

The vulnerable recovery of the largest macaw of the world

This is a story about love, about love for a bird.

A story about dedication and ingenuity.

A story about saving the largest macaw of the world from extinction.

By Meindert Brouwer

June 2003. It is a warm day in west-central Brazil. A group of Nandu's have found shade under a bunch of trees on the rolling fields of the Pantanal, the world's greatest tropical wetland. It's the dry season, the grass has turned yellow, there's hardly any water to be seen. The few ponds that have remained after the floods, are full of *jacaré's*, caimans. I am on my way to visit the famous Hyacinth Macaw Project on the grounds of the Refugio Ecologico Caiman, some 250 kilometers west of the city of Campo Grande. I am excited and looking forward to see a lot of birds.

When I enter the fieldoffice, I see a poster hanging on the wall, showing all parrots and macaws of Brazil. Among them four macaw species totally blue. Curious, I point at the first blue macaw and ask for his name and whereabouts. Interpreter Ivens Domingos translates the answer given in Portuguese: "This is the Arara azul pequena - *Anodorhynchus glaucus* in Latin - it became extinct in 1950."

I point at the second blue macaw. "This is the Ararinha azul - *Cyanopsitta spixii* -, this bird became extinct in the wild in 2000. Around 60 specimens remain in captivity."

I point at the third blue macaw, how about this one? "This is the Arara azul de Lear, *Anodorhynchus laeri*, Lear's Macaw in English. Around 450 specimens still live in the wild and some in captivity."

Three out of four blue macaws gone or almost gone, one becoming extinct in the wild just a few years ago. I am shocked.

I point at the fourth blue macaw, the last one, the largest of them all, the Hyacinth Macaw, measuring 1 meter from the beak to the tip of the tail, with a wingspan of 1.5 meter. I travelled thousands of miles to see him, *Anodorhynchus hyacinthinus*, the Arara azul as he is called in Brazil. "We estimate 6500 hyacinths are left in the wild, of which around 4800 live in the Pantanal." I sigh with relief.

Not long ago the Hyacinth Macaw was in great danger. In the eighties an estimated 10.000 hyacinths were illegally captured and sold as pets, mainly on the international black market. One hyacinth could bring in 12.000 USDollars. The natural habitat was being altered or destroyed by deforestation, burning and planting of pastures for cattle. Local Indians used fire weapons to kill the hyacinths, taking their feathers to make souvenirs for tourists. By the end of the 1980's only some 2500 to 3000 Hyacinth Macaws had remained in the wild.

In the nineties the population of Hyacinth Macaws recovered. Within 10 years the number of hyacinths in the Hyacinth Macaw Project area in the Brazilian Pantanal doubled from 1500 in 1990 to 3000 specimens in the year 2000.

How did this miracle come about?

At the end of the eighties young biology student Neiva Guedes was on tour in the Pantanal. When she set eyes on huge deepblue macaws landed on a tree of dry branches, her professor said: “These Hyacinth Macaws are likely to become extinct during our lifetime.” Tender Neiva was struck. It was at that very moment the course of her life changed forever, as she decided not to let that happen.

Hyacinth Macaw Project Research Assistant César Corrêa (35), a former car mechanic, is a man you will not run down easily. Strong, supple, dark face, short white teeth, short chin-beard, dark eyes under a hat, César at first glance seems pretty tough to deal with. During my stay at the project I discover César is a man full of love. Full of love for the Arara azul, the Hyacinth Macaw, full of love for all the beautiful birds we meet, as he steers the fourwheeldrive across the rugged terrain, to show me the nesting trees of the hyacinths. Assistant Joilson Medeiros (27) and interpreter Ivens Domingos (29) join us.

The landscape offers deciduous trees and palmtrees clustered in *cordilleras* - corridors of forest - and *capões* - small forest islands - breaking the rolling fields of grass and shrubs. Wooden fences notify this is cattle country. This is also the land of the jaguar and ocelot, whose tracks we come across. The place of permanent and temporary waters, lakes and ponds, caimans lying motionless on the shore. This is the land of the tapir and the giant anteater. The domain of more than 600 species of birds, like the Turquoise-fronted Parrot, the Golden-collared Macaw and the largest of them all, the Hyacinth Macaw.

You never forget the first time you see a bird you always wanted to see.

There they are, Hyacinth Macaws! On that branch! Three! Two adults and a young. A family, César explains. The young stick with their parents for around one year and a half. I direct my binoculars to them. Blue, so very, very blue! Golden eyerings and golden cheek stripes. There they go, flying away, with power and grace at the same time, their long tail in direct line with their back.

In the Pantanal, hyacinths - highly socialized and faithful birds who mate for life - prefer to make their nest in the *manduvi* tree. This big deciduous tree with its soft kernel is easily hollowed out by a hyacinth beak.

We arrive at the first nest. We see the opening of a cavity in the trunk, 8 metres above the ground. A small rope is hanging down from a big branch way up. This nest has been monitored before. Joilson takes the bag from the car, pulls out the gear, attaches a big rope to the small one, hauls it across the branch. After the rope is secured, César clicks a seat onto it made of seatbelts. Stretching our necks, we watch César hauling himself up fast and then putting a hand in the dark of the cavity.

“The hyacinths are preparing their nest,” C ezar tells when he’s come down. “I felt the wood chips, the hyacinths have pinched off the inner wall.” By hollowing out the cavity, hyacinths create a nest and provide themselves with a convenient layer of small woodchips and sawdust for the eggs to rest on. When the cavity is too deep for the future young to get out, C ezar brings his own woodchips to raise the floor of the nest.

However, natural cavities in trees to start digging, are hard to find. Also, there are competitors like red-and-green macaws, owls and ducks. And there’s another problem: the opening of the captivity may be too big, allowing toucans to steal the eggs and hawks and owls to snatch the young.

Two black vultures are sitting guard on a branch next to a hyacinth’s nest. A hyacinth appears in the opening of the cavity. He or she, with a slightly slant head, calmly watches the two black predators. The hyacinth has no invasion to fear. C ezar constructed boards of wood around the opening, making it smaller, too small for the vultures to get in.

Because the availability of natural nesting sites is a problem, C ezar constructs artificial nests - wooden boxes - and puts them on the trees. After finding out with trial and error what kind of box was accepted by the hyacinth, artificial nests have contributed considerably to the come back of the Hyacinth Macaw. Woods of board and artificial nests are only two of a number of rewarding solutions Neiva Guedes came up with during her research in the nineties.

After she had returned from her tour in the Pantanal, biology student Neiva Guedes started the Hyacinth Macaw Project to save the bird from extinction. She raised money, learned how to climb trees and to band macaw chicks. In 1990 at the age of 28 Neiva began monitoring the nests and the chicks.

Generally the survival rate of Hyacinth Macaw chicks is low. This is a characteristic of the species. Breeding hyacinths lay 2 eggs on average, but the survival rate of the chicks is only close to 1. The second chick does not survive if it hatches 5 or more days after the first chick. C ezar recalls a remarkable event.

C ezar had investigated a hyacinth’s nest, he had taken out the young and noticed a difference of at least 5 days between the two chicks. Back in the fieldoffice he called Neiva, who was at the UNIDERP University in Campo Grande that week. Neiva listened, remained silent, then responded to C ezar: “Find another nest with 2 chicks with the same difference in days. Make a transfer. Put the two elder chicks together in one nest and put the two young ones in the other nest. Let’s see what happens.” Neiva’s idea proved to be successful.

Chick management takes place in hyacinth nests which have a history of being not successful, because of predation or because the eggs do not hatch. C ezar may take the hyacinth eggs out of the nest, replacing them with small size hen eggs. The hyacinth eggs are incubated in the field laboratory.

After hatching, the chicks are fed during 5 to 7 days. Then they are reintroduced in their original nests or transferred to other nests with chicks of the same age.

Chickmanagement has proven to be very effective in helping the reproduction of the hyacinth and in increasing the population, away from the verge of extinction in the wild. There are people who disapprove of interfering like this.

Neiva: “Artificial nest boxes are a short and medium term measure. We put nest boxes because one of the biggest problems for the Hyacinth Macaw reproduction is the lack of big cavities. For long term solutions we work with the ranchers to preserve and plant more natural trees, like the *manduvi* nesting tree. As to chickmanagement, we only do this in nests where there would be no chick survival without our interference. Before we reach this point, we confine ourselves to managing the nest, for example by making the opening hole smaller to avoid entrance of the predator. We will do chickmanagement as long as it is necessary and for as long as we have people in the field full time. Our work requires steady and long term monitoring.”

When asked about the purpose of her scientific research, Neiva states: “The purpose of my research, which means my life, is to preserve the Hyacinth Macaw in the wild. I do not care about having 100, 200 or 300 Hyacinth Macaws in captivity, in 50 or 100 years from now. I care about a sustainable population of wild Hyacinth Macaws flying in Brazil.”

Illegal trade in hyacinths is still a threat, but has considerably diminished in the region of the Hyacinth Macaw Project in the Pantanal which succeeded in raising awareness among the local population. Nevertheless Neiva worries about the growth of “the feathers art commerce in Brazil, which kills populations of macaws and other wild birds”. The major threat to the Hyacinth Macaw in the Pantanal today, is habitat loss in favour of cattle breeding. The highly specialized Hyacinth Macaw has a high-energy diet, based on nuts from the fruit of two species of palm trees, the *acuri* and the *bocaiúva*. Safeguarding these two feeding trees plus the hyacinth’s favorite nesting tree, the *manduvi* tree, is a priority.

Luckily project coordinator Neiva Guedes combines a number of qualities, I discovered. Besides being a gifted researcher, modest Neiva turned out to be a successful ‘Warrior for the hyacinth’ as a cattle rancher put it. In the past decade Neiva, in between collecting data, tirelessly and patiently payed visits to the *fazenda*’s, the cattle ranches in the region. Ranchers have started to be proud of having a hyacinth breeding on their property.

Says Bernadete Lange, manager of the Pantanal Forever Programme of WWF Brazil: “The Hyacinth Macaw Project of Neiva Guedes in the Brazilian Pantanal brought hope to this species. Her results are outstanding. Within ten years the number of hyacinths in her project area doubled from 1500 to 3000. Unfortunately, it happens that in other areas of Brazil, such as the Cerrado savannas and the Eastern Amazon, the amount of Hyacinth Macaws heavily decreased. Seventeen years ago there were also 1,500 individuals in these areas, but today only 1000 of them remain alive in the wild.

This occurred due to the destruction of their habitat, that was converted to grazing areas and soy crops. It's necessary that the Brazilian Government treats the hyacinth macaw as an endangered species and starts a programme to protect its natural habitat in the Pantanal and to recover its habitat in other parts of Brazil.”

Neiva: “WWF, the Worldwide Fund for Nature, is our main partner and sponsor since the year 1999. My university UNIDERP - University for the Development of the State and Region of the Pantanal – makes it possible for me to dedicate myself exclusively to the Hyacinth Macaw Project. Caiman Ecological Lodge provides us with a fieldoffice and Toyota Brasil renders vehicles to go into the field. We are also supported by Brasil Telecom and the Brazilian organisations Manoel de Barros Foundation and Vanzin Escapamentos.”

The Pantanal is one of the best places in the world to watch birds and animals. The potential of sustainable eco-tourism as a mighty source of income can be the incentive to the Brazilian government and local landowners to protect wildlife and preserve the habitat of the hyacinth. Neiva and her team are thinking of organizing field trips for eco-tourists to experience the hyacinth project.

The population of hyacinths in the area of the Hyacinth Macaw Project in the Brazilian Pantanal, doubled from 1500 to 3000 specimens within 10 years. Neiva is very grateful for the support by the local ranchers and farmers and for the support by her sponsors. However the Hyacinth Macaw Project in the Pantanal and the protection of this bird in general, face a problem which is all too familiar: there's a lack of funds to monitor the nests properly and there's a lack of funds to preserve its habitat. Vulnerable, the recovery of the largest macaw of the world is still at stake.

For more information, go to:

www.projetoararaazul.org.br

www.uniderp.br

www.wwf.org.br/projeto/arara.htm

www.panda.org

Hyacinth Macaw Project, e-mail address: projetoararaazul@uol.com.br

For information on the pet trade, go to: www.traffic.org