

“Blue Beard” Macaws

2011-2012 Nidos Adoptivos



Three Blue-throated Macaw chicks in nest box adopted by South Bay Bird Society.

Introduction

The Blue-throated Macaw (*Ara glaucogularis*) is a restricted range species endemic to the department of Beni in Bolivia. It is one of the most threatened bird species in the world (Birdlife International 2012). It is believed that one of the principal factors affecting the population size of this species is the lack of available nest sites and the inter-

species competition with the more common and abundant Blue-and-Yellow Macaw (*Ara ararauna*) that shares the same ecological niche.

In 2005 the Asociación Armonía / Loro Parque Fundación Blue-throated Macaw Conservation Program experimented and placed 20 artificial nests in the southern zone of the species distribution. Beginning the following year, Bird Endowment formed a part of the initiative for conservation of the Blue-throated Macaw and created the **Nido Adoptivo**[™] project for adoption of artificial nests, which entails searching for donors to sponsor the nest boxes annually. Each participant is honored as an **El Beni-Factor**[™] for a year.

<http://www.birdendowment.org/inBolivia/nidoAdoptivo.shtml>

These studies have demonstrated that the lack of cavities in trees and palms in the Llanos de Moxos habitat could be a limiting factor in the reproduction of many species of birds including the Critically Endangered Blue-throated Macaw.

Design of the nests

The design of the model for the nests was taken from information obtained in the field of a successful natural nest found in a hollow of a palm where two chicks were hatched and raised. Several aspects were taken into consideration such as latitudinal location, suitable depth -- both vertical and horizontal -- entrance shape and diameter, etc.

The artificial nest consists of a rectangular box 1m. long x 30 cm. (fig.1), with an entrance hole measuring 12 x 25 cm. On one side of the box there is a small inspection door to facilitate the monitoring of the reproductive process.

These models have not yet been modified. The next breeding season aims to try different alternatives.



Figure 1. Artificial nest occupied by Blue-throated Macaws 2011-2012

The nests are constructed with the wood of Palo Maria (*Calophyllum brasiliense*) and Ochoó (*Hura crepitans*) and are placed at a height of 5 m above ground. The majority of them have been situated in Totaí palm trees (*Acrocomia aculeata*) in areas where Blue-throated Macaws have been seen frequently. The Palo Maria wood is more difficult for them to destroy and for that reason we have chosen to use this material.

Monitoring the artificial nests occurs along with that of natural nests. Nest box inspections occur every 15 days. The data is collected in a predetermined schedule.

Results

Thanks to the effort of Bird Endowment with its **Nido Adoptivo**[™] project, 34 nest boxes were funded by people who want to help the conservation of the Blue-throated Macaw. Next is a brief summary of the usage activities of all the “Adopted Nests” sponsored by the various participants in the project.

Table 1. Initials, sponsor and species that used the nests in the 2011-2012 breeding year.

Nest ID	EI Beni-Factor™	GPS location	Species / Activity
#1	Katy Secor	S 15° 11' 56,7" W 064° 43' 41,0"	No activity
AF	St. Augustine Alligator Farm	S 15° 18' 00,4" W 064° 37' 55,9"	No activity. Only observed pair of Blue-and-Yellow Macaws perched on the nest box.
ASC	Arizona Seed Crackers Society	S 15° 16' 03,0" W 064° 45' 05,3"	Blue-and-Yellow Macaw laid three eggs. Hen was in nest but eggs failed to hatch.
AV	Adele Vessey	S 15° 17' 49,6" W 064° 38' 47,8"	Blue-and-Yellow Macaw laid two eggs, hatched two chicks which fledged successfully.
BA	San Francisco Bay Area Zookeepers	S 15° 16' 04,3" W 064° 46' 02,2"	Blue-and-Yellow Macaw laid two eggs, hatched two chicks which fledged successfully.
BH	Brenton Head	S 15° 11' 47,7" W 064° 46' 28,7"	Muscovy Duck laid 16 eggs. The hen was in the nest and all the ducklings hatched.
BS1	The Beak Squad	S 15° 17' 19,2" W 064° 38' 44,2"	Blue-and-Yellow Macaw laid three eggs, hatched two chicks which fledged successfully.
BS2 (BTM)	The Beak Squad	S 15° 16' 30,5" W 064° 46' 01,5"	Blue-throated Macaw laid two eggs. Hen found dead in nest. Eggs broken. Predator unknown.
CD	Claire Dicker	S 15° 19' 22" W 064° 37' 40,5"	Blue-and-Yellow Macaw laid three eggs. All hatched and three healthy chicks fledged.
CP	Covenant Parrot Place	S 15° 16' 06,3" W 064° 46' 02,2"	White-eyed Parakeet laid three eggs. Hen was inside nest but Blue-and-Yellow Macaw destroyed eggs fighting for nest.
CZ	Cincinnati Zoo & Botanical Garden	S 15° 16' 27,7" W 064° 45' 58,5"	Blue-and-Yellow Macaw laid two eggs. One chick hatched and fledged in good health.
DP	In Honor of Laney Rickman by Dorothy Paterson	S 15° 18' 43,1" W 064° 37' 06,2"	No activity
DW	In Memory of Dick Williams by Blue-throated Macaw Yahoo Group	S 15° 18' 0,6" W 064° 37' 57,9"	Blue-and-Yellow Macaw laid two eggs. One chick hatched and fledged in good health.
ED (BTM)	Eva Dicker	S 15° 12' 50,9" W 064° 40' 43,9"	Blue-throated Macaw laid two eggs. Both disappeared. Later, Black-bellied Whistling Duck laid 45 eggs.
GB	Good Bird, Inc.	S 15° 17' 19,2" W 064° 38' 46,6"	Blue-and-Yellow Macaw laid four eggs which all hatched. One chick died but the other three fledged in good health.
JB	Janice Boyd	S 15° 13' 02,3" W 064° 40' 19,9"	Blue-and-Yellow Macaw laid three eggs and they were ruined. Later same species laid three

			eggs which did not hatch.
JJ	Jana Julleis	S 15° 18' 15,6" W 064° 38' 08,5"	Blue-and-Yellow Macaw laid three eggs. Hen was inside nest.
JW	Jennifer White	S 15° 16' 09,4" W 064° 46' 04,6"	Blue-and-Yellow Macaw laid two eggs. One hatched but the chick disappeared.
KJ	Karen Justice	S 15° 15' 32,7" W 064° 45' 29,6"	No activity
KT	Kathryne Thorpe	S 15° 16' 30,8" W 064° 46' 00,7"	No activity. Only observed pair of Blue-and-Yellow Macaws perched on the nest box.
LJ (BTM)	Lisa Johnson	S 15° 15' 16,5" W 064° 43' 48,8"	Blue-throated Macaw pair investigated the nest box but they did not reproduce.
ME (BTM)	San Francisco Bay Area Zookeepers	S 15° 12' 53,3" W 064° 40' 29,3"	Blue-throated Macaw laid one egg. Pair perched on the nest box. Later the egg disappeared.
MR	Margo Rose	S 15° 11' 31,7" W 064° 43' 10,4"	White-eyed Parakeet inside nest. Later, Black-bellied Whistling Duck laid 12 eggs which all hatched.
NC	Nyla Copp	S 15° 15' 19,3" W 064° 45' 20,7"	Blue-and-Yellow Macaw laid two eggs. One chick hatched and fledged in good health.
PC	Cleveland Parrot Education & Adoption Center	S 15° 15' 32,5" W 064° 45' 28,7"	No activity
PU	Parrot University	S 15° 11' 24,8" W 064° 43' 10,4"	White-eyed Parakeet laid two clutches of three eggs which disappeared. Later, Black-bellied Whistling Duck laid 11 eggs which all hatched.
RO	Roger O'Connell	S 15° 15' 08,8" W 064° 41' 31,3"	White-eyed Parakeet laid two eggs which hatched. Later Blue-and-Yellow Macaw laid one egg which hatched. Chick fledged.
RM	Rocky Mountain Society of Aviculture	S 15° 12' 34,01" W 064° 43' 37,1"	Blue-and-Yellow Macaw laid three eggs. Two chicks hatched and fledged successfully.
RS	In Memory of Dr. Robert Stonebreaker	S 15° 18' 16,2" W 064° 38' 09,2"	Blue-and-Yellow Macaw laid two eggs. One hatched and fledged in very good health.
SB (BTM)	South Bay Bird Society	S 15° 11' 25,3" W 064° 43' 11,2"	Blue-throated Macaw laid three eggs which all hatched. Three very healthy chicks fledged.
SF	San Francisco Bay Area Zookeepers	S 15° 19' 11,07" W 064° 37' 05,03"	No activity
SL	Bolivar the BTM	S 15° 17' 18,5" W 064° 39' 49,5"	No activity
SR	Northern Illinois Parrot Society	S 15° 16' 15,8" W 064° 46' 02,9"	Blue-and-Yellow Macaw laid two eggs which were ruined. Later same species laid one egg

			which disappeared.
ZK	San Francisco Bay Area Zookeepers	S 15° 11' 29,6" W 064° 43' 08,1"	No activity

All of these nests were placed in trees on cattle ranches in the southern range of distribution. These are: Esperancita, Las Trancas, La Avenida, Santa Rosa de Justiniano, Getafe, La Asunta and La Cantina.

Of the 34 nest boxes monitored, five were occupied by Blue-throated Macaw (*Ara glaucogularis*) and 18 by Blue-and-Yellow Macaw (*Ara ararauna*); the nest boxes were also used by White-eyed Parakeet (*Aratinga leucophthalmus*), Black-bellied Whistling Duck (*Dendrocygna autumnalis*) and Muscovy Duck (*Cairina moschata*). Some nest boxes were occupied by two species of birds.

Table 2. Number of artificial nests occupied by different bird species 2011-2012

Species	Common name	Number of nest boxes occupied
<i>Ara ararauna</i>	Blue-and-Yellow Macaw	18
<i>Ara glaucogularis</i>	Blue-throated Macaw	5
<i>Aratinga leucophthalmus</i>	White-eyed Parakeet	5
<i>Dendrocygna autumnalis</i>	Black-bellied Whistling Duck	2
<i>Cairina moschata</i>	Muscovy Duck	1

Although five nests were occupied by Blue-throated Macaws, only one produced offspring. The pair in nest box **SB** sponsored by **South Bay Bird Society** successfully fledged three chicks, and did not need – in any instance – supplemental feedings by our team. We believe that the parents are able to raise three chicks regardless of their hatch dates.

Activities for 2012-2013

Approximately 25% of worn out nest boxes will be replaced with new ones. We will continue to monitor the artificial nests in the southern area of distribution (provincia Marban) and 50 nest boxes will be monitored in the Barba Azul Reserve.

In addition to the usual monitoring, we intend to provide new alternatives for Blue-throated Macaw nesting success -- to play around with places, shapes of boxes and other things in order to find some answers regarding their nest preferences -- and for other species with which it competes.

Gustavo Sanchez
Programa de Conservación de la Paraba Barba Azul
Armonía / Loro Parque Fundación
Lomas de Arena 400
Santa Cruz, Bolivia
591 -03-3563636