

Refutation of the Historical Evidence for a Hispaniolan Macaw (Aves: Psittacidae: *Ara*)

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ABSTRACT.—Historical accounts from Hispaniola in the 16th century have been misinterpreted since the late 19th century as indicating that three species of parrots once occurred on the island, one of which was thought to be a macaw (*Ara*). Careful rereading and analysis of these accounts show that only two parrots were described, which correspond exactly with the existing species *Amazona ventralis* and *Aratinga chloroptera*. There is now no credible evidence for the existence of a macaw on Hispaniola in historic times.

KEYWORDS.—extinct birds, Hispaniola, Oviedo, parrots.

Large, loud, long-tailed, and with gaudy plumage, macaws (*Ara*, *Anodorhynchus*) are the most conspicuous and arresting of all New World parrots, and arguably of all New World birds. Irrefutable evidence of the presence of macaws in the West Indies exists in the form of slightly over a dozen skins of the extinct, endemic species *Ara tricolor* from Cuba, the last having been taken in 1864 (Greenway 1958). Otherwise, apart from a scattering of bones from archeological sites (Williams and Steadman 2001), all evidence of macaws in the West Indies, mainly from Jamaica and the Lesser Antilles, is based on hearsay accounts of varying degrees of believability (Greenway 1958) and one painting (Fisher and Warr 2003). This has not kept most of these birds from being given scientific names, however (see Clark 1905a,b, 1908; Rothschild 1905, 1907a,b). One that escaped naming, fortu-

nately, is a supposed macaw from Hispaniola. Because it is the second largest of the Antilles, Hispaniola would be the most likely of the islands in the West Indies, besides Cuba, to have harbored a macaw. Although I will argue elsewhere that there probably once was a macaw on Hispaniola, re-examination of the supposed historical evidence for such a bird shows that it has been widely misinterpreted and that no macaw was indicated at all.

The only source for a Hispaniolan macaw cited by Clark (1905b) and Wetmore and Swales (1931) is a brief mention that appears in Buffon (1779—discussed below). Prior to their publications, however, in an obscure reference that was long overlooked, Armas (1888) cited the accounts of Oviedo (1851) and Las Casas (1876), both originally written in the 16th century, as referring to a macaw in Hispaniola. He interpreted the three supposed species of parrots on Hispaniola mentioned by Las Casas as representing *Ara*, *Amazona*, and *Aratinga*. Greenway (1958) appears to have been the first subsequent author to adopt this interpretation, citing Las Casas and Armas, and he was then followed by others (e.g., Wetherbee 1985; Snyder et al. 1987; Williams and Steadman 2001).

Wetherbee (1985) contrived an intricate and convoluted thesis to the effect that the Cuban and Hispaniolan macaws had been confounded, with the extant skin specimens apparently representing both species. Ultimately, he applied the name *Ara tricolor* to the Hispaniolan macaw and named the Cuban bird anew as *Ara cubensis*. Most of his premises were severely flawed, however, and Walters (1995) proceeded to demolish Wetherbee's fable, which had as one of its basic underpinnings the account of Las Casas (1876).

In all of this, no one but Armas (1888) ever mentioned anything about what Oviedo (1851) had to say about Hispaniolan parrots. This is critical, however, because Las Casas' account, it turns out, was clearly derived in part from Oviedo. Las Casas and Oviedo were contemporaries who had strongly differing political views,

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and the more influential Las Casas was actually involved in suppressing or impeding Oviedo's publications (Wagner 1942: 12; StouDEMIRE 1959). The first part of Oviedo's *General and Natural History of the Indies*, containing the descriptions of Hispaniolan parrots, appeared in 1535. The *Historia General* of Las Casas, upon which Greenway and Wetherbee relied, was not actually published until 1876, more than 300 years after the manuscript was finished. MacNutt (1909: xxiv) writes that "much of the material Las Casas had collected for the *Historia General* was lost and when he began to put that work into its actual form—probably in 1552 or 1553—he was obliged to rely on his memory for many of his facts, while others were drawn from the *Historia del Almirante, Don Cristobal Colon*, written by the son of Christopher Columbus, Fernando." He would have had Oviedo's work to draw upon as well, and clearly did so with the parrots. Oviedo's (1851: 443) account is reproduced below followed by my translation. Like StouDEMIRE (1959: vi), I found that "Oviedo's language is not simple and direct, and his style is frequently involved" so that it is often "difficult to express Oviedo's ideas literally in English," necessitating paraphrase.

Book 14
Chapter 4

De las aves que hay en esta Isla Española, las quales no hay en España ni allá se crian.

Hay muchas maneras de papagayos en esta isla, assi de los verdes, tamaños ó mayores que palomas (que tienen un flueco de plumas blancas in el nascimiento del pico), como de los otros del mismo tamaño é verdes que tienen aquel flueco que he dicho, pero colorado, como un carmesí. Hay otros menores, de colas luengas, é los codillos ó encuentros de las alas é los sobacos colorados, é todo el restante dellos verde, é aquestos se llaman *xaxabes*. Otros hay de otras maneras, assi en esta como en las otras islas; pero porque en la Tierra-Firme hay mucha mas cantidad é diversidad destos papagayos, allí se dirá lo que aquí no se façe; porque á la verdad, en esta isla no los hay tantos ni de mas diferencias de las que se dixo de suso. Verdad es que hay unos paxaritos todos verdes, no mayores que los xilgueritos de Castilla; pero aquellos, aunque sean verdes, no son papagayos.

Of the birds that are in the island of Hispaniola, which are not in Spain and do not breed there.

Among green birds are many kinds of parrots in this island, the size of, or larger than, pigeons (which have a border of white feathers at the base of the bill), like others of the same size and green that have said border, but red, like carmine. There are other smaller ones, with long tails, and the elbows [bend of the wing], base of the [under]wing, and axillae red, and all the rest of them green, and these are called *xaxabes*. There are others of other kinds like this in the other islands; but because in Tierra-Firme [the Darien coast of Panama and Colombia] there is a much greater quantity and variety of these parrots, which will be spoken of later, not here; because in truth, in this island there are not so many nor any differing from those spoken of above. It is true that there are some small all green birds, no larger than the little goldfinches [jilguero = *Carduelis carduelis*] of Castille; but those, although being green, are not parrots.

The first is very clearly a description of the Hispaniolan Parrot *Amazona ventralis*, which is green with a white forehead, which Oviedo contrasts with similar parrots in which the forehead is red. From his long residency in the Darien region, Oviedo would doubtless have come in contact with the Red-lore Parrot *Amazona autumnalis*, which is common there and has a red forehead. The second bird described is just as clearly the Hispaniolan Parakeet *Aratinga chloroptera*, which is green with a long tail and red under the wings. The third bird is described as quite small and clearly stated not to be a parrot. This might perhaps refer to todies (*Todus*), the greenness of which is such as to draw attention, although todies are far from being all green. Regardless of what this bird may have been, it has no bearing on parrots.

The following is Las Casas' (1876: 298-299) account, again with my translation.

Hay in esta Isla, . . . inmensidad de papagayos verdes con algunas manchas coloradas. Y en esta Isla son tres especies dellos, mayores y menores y muy chiquitos, los mayores se llamaban por los indios higuacas, la silaba de enmedia luenga, y éstos difieren de los de las otras islas en que tienen sobre el

the island of Hispania and do not

many kinds of parrots of, or larger than, the order of white feathers, like others of the Darien coast; they have said border, but there are other smaller parrots at the elbows [bend of the wing], and axillaries of them green, and there are others of the other islands; but the Darien coast of Hispania there is a majority of these parrots, later, not here; beyond there are not so many as those spoken of; there are some small all over Hispania the little goldfinch [*carduelis*] of Casseus being green, are not

description of the *Amazona ventralis*, white forehead, with similar parrot is red. From his Darien region, have come in concolor parrot *Amazona autumnalis* and has a bird described is Hispaniolan Parakeet which is green with a white wings. The third small and clearly distinct. This might perhaps), the greenness draw attention, although being all green. This bird may have been parrots. Casas' (1876: 298-299) translation.

variedad de papas y manchas coloradas de estas especies dellos, muy chiquitos, los indios higuacas, y éstos difieren que tienen sobre el

pico ó la frente blanco, no verde ni colorado; los de esta especie que hay en la isla de Cuba tienen sobre el pico ó frente colorado. Estos higuacas son muy parleros, cuando les enseñan á hablar las palabras humana. La otra especie de los medianos son los que llamaban xaxabis; son muy más verdes, y pocos tienen plumas coloradas; son muy traviesos y inquietos, bullidores, muerden y aíranse más que otros; nunca toman cosa de la habla humana por mucho que los enseñen, pero son muy chiariadores y parladores en su hablar natural. Diez destos xaxabis acometen á ciento de los higuacas y los desbaratan, y nunca en paz se juntan éstos con aquéllos. Vuelan cada especie muchos juntos por sí, y por donde quiera que pasan van todos, cada especie, voceando á su manera, porque los higuacas tienen el sonido más entero y grueso, los xaxabis más delgado y agudo, y aunque no hablan los xaxabis palabras humanas, todavía, puestos en jaula, es placer vellos [sic = verlos] porque nunca están quietos ni callando. La tercera especie es de unos chiquitos como gorriones, verdes todos, y no me acuerdo que tengan alguna pluma colorada: hay pocos dellos, y cuasi no suenan ni hacen bullicio alguno, sólo por ser verdes y chiquitos parecen bien y son agradables.

There are in this island . . . vast numbers of green parrots with some red spots. And in this island are three species of them—large ones, lesser ones, and very tiny ones. The large ones are called by the Indians *higuacas*, the middle syllable long [accented], and these differ from those of the other islands in that they have white foreheads, not green or red. Those of this kind in Cuba have red foreheads. These *higuacas* are very talkative when taught to speak human words. The other kind, of medium size, is called *xaxabis*. They are much greener and a few have red feathers. They are very noisy, nervous, and restless. They bite and are irritable more than the others. They never learn anything of human speech no matter how much they are taught, but they are very garrulous and talkative in their own tongue. Ten of these *xaxabis* will attack a hundred *higuacas* and defeat them and they are never found together in peace with one another. Each species flocks together a lot and where one goes they all go, each species calling in its own way. The *higuacas* have a sound that is stronger and deeper, the *xaxabis* sharper and more high-pitched. Although the *xaxabis* don't speak human words, still, placed in a cage it is a plea-

sure to see them because they are never still or quiet. The third species is a small one, like sparrows, and I do not recall that they have a single red feather. There are few of them and they make almost no sound or noise. Only by being small and green do they seem good and are agreeable.

To begin with, Las Casas makes it clear here that he is speaking only of green parrots. Although he has added information about vocalizations and behavior, his account is clearly patterned after, and doubtless derived in part from, that of Oviedo. He mentions the white forehead of the Hispaniolan bird and contrasts this with similar parrots with red foreheads which he erroneously attributes to Cuba (the Cuban *Amazona leucocephala* also has a white forehead). The second species is again clearly the Hispaniolan *Aratinga*, and mention of a third small green bird the size of a sparrow is simply lifted from Oviedo's account, to which Las Casas has added nothing save a few apparently entirely contrived remarks. Oviedo stated clearly that this smallest green bird was not a parrot. Therefore, there is nothing in the accounts of either Oviedo or Las Casas that can in any way be construed as indicating a macaw on Hispaniola and neither author seems to have been aware of the macaw in Cuba either.

Thus, the only evidence for a Hispaniolan macaw rests on the meager statements in Buffon (1779: 183 and footnote) given below along with the translation from Clark (1905b: 348).

En général, les aras étoient autrefois très-communs à Saint-Domingue. Je vois par une lettre de M. le chevalier Deshayes, que depuis que les établissemens françois ont été poussés jusque sur le sommet des montagnes y sont moins fréquens.

"Dans toutes ces îles (Antilles) les aras sont devenues très-rares, parce que les habitans les détruisent à force d'en manger; ils se retirent dans les endroits les moins fréquentés, & on ne les voit plus approcher des lieux cultivés." Observation de M. de la Borde, Médecin du Roi à Cayenne.

In general, macaws were formerly very common in Santo Domingo. I see from a letter of

M. le Chevalier Deshayes that since the French settlements have been extended to the tops of the mountains, these birds have become less common.

In all these islands (Antilles) the macaws have become very rare, because the inhabitants destroy them for food. They retire into the less frequented districts, and do not come near the cultivated areas. [Observation of Mr. de la Borde, physician to the king at Cayenne.]

Note that there is no connection between the second statement and Hispaniola. Clark (1905b), incidentally, made a curious error in citing the reference to the Hispaniolan macaw as "Brisson (IV, p. 183, 1760, under 'L'Ara Rouge')" when the correct reference is Buffon (VII, p. 183, 1779). Volume 4 of Brisson (1760) is indeed the one in which macaws are treated and page 183 coincidentally is the first page on which *Ara* is mentioned. Although Brisson goes on at length about Jamaican macaws, he says nothing about a macaw from Hispaniola. Clark (1905b: 348) went on to say that macaws were evidently rare on Hispaniola by 1760, the date of the Brisson publication, rather than 1779, the date of Buffon's, and the erroneous 1760 date has been passed along since (e.g. Williams and Steadman 2001, Keith et al. 2003: 47). Although Buffon often directly or indirectly used Brisson's descriptions in his own publications, in this case he must have had another source.

It is difficult to give much credence to Buffon in this matter. Oviedo and Las Casas had between them many years of residence on Hispaniola. Had macaws been "very common" up until the 18th century, surely they would have been more so in the 16th century when Oviedo and Las Casas were there. But neither mentions such a distinctive bird. Macaws would have been of the greatest interest and value to the native inhabitants who would surely have made them known to the Spaniards had they still existed. The fact that there is no credible evidence for a macaw in the historical record, which began in 1492, is in itself a pretty good indication that macaws probably became extinct in prehistoric times if they ever existed on Hispaniola.

Now, only pre-human fossil deposits can document the former existence and nature of any macaw that may once have inhabited the island.

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Fossil Echinoids from Belize

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ABSTRACT.—Fossil echinoids are poorly known from Belize. An internal mold of *Echinocorys* sp. cf. *E. scutata* Leske (Upper Cretaceous) and a test of *Echinolampas* sp. cf. *E. aldrichi* Twitchell (Miocene or younger) are reported herein. Although widely distributed and locally abundant in the Upper Cretaceous and Paleocene, *Echinocorys* is rare in the Caribbean region. In contrast, *Echinolampas* is wide-

spread within the Caribbean, most nominal species being known from the Paleogene.

KEYWORDS.—Belize, echinoids, *Echinocorys*, *Echinolampas*

The modern shallow water echinoids of Belize are diverse and well known (Kier 1975). However, fossil echinoids from the same region remain poorly documented. It is therefore considered significant to report two fossil irregular echinoids collected from Belize. One specimen, *Echinolampas* sp. cf. *E. aldrichi* Twitchell, belongs to a genus widely distributed in the Cenozoic, particularly Paleogene, rocks of the region. Conversely, the other, *Echinocorys* sp. cf. *E. scutata* Leske, belongs to a taxon rare in the Caribbean, although locally common and widely distributed in the Upper Cretaceous and Paleocene elsewhere.

The terminology of the echinoid endoskeleton used herein follows Melville and Durham (1966), Durham and Wagner (1966) and Smith (1984). Our philosophy of open nomenclature follows Bengston (1988).

SYSTEMATIC PALEONTOLOGY

Class Echinoidea Leske

Cohort Irregularia Latreille

Order Cassiduloida Claus

Family Echinolampidae Gray

Genus *Echinolampas* Gray, 1825

Type species.—*Echinus oviformis* Gmelin, 1789, by the subsequent designation of Pomel (1883:62) (Kier 1962:106).

Range.—Eocene to Recent (Kier 1962:107).

Echinolampas sp. cf. *E. aldrichi* Twitchell in Clark and Twitchell, 1915

Fig. 1

Material.—A single unnumbered test in the collection of the Geology and Petroleum Department, Ministry of Natural Resources, Belize.

Locality and horizon.—Collected from the

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