown fowl. The feathers of the head, neck, back, and underparts are flame color; the wings are a mixture of blue, yellow, and red; the tail, which is from fifteen to twenty inches in length, is wholly red. The head and the beak are very large, and it walks gravely; it talks very well, if it is taught when young; its voice is strong and distinct; it is amiable and kind, and allows itself to be caressed."

He also says (II, p. 211): "There are Macaws, Parrots and Parrakeets in each of our islands, and it is easy to tell from their plumage from which island they have come. Those from Guadeloupe are generally larger than the others, but the parrakeets are smaller."

Buffon (*Hist. Nat. Ois.*, VI, p. 181, 1774) states that Macaws occur in all the warm parts of America, and in the West Indies. He says further (*l. c.*, p. 177): "Christopher Columbus in his second voyage touched at Guadeloupe and found there Macaws, to which he gave the name of 'Guacamayas.' He met with them only in the uninhabited islands, and they were by far the most beautiful ornaments of the gloomy forests which covered the land given up to nature."

Brisson (*Orn.*, IV, p. 183, 1760) says (under "L'Ara Rouge"), quoting from a letter from M. de la Borde, Médecin du Roi at Cayenne: "In all the islands (Antilles) the Macaws have become very rare, because the inhabitants destroy them for food. They retire into the unfrequented districts, and do not come near the cultivated areas."

Edwards says (*Birds*, IV, p. 158, 1751): "This bird ('The Red and Blue Maccaw') is a native of America, and, I believe, is found everywhere between the tropics, not only on the continent but on some of the American islands."

Latham says of the "Red and Blue Maccaw" (*Gen. Hist. Birds*, II, p. 102, 1822): "Inhabits Brazil, Guiana, and other parts of South America, and, we believe, some of the islands also, but becomes scarce or wholly eradicated in proportion to the increase of inhabitants."

From the foregoing we appear to have ample proof that there were Macaws in these islands; we are told also that they were becoming rare before 1760 (Brisson). That the various members of the parrot tribe are among the first to be exterminated from any given locality, especially if the species be confined to an insular habitat, we learn from the cases of *Nestor productus* Gould (Philips Island), *N. norfolcensis* Pelz. (Norfolk Island), *Lophopsittacus mauritianus* (Owen) (Mauritius), *Necropsittacus rodericanus* (Milne-Edw.) (Rodriguez), *Mascarinus mascarinus* (Linn.) (Réunion), and *Palaeornis exsul* Newt. (Rodriguez); and so, everything considered, I believe we are justified in giving credence to the writings of the three principal authors quoted. That they knew of the different conditions which pertain in the different islands is brought out in their remarks about the parrots being different in the different islands, and also by the account of the Armadillo

given by Dutertre and Labat. Both record this animal as found only in Grenada, and say that it cannot be introduced into the other islands. To-day Grenada is the only island (except, of course, Tobago and Trinidad) where the Armadillo is found, and it is there known by the same name that they give it — Tatu.

The Lesser Antillean Macaw, as described by Dutertre, had “the head, neck, underparts, and back, flame color; wings azure, yellow, and scarlet; tail red, 18 inches long.” Labat says: “Head, neck, back, and underparts flame color; wings blue, yellow, and red; tail red, 15 to 20 inches long.”

This shows that the bird differed from *A. macao* in (1) having the tail wholly red; in *A. macao* the two central feathers are red, the others with blue tips, increasing in extent to the outer pair, which are almost wholly blue; and (2) in having a shorter tail (? smaller¹); the tail of *A. macao* is two feet long.

From *A. chloroptera* it differed (1) in having a wholly red tail (*A. chloroptera* has even more blue in the tail than *A. macao*); (2) in having yellow on the wings, and (3) in having a shorter tail (? smaller); the tail of *A. chloroptera* is 21 in. long.

From *A. tricolor* it differed in (1) having yellow on the wings, and (2) in having a much longer tail (? larger); the tail of *A. tricolor* is 10 in. in length.

Dr. Latham has figured and described (Gen. Hist. Birds, II, p. 107, pl. xxi, 1822) under the name of the “Red and Yellow Maccaw,” a bird entirely scarlet, except the posterior half of the wings, which is yellow; the lower rump, and tail coverts are rose white. The bird came from Trinidad (!) (probably Guiana or Venezuela), and appears to be a variety of *A. macao*.

D'Aubenton (Pl. Enl. 12, “L'Ara Rouge”) figures a bird with all the tail feathers red (central pair and three on right side shown), and with much more red on the scapulars and tertials than in *A. macao*. There appears to be a possibility that the fig-

¹ In the Macaws the relative length of tail and wing, or of tail and total length is variable, so that we cannot say with certainty that the bird was smaller. *A. tricolor* measures, tail 10 in., wing 11 in., total length about 18 in.; *A. ararauna*, tail 12 in., wing 14 in., total length about 31 in.; *A. macao*, tail 23.5 in., wing 16 in., total length about 31 in. In the green Macaws the wing and tail are about equal in length.

ure is from a West Indian bird, although it is regarded by systematists as a specimen of *A. macao*.

The names which have been applied to Red and Blue Macaws are all referable to *A. macao* or to *A. chloroptera*. Linnæus (Syst. Nat., I, p. 139, no. 1, 1766), under [*Psittacus*] *macao*,¹ refers to the Pl. Enl. 12; but in his description says "rectrices rubræ, lateralibus cæruleis," his diagnosis being referable to *A. macao* as now understood. *Psittacus aracanga* Gmelin (Syst. Nat. I, p. 313, 1788) et auct., *Ara canga* Levaill. (Perr., I, pl. 2, 1801) and *Sittace coccinea* Reichenow (J. f. O., 1881, p. 267) are all referable to *A. macao*.

I believe we are justified in admitting provisionally into the avifauna of the Lesser Antilles a red, yellow, and blue Macaw, under the name of

Ara guadeloupensis.

LESSER ANTILLEAN MACAW.

Characters. Apparently similar to *A. macao* Linn., but smaller (tail 15 to 20 in. long [Labat]; 18 in. long [Dutertre]), and with the tail wholly red.

Habitat. Guadeloupe (extinct); ? Dominica (extinct); Martinique (extinct).

Ara DUTERTRE, Hist. Générale des Isles des Christophe, de la Guadeloupe, de la Martinique, et autres dans l'Amérique, p. 294 (1654); Hist. gén. des Antilles habitées par les François, II, p. 247 (1667).² — ANON.,³ Hist. Nat. et Morale des Isles Antilles de l'Amérique, p. 154 (1658), 2nd ed., p. 170 (1665). — LABAT, Nouv. Voyage aux Isles de l'Amérique, contenant l'histoire naturelle de ces pays, II, p. 211 (1742). — BUFFON, Hist. Nat. Ois., VI, p. 181 (1774) (part).

¹ The name "macao" was given to this bird because it was first supposed to have come from Macao, near Hong Kong. The English "Macaw" is supposed by some to be derived from it.

² In the title it says "en deux tomes," but three volumes were published — Vol. I (1667); Vol. II (1667); and Vol. III (1671), entitled "Histoire Générale des Ant-Isles habitées par les François" (Paris). The spelling "Ant-Isles" is to agree with a theory of the author's as to the derivation of the word "Antilles."

³ This book was published at Rotterdam: other early writers refer to it as being the work of C. César de Rochefort.

L'Ara Rouge, ? D'AUBENTON, Pl. Enl. 12. — BRISSON, Orn., IV, p. 183 (1760) (part).

The Red and Blue Maccau (part) EDWARDS, Birds, IV, p. 158 (1751). — LATHAM, Gen. Hist. Birds, II, p. 102 (1822).¹

NESTING HABITS OF BIRDS IN MISSISSIPPI.

BY CHARLES R. STOCKARD.

(Concluded from p. 158.)

THE FOLLOWING observations complete a summary appearing in this journal of the nesting habits of birds recorded by the writer in Mississippi from 1895 to 1903 inclusive. As stated in the introduction to the former article, no attempt is made to enter into the details of nest building and such matters as are commonly known. Only the important facts regarding nesting seasons, places, and peculiarities are stated, these being of general interest coming from a locality hitherto not specially observed.

45. *Cyanocitta cristata*. BLUE JAY (concluded). — The outside of the Jay's nest is composed of coarse sticks and above these is then daubed and plastered a thick coat of mud; here the work seems to stop for several days, apparently to allow the mud to dry and harden more advantageously than it would if immediately covered with the lining of fibrous roots which is to be later added. In many cases cloth, paper, strings, leaves, etc., enter into the composition of the nest. One was found with no lining whatever, the eggs being deposited on the hard mud floor.

The sets taken early in the season contained almost invariably five eggs while those observed near the close of the laying time, about the last of May, consisted of only four. Whether these late sets were second layings of the season or not I am unable to state, but in some instances such was apparently not the case. The Blue Jay's earliest set was found March 29, 1899, and the latest June 5, 1897.

46. *Corvus americanus*. AMERICAN CROW. — The Crow is common throughout the State and detested by most farmers as a corn consumer.

¹ The references to Latham's 'Index' and 'Synopsis' are given in this book.