

The Indigo Macaw Re-appraised

A smaller bird or a mystery solved?

(*Anodorhynchus leari*)

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As close friends of world renowned aviculturists Harry and Pat Sissen, Joe and I often visit them to discuss various avicultural and ornithological matters.

For some time now we have all taken a keen interest in Harry's efforts to bring together the last remaining captive Lear's Macaws in a serious attempt to establish a successful breeding program.

At the present time, Harry and Pat's efforts represent the only positive attempt in Europe to save this macaw from oblivion. It was therefore amid great excitement that the two "Lear's" Macaws arrived from Mulhouse Zoo in France to join the program in February this year. Roland Wirth of ICBP had initiated their move by suggesting to Dr. J. Lernould of Mulhouse Zoo that results might be achieved if the pair was placed into Harry's care in England. Further dialogue between Dr. Lernould and Harry led to the decision to organize their transfer to England. It is regrettable that others holding Lear's Macaws do not have the same insight as Roland and John, if perhaps all owners cooperated and sent non-breeding stock into the one program then positive results might be achieved more quickly.

Prior to their arrival, Joe had called me and indicated that he had seen an old photograph of this pair of Lear's and was suspicious that one, indeed, may be a Glaucous Macaw. However, he believed that the suspect bird was the male and that it had originated in Belgium. I knew that this bird had been sent some time previously back to Brazil and had since died. In the light of this information, Joe aborted his plan to view the birds in France.

Details of the female's history have been made available from Dr. Lernould and Mr. Tony Pittman after his communications with Basle Zoo. It appears that the female was originally one of a pair that were

imported via Lisbon, Portugal and transferred to Basle Zoo, Switzerland on the 11th July 1975. There they joined another Lear's that had been in Basle since 1955. After the pair's arrival, the spare bird was transferred to Walsrode, Germany to pair with another single bird in their care. Meanwhile in Basle, the new pair produced a broken egg in 1976, in 1977 a single egg was laid, and in 1978 two eggs were laid but unfortunately all the eggs were infertile. Alas, in 1978 the original male died from liver disease and the carcass disposed of. However, in Walsrode, their pair had been non-productive and in the event of the male's death it was agreed to return the original bird. In this new pair bond, no further eggs were produced and in 1982 the original Lear's died. Autopsy showed that this bird had also been a female and this carcass was also disposed of. Following this, the female was then paired to a spare Hyacinth Macaw and it appears that this situation remained until 1987 when negotiations were made to pair the female to another male Lear's that had been kept in Paris Zoo, France. The male's records show that he was "born" in 1967, although there are no available details of a captive breeding at that time. It was agreed that both birds would be transferred to Mulhouse Zoo, France and the male arrived on the 16th March 1987 with the female following on the 30th of July that same year. Unfortunately, although the pair is compatible, no further breeding activity has occurred since they were paired.

In due course their export to England was arranged and the pair arrived at Heathrow on 25th February 1992. They were collected by Harry and transferred to their quarantine, to be cared for by Harry's daughter Yvonne Scales. Indeed, her first impression was that the hen of this

pair was so much smaller than the other Lear's in her parents' care, and she likened it to a Spix Macaw.

After some time I went to visit Harry and Pat and view the new pair of Lear's. The birds were well and seemed to have coped with their recent transfer. Their feather quality was dry and the male had been plucking an area of his breast feathers. The female, however, seems to have permanent damage to the wing tips that results in an almost total lack of primary feathers.

However, the most outstanding feature of the pair was the small size of the female. We all agreed that the marked difference in size was far more than the usual slight size discrepancy that may occur between the sexes. When viewed from the front it was noticeable that the female was a blue-green color and did indeed appear to have reduced melanin in the mandible. Harry also commented that the male had much more blue in the breast and he described the color of the hen's breast and abdomen as sea-green. I summed up the female's general appearance as a smaller, paler blue bird.

After returning home I replayed the home video recording made of the pair, and again there was the marked difference. Only then did I begin to speculate that the bird seemed to represent *Anodorhynchus glaucus*. I cross referenced many books, documents and reviewed my video tape of eight individual captive Lear's made over the last five years. Out of the eight birds on video, this one female was the "odd one out." Her small size and blue-green colour did seem to fit the descriptions of the Glaucous Macaw.

The following day I called Joe and told him about the pair and asked for his opinion. Joe lost no time in flying north for an urgent exchange of views. We drove straight to Harry and Pat's and asked once again to view the Lear's and prepared to discuss the possibility further.

Her fine features, paler color and different bill color and structure were undeniable to us all. Harry also felt that the female appeared to be "the odd bird out." This bird incidentally also has wing damage to the primary feathers typical of a bird trapped in southern Brazil or Paraguay. At this point, we were all pointing out that the features of the female were not typical of *A. leari* but it was Joe who

had the conviction of his views to openly declare that the female represented the Glaucous Macaw!

Another person who also felt that this bird could, indeed, represent *A. glaucus* was Dr. J. Lernoold himself when he first saw the bird. A photograph was given to Roland Wirth and this was submitted to the museum in Vienna; however, their conclusion from the photograph was that this bird was an unusual Lear's (pers. comm).

This could prove to be an avicultural sensation not equalled since the discovery of the Kawalls Amazon which had long since been classified by experts as a Mercenary Amazon. This case of mistaken identity has occurred time and time again.

In 1989, I visited Tring and examined the skins of all three species of *Anodorhynchus*. Visual and photographic evidence concurred with the findings of George Smith and the illustrations of Jenevora Searight. Though in discussion with Harry we both agreed that on the evidence of the skin held at Tring that the Glaucous Macaw was a dilute mutation of the Lear's Macaw. This reasoning, however, seems to be flawed as we were not taking into account other documented evidence and illustrations of both *Leari* and *Glaucus*.

Meanwhile, over the previous twelve years, Joe's research had taken him to several of the world's skin collections including the skin held at Tring and also those held in Vienna, (a single badly prepared skin with no head) and in the United States Natural History Museum in Washington where he saw six skins. He noted that of the eight skins he has examined internationally, the specimen held at Tring seems much paler than the remaining seven and it does not follow the illustrations of Cooper in "Parrots of the World" and that of Elizabeth Butterworth. Indeed, the remaining skins viewed all depict a smaller bird not identical in size to *Leari*. It would appear that the bird present in Harry's care is very similar to those seven skins. Further research by Joe is proposed in New York at the Natural History Museum where other skins are held.

So here we now have a living bird that seems to fit the known descriptions of the Glaucous Macaw and that can be directly compared to its closest relative, the Lear's Macaw. Perhaps at this point it would be wise to examine its distinct features in more

detail and compare these to some of the known information for *A. glaucus*. It must be appreciated that at the present time it is impossible to obtain accurate information regarding dimensions and weight as this would induce too much stress. Harry's highest priority is that this pair of *Anodorhynchus* must be given conditions and management that will provide the best chance of breeding. For the present time their reproduction must take a higher priority over the scientific interest.

First we can look at the size of the female, as stated she is significantly smaller than her mate and in comparison to three other captive females I have seen. We would estimate that she is at least 5cm (2 inches) smaller than her mate and considering this pro rata she appears a much smaller bird. As pointed out, her small size gave Harry's daughter the impression of a Spix Macaw. Despite her small size, she does not give the impression of a stunted bird. In her work on stunted birds, Joanne Abramson found that a classic, mature, stunted bird appears with a huge head and feet drawing attention away from the small body. She has also found that these birds are most likely to be immunologically weakened and may suffer from damaged and poorly developed internal organs with, perhaps in some cases, reduced reproductive capabilities. The female in Harry's care does not appear to fall into this category, her head appears in proportion to the rest of her body and her advanced age would seem to refute any idea that she is prone to disease. Also surgical sexing last year revealed her to be in breeding condition and no abnormal adjacent organs were noted. Also as pointed out, this female has laid eggs so her reproductive capabilities appear intact.

Forshaw, after examining nine skins of *A. glaucus* held at the United States National Museum, Washington and seven skins of *A. leari* held at the American Museum of Natural History, New York states the length of *A. glaucus* to be 72 cm (28.35 inches) and that of *A. leari* to be 75 cm (29.53 inches), a 3 cm (1.18 inches) difference. In "A Monograph of Endangered Parrots," Tony Silva also agrees with these measurements. Perhaps though the research done by George Smith of England to be presented in his proposed book provides even greater insight. In his research material for *A. glaucus* five

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measurements for length are given which vary from 56 cm (25.98 inches) (Azara) to 74 cm (29.13 inches) (Salvadori 1891) with an average of 70 cm (27.56 inches). George also states that those familiar with the living bird (Souance et al. 1857) found *A. leari* to lie in size between the Hyacinth Macaw (*A. hyacinthinus*) and the Glaucous Macaw. The ornithologist Voous in 1965 concluded that he felt that *A. leari* was perhaps a hybrid in origin between the other two species of *Anodorhynchus* and that *leari* was a wonderful *intermediate* between the two for size and color.

Taking into account the above information, it seems that this female is much more typical of *A. glaucus* than *A. leari* in size. In fact if a Hyacinth Macaw was to be placed with this pair of "Lear's," the result would be apparent even to the most casual observer. The male Lear's would lie in size between the two and also appear as an intermediate between a Hyacinth and his mate.

Next we would like to direct attention to the color of this bird. She is without doubt, a lighter color than her mate and the other six individual Lear's I have observed. However, she is not of such a light color as depicted in the illustration by J. Searight, though perhaps this may be due to the color reproduction and that the illustration shows sunlight on the birds depicted. The bird is more close in coloration to the illustration of William Cooper in "Parrots of the World" and also that of Leari and Glaucous study as depicted by Elizabeth Butterworth. In fact, the head study by Butterworth of Glaucus is the closest comparison of all. Her breast and abdomen are a slate blue-green. Harry himself describes

the color as sea-green and the color extends into the head as a grey slate green with a pale greyish-brown throat. However, from the mantle to the tail and over the wings to the secondaries she is similar in coloration to the male Lear's. Her bill is dark grey and appears lighter than her mate's with a horn colored stripe on the front edge of the upper mandible; the feet are also grey. The semi-circular area of skin around the lower mandible is a white-yellow color, the male's being a more primrose yellow. Indeed, in personal communication with Elizabeth Butterworth she stated that while examining the skins of Leari and Glaucus she too noted the lighter color of the skin in Glaucus.

The third area of physical difference between the two birds is that of the bill. As Joe pointed out, the female's upper mandible is more slender and elongated. The lower mandible projects in an almost horizontal like fashion, which overall gives the impression of a bill with a reduced biting power compared with the male Lear's. A bird very similar in appearance to this hen is illustrated in the "World of Macaws" by Dieter Hoppe on page 53. Here the author also states that the photographer identified the bird as *A. leari* but he too suggests the coloration is suggestive of Glaucus, but he makes no reference to the bird's elongated upper mandible. An important question may now be, where was this bird photographed and is it still alive? It may prove vital to the breeding program. Once more in George Smith's research we found reference to this slight difference in the bill structure. In the accounts by Azara it is stated that *A. glaucus* had little strength to the jaws and they were restricted to

fruits, seeds and palm drupes. Later it states that the Glaucus with such a bill would find it impossible to benefit from harder shelled fruits and it evolved to feed on softer fruits and foods. It was interesting that due to its environment, Joe had suggested that the bird had adapted to a more frugivorous diet. The habitat is described to be palm groves and forest while Ridgley (1981) notes it to be subtropical forest to which must be added pantanal. Some areas of habitat are subjected to flooding and others are swamp regions.

A final note is that this female lacks primary feathers. Joe has suggested that he has found that birds trapped in Paraguay often exhibit wing damage of this nature resulting in permanent damage to the primaries' follicles. Although not conclusive, this can give us valuable clues into knowing the area in which this bird was trapped, indeed the range of the Glaucus did extend into this region.

So it appears that here in this pair of Lear's may be the answer to a riddle that has perplexed many aviculturists for most of this century. Certainly the bird fits with the descriptions given for the Glaucus Macaw but no doubt great debate will follow, some will agree and some not. Perhaps DNA testing may be the answer? However, while people continue to debate and search for this legendary macaw, one issue must take priority above others and that is that the Lear's Macaw is on the brink of oblivion. Its captive numbers are critically low and most of the captives are of an advanced age. In the wild its status is critical and uncertain; if the species is to be saved then we must act now.

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