



Two released birds
Photo: Gabriela Favoretto

Lear's Macaw

Celebrating extraordinary wild and captive successes

Rosemary Low

Brazil's iconic blue macaws have been the subjects of my recent articles in *Parrots* magazine with ground-breaking news on Spix's Macaw (August issue) and disturbing news about the electrocution of Lear's Macaws (June and July).

The blue macaws comprise the two species mentioned above, plus the magnificent Hyacinth (*Anodorhynchus hyacinthinus*). They are among the rarest, the most distinctive and the most striking of all 400 members of the parrot family.

The tragically extinct Glaucous Macaw (*A.glaucus*) disappeared unnoticed, probably in the 1930s. It was formerly found in south-western Brazil, south-eastern Paraguay, northern Uruguay and eastern Argentina. Birdlife International (2022) classify it as Critically Endangered/Possibly Extinct, but there is no reason to believe that the Glaucous still survives. I will write about it here to show how a species, so closely related to Lear's Macaw, can become extinct. This happened probably about a century ago.

BirdLife states that habitat loss and capture for the cage bird trade were the major reasons for its decline (BirdLife International, 2022). Habitat loss, yes, but I believe that capture for the cage bird trade was extremely rare and definitely not a major cause. The avicultural literature of the late 19th and early 20th centuries indicates that it was an extreme rarity, almost unknown in captivity. In conversation, Prof. Luis Fabio Silveira told me a more

likely contributing factor to its extinction. He is the Curator of Ornithology at the Zoological Museum of the University of São Paulo and has a special interest in the blue macaws.

The Paraguayan War raged across the distribution area of the Glaucous Macaw from 1864 to 1870. This war was fought between Paraguay and the Triple Alliance of Argentina, the Empire of Brazil, and Uruguay. It was the deadliest and bloodiest inter-state war in Latin American history.

Its time length, involving thousands of troops, resulted in near starvation for many of these men. They had guns, of course, and a large macaw makes a good meal for desperate men. Although the Glaucous Macaw survived for probably several decades after the end of this war, depleted numbers and habitat disturbance meant that with increasing agricultural development of palm savannas, it could not survive. The blue macaws feed mainly on the fruits of palm trees.

Was the Glaucous extinct?

In the revised edition of his book *Extinct Birds* (2001) Errol Fuller, an authority on the subject, stated: "The glaucous macaw may not be extinct, but it appears to be."

The suggestion that the Glaucous Macaw was not extinct appeared in the avicultural literature until the 1990s. One of the strangest of the many rumours about its survival surfaced in 1991. I recorded in *Endangered Parrots* (Low, 1994) that in 1991 the controversy raged anew when British aviculturist Harry Sissen was given permission to import two Lear's Macaws from a zoo in France. Ultimately this did actually happen, but he did acquire three Lear's Macaws which were eventually removed in a Customs and Excise seizure. However: "He made an

announcement to the press that one of these birds was probably a Glaucous, his identification being based mainly on the smaller size. Most people believed that here was a case of mistaken identity. Nevertheless, it captured the imagination of national and regional press, and TV and radio presenters."

If the birds had come from a French zoo, they would have had the correct CITES documentation and would not have been confiscated, I thought. So I contacted Marc Boussekey, curator of a French zoo at the time.

He suggested that I should contact Dr Jean-Marc Lernoould, then curator of Mulhouse Zoo. Dr Lernoould told me:

"Knowing that a Lear's Macaw (supposed male) was living alone for many years in Paris-Vincennes Zoo, and that the Basel Zoo had a lone female after the death of the male, I suggested that both zoos should loan their bird to Mulhouse Zoo. They agreed and both birds arrived in 1987. They visited the nest-box regularly but the female never laid eggs.

"I met Harry Sissen at a conference in France (in 1991?). He told me that he had two Lear's Macaws and because of his very good breeding successes with parrots (macaws in particular), I agreed to loan him our pair. Both birds had been donated to Mulhouse Zoo by their former owners. These microchipped birds went to Harry Sissen in February 1992.

"When the Basel bird arrived in Mulhouse, I was surprised that it was a bit smaller than the Paris bird and that the blue of the flight feathers was not so brilliant. I immediately thought it could be a Glaucous Macaw. Thomas Arndt, the German parrot expert, visited me to see the birds. He was not convinced that it could be a Glaucous."

Sadly, in November 1996 the Mulhouse birds were stolen from Harry Sissen with a number of other parrots. They were never traced. He never bred from them because they had, over the years, been so badly cared for. The male had been chained to a metal stand for 20 years in Paris, which is how zoos often exhibited macaws in those days. The female had had her wing tips injured so badly, presumably when she was caught, that she could fly only down.

Jean-Marc Lernoould said, and this was confirmed by Harry Sissen, that the two birds he had before the Mulhouse pair were a female from Birdland, Bourton-on-the-water and a male donated by Brian Boswell from South Africa. Harry Sissen eventually had three Lear's Macaws and ultimately these went to the bird garden at Harewood House in Yorkshire, after the Customs seizure. All his birds were removed because unfortunately, he did not have proof that they were legally imported or bred by him.

At the time that Harewood received the Lear's Macaws thefts of valuable parrots, especially macaws, were rife. There was no publicity regarding the whereabouts of the macaws. In fact they were in an off-exhibit location near the bird garden, built especially for the seized birds.

Breeding at Harewood

The Lear's Macaws which went to Harewood were sexed as one male and two females. Two were believed to be quite young birds. They bred for the first time in 2010, producing a male and a female. It was hoped to leave the young with their parents. This proved impossible as the male started to chase them, so they were removed at the age of five months.

In August 2011 a notable event occurred: the pair reared three young – almost certainly the first time in captivity that



Released Lear's Macaws feeding on licuri palm fruits
Photo: Gabriela Favoretto

three had been hatched and reared. Two males and a female, young males were not accepted by their father. They were removed and placed with the other young Lear's. A lull in breeding occurred.

In 2020 another young one was parent-reared from the original pair. He was chased and attacked by the adult male almost as soon as he fledged, so was weaned by keepers, before being moved to live with a 2019 hand-reared female.

Meanwhile the older female had been placed in the aviary with the young ones. She chose the oldest male when he was five or six years old. In 2017 and 2018 the female laid off the perch. This elderly female, who probably never previously had a chance to breed, broke eggs or laid eggs off the perch. The nest-box was changed to a sloping design. Lisa Bath, the bird garden supervisor, told me: "I believe that she wasn't comfortable in a long horizontal box and always stayed near the entrance where she could see out. This was why I provided her with a small box."

In an attempt to stimulate breeding the young birds were moved to an aviary further away and the breeding aviary was screened with hessian. In 2018 two eggs hatched but sadly the chicks were ejected from the box the next day.

In July 2019 two eggs were removed for incubation, and hatched, four days apart, in a Brinsea incubator. The hatch weight of both was 17g. (Adults weigh 780-880g). Interestingly, the eldest, a female, was larger and the second, a male, was smaller and always at the lower end of the expected weight range. They were also very different in personality, the female being much calmer, said Lisa.

I was very fortunate to visit Harewood in July 2022 and, due to the kindness of Animal Manager Nick Dowling, to visit the two chicks being hand-reared by the very capable and caring Lisa Bath. Many thanks to Lisa for allowing me to intrude at feeding time and to capture some exciting photos of the chicks being fed.

The rearing food consists of Kaytee Exact blended with a small quantity of ground sunflower seed kernels. Weaning occurs at about five months.



Lisa with one of the Lear's bred at Harewood House
Photo: Rosemary Low

Breeding at other locations

These breeding successes are very important as there are few Lear's Macaws in aviculture. In recent years the species has been bred very successfully at Loro Parque, Tenerife and at ACTP in Berlin. Some of the latter were reared at Al Wabra in Qatar, but went to Germany following the death of the owner.

In Brazil, the first recorded breeding in South America occurred at São Paulo Zoo in 2015. I was able to see this pair in 2019 with two young in the aviary.

Thanks in great part to the skill and expertise of Cromwell Purchase, the captive Lear's population is steadily growing. Cromwell oversees the Lear's at ACTP in Berlin and manages those that were sent from there to the ACTP breeding facility in north-east Brazil. The numbers reared while in his care are without equal.

Some of the birds reared at Loro Parque, Tenerife, have played a huge role in ensuring the future of this precious macaw species.

A remarkable and historic event

In the third week of July 2022, an event of truly remarkable and historic conservation significance occurred. In fact, in all my years of reporting on and being involved in parrot conservation, I have never seen its equal.

Lear's Macaws were found in a restricted area of northern Brazil in a special type of tropical dry forest called *caatinga*. It is located in the Raso da Catarina, in the northern part of Bahia state. Listed by the IUCN as Endangered, the macaw's conservative 2019 estimate by CEMAVE (Brazil's national centre for bird conservation) was 1500.

Since then more roosting sites have been discovered so the population should be significantly higher. It has seen



Two Lear's chicks being reared by Lisa in July
Photo: Rosemary Low



The chicks weighed 843g and 635g on August 7
Photo: Lisa Bath

an acute increase in recent years, but habitat loss continues. Its numbers were depleted by persecution by impoverished farmers when macaws ate the corn crops on which farmers depend, and by illegal collecting. Both these problems have been controlled to a degree, but that is another story (Please refer to my book *Parrot Conservation*, published in 2021.)

In a locality called Boqueirão da Onça, 150 miles (240 km) from the remaining population, for more than two decades, two lonely Lear's Macaws were living out their lives. The population there was probably trapped and shot almost to extinction, according to elderly residents interviewed by Erica Pacifico, the Lear's Project Manager. There is no record of breeding by the two survivors. Either they are too old or possibly of the same gender. They were destined never to see another bird of their own species.

Releases of captive-bred birds

The first release in Boqueirão took place in 2019 with six macaws bred at and donated by the Loro Parque Foundation in Tenerife.

The next two releases, in 2021 and 2022, included the donation of macaws hatched at São Paulo Zoological Foundation (Fundacao Parque Zoologico de São Paulo) and several rescued from accidents in the wild by the Lear's Macaw Rescue Programme. They were rehabilitated at Criadouro Fazenda Cachoeira (Breeding Centre for Conservation of Threatened Birds). This brought the total to 19 released birds.

The main goal of the project is to discover the breeding and roosting sites and to find ways to protect them, so the released macaws are identified with numbered GPS tags which can easily



Family of Lear's Macaws bred at Sao Paulo Zoo in 2019. Parent-rearing of this species is rare
Photo: Rosemary Low



Inset above: The Loro Parque pair with newly fledged young one
 Right: The male feeding the young one
 Photos: Thiago Filadelfo

be read by those working in the field. Some experimentation was required on the design as most tags were destroyed by the powerful beaks. The macaws are also microchipped.

I was interested to know whether the two original birds interacted with the released ones. Erica Pacifico told me: "They have their own life style, but they enjoy visiting the release site and share the same feeding area. I believe the released macaws and the wild ones have trouble in communication. They might speak different languages, who knows? We will keep monitoring them."

The activities of two of the Loro Parque birds were of particular interest to Fernanda Riera and Gabriela Favoretto, pre-release training and post-release monitoring biologists. They discovered the pair exploring a cave. (This species nests in cliffs).

A very special fledging!

At the end of July 2022 Thiago Filadelfo, the Lear's Macaw Release Project fieldwork Coordinator, reported the historic event that was soon making international news. The Loro Parque pair had fledged a youngster! How exciting and rewarding was this! Erica Pacifico reported: "The baby macaw is from the captive born couple "Asa Cruzada" (male, medal 101) and "Maria Amassada" (female, medal 102).

"The male is seven years old and the female is 10 years old, and we have been following their breeding behaviour since 2020. The fledgling has already integrated into the group of released macaws at the feeding areas, with typical fledgling behaviours, calling its parents for food.

"The nest was in a natural cave, located in the historical roosting site of the species. Our previous investigations were made in collaboration with CEMAVE, to verify habitat quality and availability and to define the release site. The successful breeding confirms that our conclusions were correct."

There are many people who doubt that captive-bred parrots can be released to the wild and go on to breed successfully. This is another step in proving them wrong. Captive-bred Scarlet Macaws (*Ara macao*) have been released and produced young in Costa Rica, but large numbers of macaws have been released there.

Furthermore, Lear's live in an inhospitable and challenging habitat, much of which has been destroyed. This makes the success even more extraordinary and important. It paves the way for successes in releases of other threatened parrot species that have been reared in captivity.

Congratulations are due to everyone concerned, and my special thanks to Erica Pacifico and to Lisa Bath for providing information and photographs and to Nicholas Dowling and Marc Boussekey for further information.

The people who made the Boqueirão da Onça release possible

Erica Pacifico thanks everyone for trusting their pioneering and challenging work (especially Loro Parque for taking the first step) and the field biologists committed to make this dream come true: Thiago Filadelfo, Fernanda Riera, Gabriela Favoretto, and an exceptional man, Maximo Cardoso, the main field supporter. He was born in the area and his love for Lear's Macaw has inspired everyone. INEMA gave the first release licence in Bahia and Enel Green Power fully funded the cause in Boqueirão da Onça. The release project had the support of government environmental agencies, such as ICMBio, CEMAVE and INEMA, and several other national and international partners.

References

- BirdLife International (2022) Species factsheet: *Anodorhynchus glaucus*. Downloaded from <http://www.birdlife.org>
- Fuller, E. 2001, *Extinct Birds* (revised ed.), Comstock Publishing.
- Low. R., 1994, *Endangered Parrots*, John Gifford, London.

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