

As the Blue-throated Macaw is now the world's rarest wild macaw, our work is focused primarily on helping the last known pairs successfully fledge chicks. For a number of reasons – from rainfall to losing eggs to toucans – nearly all nesting attempts seem to fail without direct and persistent intervention by this team of committed conservationists.

In this issue, our project leader and volunteers tell their tales of the latest breeding season.

Photo: © Igor Berkunsky



# Beginner's Luck

By Igor Berkunsky

It was our first visit to the field and my first encounter with the Blue-throats. I was being "trained in" by Toa Kyle, the former Blue-throated Macaw project leader. After taking some photographs and visiting some nest-boxes, we found a pair that appeared to be interested in a dead palm tree. I said:

"Hey Toa, it looks like a nest. What do you think?"

Toa suggested I find a hiding place near the tree and wait for the birds. I spent more than an hour under a shrub waiting and finally the pair arrived. One of them went into the cavity and the other stayed outside, guarding. That was all the evidence I needed. I waited until the bird that was guarding the site flew, and I left silently. Later we climbed the tree and found the first egg of the season! The nest went on to fledge 3 chicks. I was so happy with my beginners luck! Unfortunately this luck did not repeat and the nests that followed did not come so easy, but they came... ➤



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**W**HEN THE WORLD PARROT TRUST invited me to lead the Blue-throated Macaw Conservation Project I thought it was a dream. After 10 years working with Blue-fronted Amazons (*Amazona aestiva*), Blue-crowned Parakeets (*Aratinga acuticaudata*) and Monk Parakeets (*Myiopsitta monachus*) in Argentina, I would be in Bolivia, working with the most endangered macaw in the world. My concerns were significant. Even though I had been monitoring nests for years, I had always done it from a scientific point of view - an observation of a wild situation. Now I felt a huge responsibility. With the Blue-throats we would need to act - to make decisions and go ahead with them. Everything would be focused on increasing the wild population. We only have around 80 individuals identified in the wild, and it is highly probable that the total population is not more than 200 individuals. Anything we do (good or bad) could have a significant impact for the species. All this attracted me and worried me at the same time. I searched out my best assistant, Federico Kacolis, and we went to Trinidad to meet Toa.

We spent more than one month with Toa and he showed us all the places he knew Blue-throats to be. We visited nests and nest boxes, and we met all the cattle ranchers involved in the project.

Project Leader Igor Berkunsky examines 3 chicks from one of the nest boxes. With the provision of supplementary food during critical early days, all 3 chicks fledged successfully.

Fortunately Beni (the Bolivian department or state where the project takes place) is not as stifling as the Chaco region of Argentina, to which I was accustomed.

We have a straightforward mission: to find as many active nests as possible and do everything possible to guarantee the success of the nest. To achieve this objective we must monitor every nest, every day during the 4-month period between egg-laying and fledging. All the while, we must repair old cavities and nests, and even remove bees from some cavities. None of this is

easy in an environment like the Llanos of Moxos. Here, in the dry season, the combination of intense heat, dust and smoke results in hot grey days. With the first rains the sky clears, but another problem arises - flooding. By early December almost all access is flooded, and in January we have only one road accessible by truck. By the end of the season, trucks and aeroplanes are no longer functional and we must get around in boats!

Unfortunately Blue-throated Macaws are protected by neither park nor reserve. Their



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protection totally depends on the cattle ranchers who own the land where macaws live. Happily some of these cattle ranchers understand the situation and participate in the conservation project. Thanks to them it is possible to set up camps close to the nests to guard them. Our good results were a direct result of the ranchers' support.

### AN INCREDIBLE TEAM EFFORT

contributed to our excellent results. All field activities were coordinated with the help of two field assistants, Federico and Carmen, and two

enthusiastic field workers, Vicente and John. But as you can imagine, five people are not enough to cover 12 work sites! We brought in help, not only from Bolivia, but also from Canada, USA, Colombia, Peru, Uruguay, Argentina, Spain and New Zealand. Volunteers helped with nest monitoring and nest searches, repairing cavities and all sorts of logistics. They also collaborated with chick feeding and health checks. Thanks to volunteers' help we set up and ran 4 permanent camps with 12 active nests. Some volunteers such as "The Kiwis" (Brent and Francesca) deserve a special mention, as they brought us the gift of their experience from a variety of parrot conservation projects (see page 7).

**THE 2007-08 BREEDING SEASON** was even more successful than last season, which was the most productive to date. Five Blue-throat nests fledged a total of 10 chicks, the majority of which fledged in late December/early January. We reduced the mortality from starvation to zero, increasing the survival of chicks and the mean number of fledglings per nest. In comparison with the 2004 and 2005 seasons we doubled the average number of fledglings per successful nest. These successes are the result of more than 5 years of continuous work by the World Parrot Trust on Blue-throats in the Llanos

Bees can make a box inhospitable for birds and researchers in no time. After being removed, bees can be back within 2 weeks.

Initial nest box results are encouraging. PVC boxes (left) were introduced this year. Wooden boxes are easier to renovate, however (above). As the male looks on, one of 3 chicks enjoys the view from their new back door.

de Moxos and show that all of our management techniques are paying off.

We found 10 breeding pairs laying eggs and two of those made a second attempt for a total of 12 active nests (twice the average of previous seasons)! Half of these pairs were successful and fledged 10 chicks! This number of fledglings would be almost impossible to obtain in natural conditions. Predation remains the greatest cause of nest failure. Forty-three percent of the active nests from 2004 to 2007 (4 breeding seasons, 30 active nests) were predated. This season, one third (4 of 12) of active nests were predated, most of them during the incubation period. We lost only one nest during the chick rearing period and it was by predation.

**AT THE BEGINNING** of this breeding season (the second year using nest boxes), 67% of boxes were occupied by bees, and only 20% were occupied by birds, two with Black-bellied Whistling Duck (*Dendrocygna autumnalis*) and one with a Barn Owl (*Tyto alba*). We removed bees from 5 boxes, relocated one box, and installed three new artificial nests (one box and two PVC nests). Two of our nest boxes were occupied by Blue-throated Macaws. One pair used a nest box



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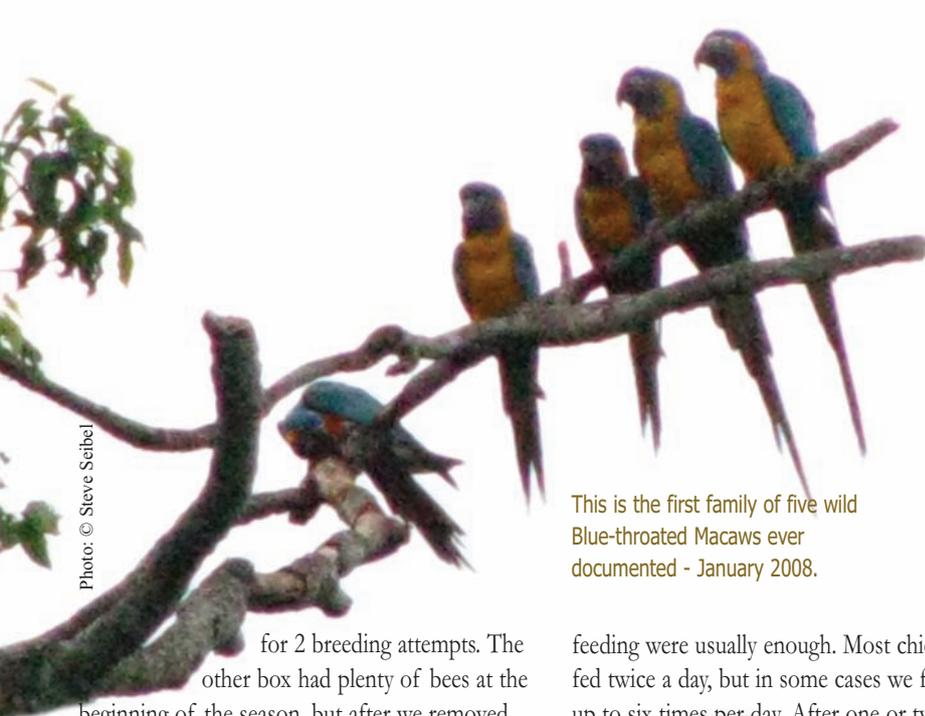


Photo: © Steve Seibel

This is the first family of five wild Blue-throated Macaws ever documented - January 2008.

for 2 breeding attempts. The other box had plenty of bees at the beginning of the season, but after we removed them the Blue-throats started to visit the nest and even decided to make a new entrance in the bottom of the box. With our help, this box finally raised a 3-chick clutch!

In Blue-throated Macaw nests, usually more than one chick hatches but only one fledges. This natural brood reduction occurs during the first two weeks of the nestling stage. This is a normal situation in other macaw species but represents a serious problem for Blue-throats since their population is critically low. It is essential to ensure the survival of every chick which naturally hatches. The simplest defense against starvation is to feed chicks during the most critical period. We fed chicks in almost all nests. The frequency of feeding varied with the requirements of the chicks. In most cases all chicks were monitored every day. We weighed them at each visit in order to make sure they were gaining body mass. We fed chicks every time it was necessary. Just a few days of

feeding were usually enough. Most chicks were fed twice a day, but in some cases we fed them up to six times per day. After one or two weeks of feeding in the most critical period, chicks obtained the mass needed to efficiently compete with their older siblings. Before 2007, over half of all nestlings (57%) that hatched died, most (75%) in the first week of life. We reduced this number to zero. This season none of the hatched chicks died due to starvation.

Blue-throated Macaws confront all the risks associated with small population size and the need to increase the rate of population growth is clear. With a population of 150-200 individuals any natural catastrophe or epidemic event could promote a natural extinction. We consider it very important to continue monitoring the wild population. We think we can continue to

improve Blue-throated Macaw reproductive output using simple management techniques. However, the urgency of a captive breeding & reintroduction plan is increasing. Ideally, a captive breeding program conducted locally would be coordinated with the wild nest monitoring program such that chicks being hatched to captive birds could be introduced into wild nests. Other parrot reintroduction programs showed socialization problems between individuals, most likely because adults and/or juveniles were released. In the best case scenario, captive bred chicks could be introduced into wild nests 2-3 weeks before fledging. This approach would provide them with natural socialization which is the best way to introduce them into the wild. Eventually, it may be possible to have 3 chicks in all wild nests.

**OTHER ISSUES** I would like to work on are nest predator identification, and monitoring juveniles. The use of cameras in active nests will help us to see what predators visit the nest and will also aid us in monitoring the movements of parent birds. Monitoring juveniles is important because all our efforts to increase the number of fledglings could be useless if juveniles don't survive to breeding age. While we do currently band fledglings, it is very difficult to see bands on birds in the wild. Lastly, the use of transmitters with GPS or satellite technology could show us the movements of an entire Blue-throat family - the bigger the better!

Chicks are carefully inspected, weighed and measured during regular nest checks.



Photos: © Igor Berkunsky