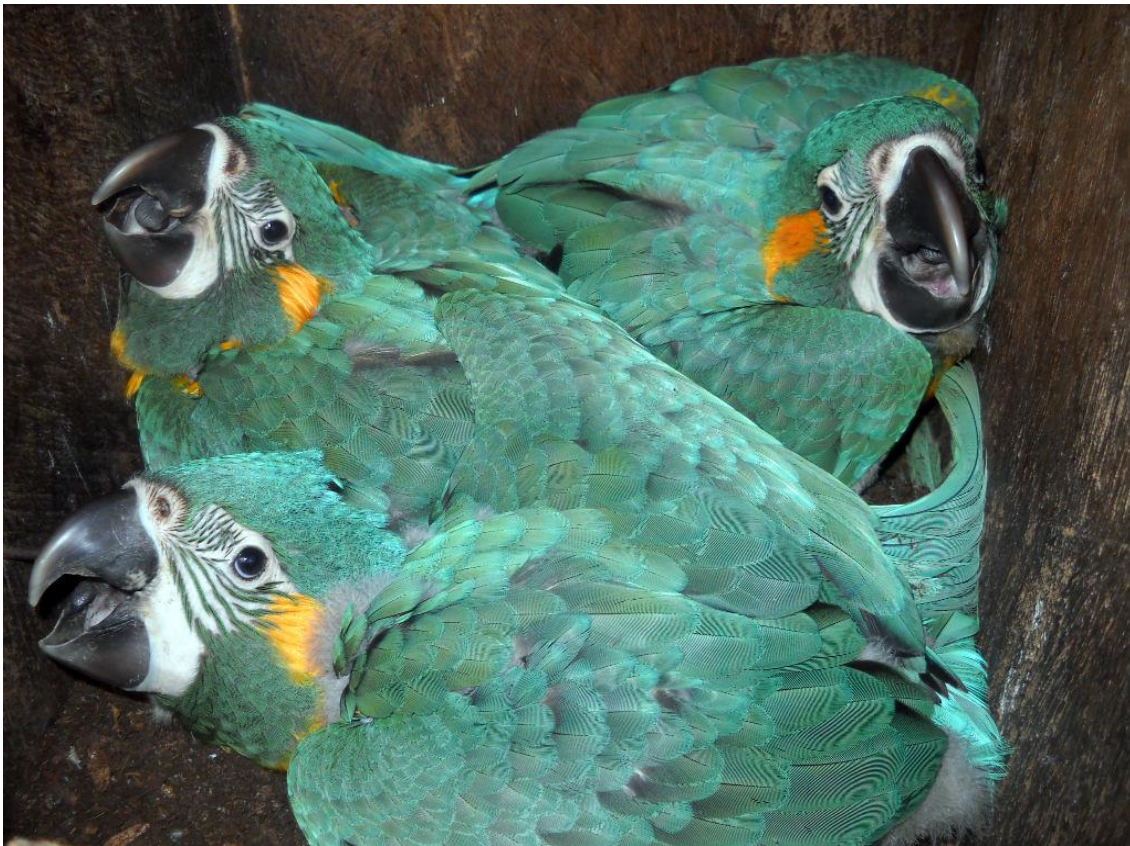


# Nidos Adoptivos of “Blue Beard” Macaws 2010-2011



Blue-throated Macaw chicks (*Ara glaucogularis*)

## 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 2010). 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 Gold 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.



**Figure 1. Artificial nest occupied by Blue-throated Macaws**

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, 36 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 “Nidos Adoptivos” sponsored by the various participants in the project.

**Table 1. Initials, sponsor and species that used the nests in the 2010-2011 breeding year.**

<b>Nest ID</b>	<b>EI Beni-Factor™</b>	<b>Location</b>	<b>Species / Activity</b>
RO	Roger O'Connell	S 15° 19' 11,07" W 064° 37' 05,03"	Blue-and-Yellow Macaw, laid one egg, hatched one chick which developed successfully.
CD	Claire Dicker	S 15° 18' 43,1" W 064° 37' 06,2"	Blue-and-Yellow Macaw, laid three eggs, hatched one chick which fledged successfully.
BT	Jean and Roy Rub	S 15° 18' 00,4" W 064° 37' 55,9"	Blue-and-Yellow Macaw, laid two eggs, hatched two chicks which fledged successfully.
RAH	Richard Heebner	S 15° 18' 0,6" W 064° 37' 57,9"	Blue-and-Yellow Macaw, laid two eggs, hatched one chick which fledged successfully.
DS	David & Sandy Mauer	S 15° 18' 02,2" W 064° 37' 58,2"	No activity. Blue-and-Yellow Macaw pair was in the nest, but they did not reproduce.
RS	(In Memory of) Dr. Robert Stonebreaker	S 15° 18' 16,2" W 064° 38' 09,2"	First Blue-and-Yellow Macaw, laid two eggs and they were predated. Then Chestnut-fronted Macaw, laid one egg and it was predated. Blue-and-Yellow Macaw returned and laid three eggs but they did not hatch.
KJ	Karen C. Justice	S 15° 17' 49,6" W 064° 38' 47,8"	Blue-and-Yellow Macaw, laid four eggs, hatched three chicks which fledged successfully.
PC	PEAC-Cleveland	S 15° 17' 18,5" W 064° 39' 49,5"	Blue-throated Macaw, laid three eggs, hatched two chicks. One fledged successfully. The other was predated by a Great Horned Owl.

SL	Bolivar the BTM	S 15° 17' 19,2" W 064° 38' 44,2"	No activity. Blue-and-Yellow Macaw pair was in the nest, but they did not reproduce.
JJ	Jana Julleis	S 15° 15' 16,5" W 064° 43' 48,8"	Blue-and-Yellow Macaw, laid two eggs, hatched two chicks which fledged successfully.
JB	Janice Boyd	S 15° 12' 15,1" W 064° 41' 01,1"	Blue-and-Yellow Macaw, laid two eggs which were predated.
RP3	Royal Parrot Conservatory	S 15° 15' 07,1" W 064° 44' 28,5"	No activity
GB	Good Bird Inc.	S 15° 16' 09,4" W 064° 46' 04,6"	Blue-and-Yellow Macaw, laid three eggs, hatched two chicks which fledged successfully.
#1	Katy Secor	S 15° 14' 53,8" W 064° 42' 06,4"	Blue-and-Yellow Macaw, laid three eggs, hatched three chicks which fledged successfully.
EL	Edward Landry	S 15° 16' 03,0" W 064° 45' 05,3"	Blue-and-Yellow Macaw, laid two eggs, hatched two chicks which fledged successfully.
JW	Jennifer White	S 15° 12' 34,01" W 064° 43' 37,1"	Blue-and-Yellow Macaw, laid three fertile eggs which failed to hatch. Later nest was occupied by Black-bellied Whistling Duck with 61 eggs.
RM	Rocky Mountain Society of Aviculture	S 15° 11' 43,1" W 064° 43' 22,8"	White-eyed Parakeet, laid three eggs, hatched two chicks, one survived and fledged successfully. Later Black-bellied Whistling Duck occupied the nest with 58 eggs.
RP4	Royal Parrot Conservatory	S 15° 11' 31,7" W 064° 43' 10,4"	Black-bellied Whistling Duck occupied the nest with 13 eggs which were predated.
SB	South Bay Bird Society	S 15° 11' 25,3" W 064° 43' 11,2"	Blue-and-Yellow Macaw, laid three eggs, hatched three chicks which fledged successfully.
CZ	Cincinnati Zoo & Botanical Garden	S 15° 16' 06,3" W 064° 46' 02,2"	Black-bellied Whistling Duck, occupied the nest with 26 eggs and Moscovy Duck, occupied the nest with 12 eggs.
ED	Eva Dicker	S 15° 12' 50,9" W 064° 40' 43,9"	White-eyed Parakeet, laid three eggs, hatched two chicks which fledged successfully.

ASC	Arizona Seed Crackers Society	S 15° 12' 48,4" W 064° 40' 41,9"	The nest was frequented by Blue-throated Macaw but they did not reproduce.
JR	Jean and Roy Rub	S 15° 12' 48,2" W 064° 40' 41,8"	The nest was frequented by Blue-throated Macaw but they did not reproduce.
CC	Compassion for Critters Club at Pasco-Hernando Community College	S 15° 13' 00,9" W 064° 40' 18,2"	Blue-throated Macaw, laid three eggs and hatched three chicks. They were stolen by local people.
LJ	Lisa Johnson	S 15° 13' 02,3" W 064° 40' 19,9"	White-eyed Parakeet, laid three eggs which were predated. Later, Black-bellied Whistling Duck, occupied nest with 48 eggs
RP5	Royal Parrot Conservatory	S 15° 13' 26,9" W 064° 40' 40,6"	White-eyed Parakeet, laid five eggs. Later, Black-bellied Whistling Duck, occupied nest with 13 eggs
PU	Parrot University	S 15° 11' 24,8" W 064° 43' 10,4"	White-eyed Parakeet, laid three eggs, hatched two chicks which fledged successfully.
BB	Beamer Blues	S 15° 18' 15,6" W 064° 38' 08,5"	Blue-and-Yellow Macaw, laid five eggs, hatched three chicks. One died and two fledged successfully.
TBS	The Beak Squad	S 15° 16' 30,8" W 064° 46' 00,7"	Blue-and-Yellow Macaw, laid three eggs, hatched two chicks. One died and the other fledged successfully.
BM	Mark Moore, Texas	S 15° 14' 54,5" W 064° 42' 09,2"	White-eyed Parakeet, laid three eggs which were predated. Later, Black-bellied Whistling Duck, occupied the nest with two eggs.
RP1	Royal Parrot Conservatory	S 15° 15' 32,8" W 064° 45' 28,9"	Black-bellied Whistling Duck, occupied the nest with 47 eggs.
JG	Jim and Ginger Payant	S 15° 15' 31,6" W 064° 45' 26,1"	Black-bellied Whistling Duck, occupied the nest with 18 eggs.
RP2	Royal Parrot Conservatory	S 15° 15' 02,3" W 064° 45' 05,7"	No activity
RG	Rigoletto Kayla Grasso	S 15° 15' 32,7" W 064° 45' 29,6"	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"	Moscovy Duck, occupied the nest with 19 eggs. After the ducklings hatched,

			Black-bellied Whistling Duck occupied the nest with 57 eggs.
GW	(In Memory of) George Waltemyer	S 15° 11' 56,7" W 064° 43' 41,0"	Blue-throated Macaw, laid three eggs, hatched three chicks which fledged successfully.

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, Berlin, La Asunta and La Cantina.

Of the 36 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*), Moscovy Duck (*Cairina moschata*) and Chestnut-fronted Macaw (*Ara severa*) etc. (table 2). Some nest boxes were occupied by three species of birds.

**Table 2. Number of artificial nests occupied by different bird species 2010-2011**

Species	Common name	Number of nest boxes occupied
<i>Ara ararauna</i>	Blue-and-Yellow Macaw	18
<i>Dendrocygna autumnalis</i>	Black-bellied-Whistling Duck	10
<i>Aratinga leucophthalmus</i>	White-eyed Parakeet	6
<i>Ara glaucogularis</i>	Blue-throated Macaw	5
<i>Cairina moschata</i>	Moscovy Duck	2
<i>Ara severa</i>	Chestnut-fronted Macaw	1

Although five nests were occupied by Blue-throated Macaws, only three produced offspring. They were nest box **GW** in Memory of **George Waltemyer**, nest box **PC** adopted by **PEAC-Cleveland**, and nest box **CC** sponsored by **Compassion for Critters Club at Pasco-Hernando Community College**.

A total of eight chicks hatched. Unfortunately, three were poached by local people and one was predated by a Great Horned Owl, resulting in four chicks that fledged

successfully. A feather sample was collected from each one in order to determine gender. Steel leg bands were applied with ID numbers 27, 28, 29 and 31.

We deeply thank Bird Endowment for the great willingness to assist in the conservation of this threatened species. Their unconditional support has helped to better understand the reproductive biology of the Blue-throated Macaw and to promote conservation among the local people through the production of educational materials and being present in all the events we do as a program.

### **Activities for 2011 - 2012**

We will continue to monitor the artificial nests in the southern area of distribution. We are going to make adjustments around the nest holes in order that Blue-throated Macaws can enter but Blue-and-yellow Macaws will not be able to fit through the openings. We also want to better understand the reproduction of the species in the western part of the distribution, poorly known to date.

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