

Special supplement to Alauda 47 (1), 1979 by Helmut Sick and Jacques Vielliard

Translated from the French text by the website editor

(Website editor note: Alauda is a quarterly ornithological international review published in France since 1929. This text was discovered and sent to me by Carlos Yamashita (September 2017). I have no idea what language the original text by Sick was written in. The first half was written by Helmut Sick (1910-1991) and sent to Jacques Vielliard (1944- 2010) in early 1979 for urgent publication. The second half was written later that year by Jacques Vielliard, who submitted the finished final text to the French publication. The original French text appears below the English translation)

Discovery of the habitat of the Lear's Macaw (*Anodorhynchus leari*)

By Helmut Sick (Alauda 47 (1) 1979, P.59-60}

At the time in July 1939 when I left the zoological museum in Berlin to travel to Brazil, Professor Oskar Neumann drew my attention to the Lear's Macaw *Anodorhynchus leari* Bonaparte 1856, a species which was only known from specimens held in captivity, but which seemed to originate from the interior of Brazil.

From 1954 I became actively interested in *A. leari*, of which there were only a few specimens in the museums of Europe and North America, as I was able to ascertain when studying the species whenever I had the opportunity.

In 1966 Professor Wilhelm Kegel, a geologist, told me about finding "black" macaws (*Anodorhynchus hyacinthinus*) with the vernacular name "Arara una", which means black macaw, the dark blue plumage appearing black in the distance in the wild) nesting in crevices in the rocky cliffs of the Rio Sapão valley, which flows into the Rio São Francisco in the far north-west of the state of Bahia. That information appeared to me as an opportunity to search for the home area of the Lear's Macaw in a region little known from an ornithological standpoint. *A. hyacinthinus* was known for nesting just in palm trees.

In the meantime O.Pinto (*Pap. Avuls. Zool. São Paulo IX (24) 1950, 364-5*) had come up with a new idea on the occurrence of *leari* - the region of Joazeiro (also written Juazeiro) in the state of Bahia. This conclusion was based on the existence of a specimen acquired in Joazeiro.

It is thanks to the interest shown by Dr. Aristides Pacheco Leão, President of the Brazilian Academy of Sciences, and the arrival of Jacques Vielliard in Brazil that an expedition was organised to the Rio Sapão in 1974 by the latter and myself, assisted by Dante M. Texeira. We only found there *Anodorhynchus hyacinthinus* with which I had familiarised myself in 1946 in the Mato Grosso. Our new journey to the Rio Sapão in 1976 achieved the same result.

In the course of the journey with Robert S. Ridgely and Dante M. Texeira in 1977 a bird dealer in Petrolina (on the Rio São Francisco) told me that the blue macaws, which appeared occasionally in the market of Joazeiro, came from a region south of Paulo Afonso. This indication accorded well with my opinion it could be the last place to find *A. leari*. We had in the meantime travelled all over Piauí in vain.

I then organised a new expedition to Bahia accompanied by my assistants Dante M. Texeira and Luiz A. Pedreira Gonzaga assisted by the funding of The World Wildlife Fund. We left Rio de Janeiro on 18th December 1978 and by 29th December we had our first proof – the feathers of an *A. leari* of two and half months caught to be eaten. On 16th January 1979 we had an entire magnificent specimen, an adult male brought down by one of the guides accompanying us. It will be the first obtained from the wild to belong to a museum (it will be deposited at the Museu Nacional in Rio de Janeiro).

We saw our first *leari* in the wild on 31st December 1978. Later we observed up to 21 flying together. We had discovered the roosting locations and probably the sites of reproduction. It seems to be the only macaw species living in that region, but our search was not conclusive. A detailed account will be published later on the following points:-

1. Habitat – It lives in extremely dry caatinga, crossed by canyons located in the gorges of the Rio Vaza Barris, Bahia. This river flows into the Atlantic near to Aracaju in the state of Sergipe and is not part of the basin of the Rio São Francisco. This region is one of the most remote and inaccessible parts of Brazil and has been made famous by the exploits of the bandit Lampião and the war of Canudos. It is known by the name “Raso da Catarina”.
2. Distribution area - the size of the distribution area of the species has been defined by what we could cover by a journey in a multi-terrain vehicle (with my Toyota with a diesel Mercedes engine, which often reached the limits of its capacity), on horseback and on foot. It's all been possible thanks to the assistance of the very few inhabitants scattered throughout the region.
3. Biology and conservation – During our stops in its habitat we were able to obtain data on the biology of the Lear's Macaw as well as photographs and recordings.

These lines were written during the journey on 18th January 1979 to Euclides da Cunha (Bahia) and sent to Jacques Vielliard to he could ensure rapid publication. We thank him for his assistance.

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Commentary on the macaws within the *Anodorhynchus* genre.

By Jacques Vielliard (*Alauda* 47 (1) 1979, P. 61-63)

History

How could a macaw - a parrot of great size, with lively colouring, powerful voice and discreet habits, which had been known to ornithologists for more than a century and a half (illustrations in Vieillot, *Galerie des Oiseaux* 1823 and Lear, *Parrots* 1832; description as a distinct species by Bonaparte in 1856) and of which a few specimens have continued to appear on the cage bird market in Europe and the United States until the present period - have remained so long without any known provenance? In spite of various trails leading to the Brazilian plateau, which Pinto had travelled through in 1950 to Joazeiro, it took long and meticulous searching by H. Sick, through a difficult route, to find the home territory of the Lear's Macaw.

I know, having travelled through these regions, that this is a real achievement. Indeed, although it is difficult to obtain precise information, it is necessary to go and check it all on the spot, because the distinction from the Hyacinthine Macaw is not easy in the wild as we discovered on the Rio Sapão. Moreover, it is a question of staying in a location long enough for the bird to manifest itself; the great macaws are scarcely noticed in the evening, when they return to their roosts with a high and direct flight accompanied by cries of contact; and it could be thought that, to remain untraceable, Lear's macaw was to be restricted to areas away from the roads and tracks. Sick's discovery, however, represents much more than that because it brings a key element for understanding the status of this enigmatic species.

Biogeography

The genus *Anodorhynchus* (Spix 1824) forms a homogeneous group of three species closely related, but very close to the large species forming the genus *Ara* in the strict sense. *Anodorhynchus hyacinthinus* (Latham 1790) occupies the western Brazilian plateau, from Mato Grosso to Rio São Francisco, reaching north to the Amazon rainforest east of the Tapajos and south to the upper Paraná basin. Its extreme north-easterly observation point seems to be Picos (Piauí State, near Ceará and Pernambuco), at the limit of the caatinga (pers. obs.) and well beyond the area currently accepted - but in fact the species was widespread in the upper Parnaíba in 1903 (Reiser, *Denks. Math-naturw. Kl. Kais. Ak. Wiss. Wien* 76, 1910, 56 and 112-113) and Picos is at the edge of the Parnaíba basin and only 400 km from the nearest stopping points of Reiser. There are also some mentions, which have not been verified recently, up to the Amazon (Monte Alegre on the left bank or, more likely, on the right bank at Monte Cussari, see Novaes, *Publ. Avuls. Mus. Goeldi* 29, 1978, 67), in the Belem region on the upper Rio Capim (in Sneath, *Cat. Aves, Amaz., Bol. Mus. Goeldi* 8 1914) and even in northern Amapá, nesting in coastal palm groves (Goeldi, *Ibis* (VII) 3, 1897, 152); it is not unthinkable that the Hyacinthine macaw has succeeded in establishing itself, at least precariously, far into the savannah enclaves of the lower Amazon basin, as far as the Guyanese coast

Anodorhynchus glaucus (Vieillot 1816) appears to be extinct and occupied the middle basin of Paraná; it does not appear to have had contact with *A. hyacinthinus*, but the southern limit of the latter remains poorly documented. It could have reached the state of São Paulo, thus approaching the *glaucus* range.

As Sick rightly points out, *A. leari* seems to be located, at least currently, outside the Rio São Francisco basin. It may seem odd to focus on the distribution of these three macaws in terms of river basins, but it appears to be highly dependent on them for both their food and nesting sites (although the cliffs offer an alternative used occasionally) in certain palm trees growing in valley bottoms. In any case, the discovery of Sick leads to the conclusion of the allopatry of the three species of *Anodorhynchus*.

Systematics

Since Bonaparte had recognized a particular species in the long-held unique specimen in the Museum of Paris, which had been illustrated by Vieillot, then by Lear, and which served as a type, the specificity of the Lear's macaw has been generally accepted. Several systematists felt uneasy by the absence of a known home range. Only Voous (O.R. f.O, 35 (sp), 1965, 153-155) proposed another taxonomic treatment. For him, *A. leari* could only be a hybrid between *hyacinthinus* and *glaucus*. This hypothesis, which was, moreover, ill-received, is evidently ruled out by Sick's discovery.

A. leari and *glaucus* are morphologically so close to one another that one would try to make them two variants of the same species (the whole of the genus could be considered as a super-species). In addition, there are various troubling cases of sub-specific affinities in birds (see, for example, in Short, Bull AMNH 154, 1975, 163-352), probably recently isolated by chaco (as *glaucus*) and caatinga (as *leari*).

The group of species *Anodorhynchus* is certainly monophyletic. One can easily imagine a first split of the ancestral population, one stock of which led to *hyacinthinus* and another has more recently split between *glaucus* and *leari*. Perhaps it is necessary to see in the relative viability of the *hyacinthinus* species a factor which has relegated the two others to residual areas: these species are obviously not sufficiently differentiated to survive together and a supposed expansion subsequently led to the isolation of *hyacinthinus*, which could have led to the marginalisation and the resulting differentiation of the *glaucus-leari* stock.

Protection

I evidently felt very uneasy in receiving the preliminary note of Sick by his geographical details, especially since by suppressing them, one loses most of the aspects useful to the description of the home range of the Lear's macaw. Even knowing that the localities mentioned only provide poor indications to those who venture into these inhospitable regions and that there is no protection without information, the risk was too great to let this data fall into the hands of a trafficker for whom the Lear's macaw has only a fabulous commercial value.

Fortunately, the area discovered by Sick is in a region already set aside by the Brazilian federal government, and I have just learned from the President of the Academy of Sciences, Professor Aristides P. Leão, that special surveillance measures will be implemented so that the discovery of this spectacular bird does not lead to its loss.

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