



Laney Rickman Reserve

Blue-throated Macaw Nestbox Report – July 2025



The 2025 breeding season marked our second consecutive record-breaking year with 19 Bluethroated Macaw chicks successfully fledged from 12 breeding attempts and 32 eggs across the 128 nest boxes we have installed. This brings the total number of fledglings since the program began in 2005 to an extraordinary 164. A true conservation milestone: nearly one in four wild Blue-throated Macaws today hatched in an Armonía nestbox.

We continue learning from these remarkable birds. Did you know that macaw parents chew an oval exit hole so their chicks can fledge? One forgetful pair skipped this step—until our expert César stepped in and carved the way to freedom.

While interspecies conflicts declined this year, fierce battles between Blue-throated Macaw pairs underscored just how valuable these nestboxes have become. Camera traps captured these encounters and offered vital insights into breeding behavior and threats—reminding us that this program remains one of the most effective tools for saving this critically endangered species. Join the "Friends of Laney Rickman Reserve" and help us reach 200 fledged chicks!

Laney Rickman Reserve 2024-2025 conservation program was supported by:











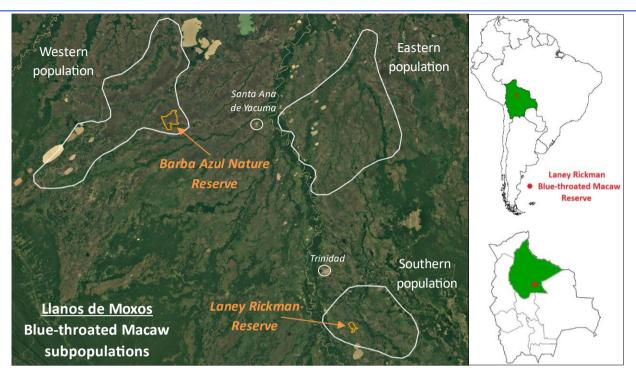




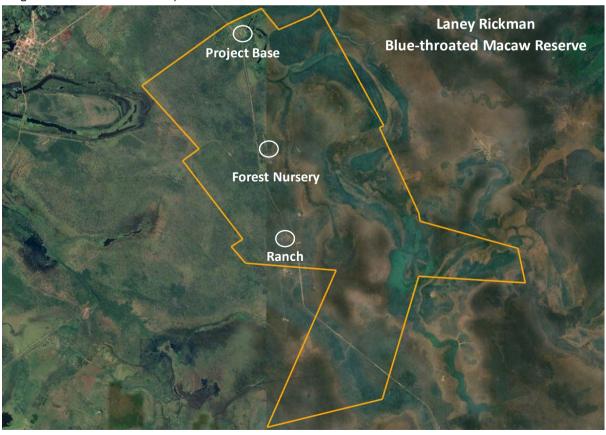




Laney Rickman Blue-throated Macaw Reserve



Figures 1 & 2. The Laney Rickman Blue-throated Macaw Reserve (2,421 ha/5,982 acre) was established in 2018 and is located in the Southern Llanos de Moxos ecoregion, 42 kilometers south of Trinidad and 213 kilometers south of the Barba Azul Nature Reserve (12,200 ha/30,147 acre, established in 2008). Armonía protects vital Blue-throated Macaw habitat in two isolated subpopulations (estimated Blue-throated Macaw subpopulation range indicated in white circles).





Laney Rickman Reserve Program Goals

To ensure the continuing development and improvement of the Blue-throated Macaw Nestbox Program and the Laney Rickman Reserve for the upcoming 2026 season, we will focus our efforts on the following activities:

1. Strengthen the Nestbox Program.

- Continue weekly monitoring of nestboxes and chick development throughout the breeding season
- Deploy camera traps to document nestbox use and nesting behavior
- Publish a paper showcasing the success of Armonía's nestbox program

2. Reduce wildfire risks.

- Maintain and expand impenetrable firebreaks.
- Launch a campaign to acquire a fire management tractor
- Ensure rapid response to fire threats around the reserve.

3. Restore native habitat for the Blue-throated Macaw.

- Complete construction of the Laney Rickman Forest Nursery
- Produce 5,000 native trees and palms preferred by Blue-throated Macaws
- Identify and establish browser-free habitat restoration plots

4. Expand conservation education

- Finalize interior design of the visitor and education center
- Install solar panels to power completed infrastructure
- Invite the first local school to visit the Laney Rickman Education Center
- Engage local schools and teachers in the Beni region to incorporate Bluethroated Macaw conservation into their curricula

5. Expand conservation impact

- Map priority areas for reserve expansion
- Lead the 2025 global Blue-throated Macaw population census to assess conservation progress

6. Sustainable ranching

Sustainably manage tallgrass palm savanna through ecofriendly ranching







Monitoring the growth and development of Blue-throated Macaw chicks over time. César Flores



Laney Rickman Reserve Nestbox Program (2025 breeding season)

Results of the 2025 Breeding Season

With 19 Blue-throated Macaw chicks successfully fledged during the 2025 breeding season, we've reached yet another major milestone. The near-annual record-breaking numbers continue to demonstrate the long-term success of this conservation strategy. Thanks to the continued support of our Nido Adoptivo program in partnership with Bird Endowment*, we once again installed and monitored 128 nest boxes across the reserve. Of these, 11 were occupied, including two used for the first time, showing expansion into new areas.

Record-breaking productivity in 2025:

- 32 eggs laid across 12 breeding attempts
- 24 chicks hatched (75% hatch rate)
- 19 chicks fledged—surpassing 2024's record of 17 and nearing our 20-chick annual goal

Conservation impact:

Since the start in 2005, 164 chicks have fledged from Armonía's nestboxes. Today, an estimated 25% of the global Blue-throated Macaw population originated from these efforts.

New insights:

Interspecies competition decreased, but territorial disputes between Blue-throated Macaw pairs intensified, signaling increased breeding pressure. One pair stopped feeding their two already large chicks to fight a rival pair, forcing us to intervene. While we try to avoid handfeeding, it ensured their survival. Remarkably, the chicks developed on the same timeline as parent-fed birds and were readily accepted by their parents after fledging.

Here's something you might not know: Blue-throated Macaw parents instinctively carve an oval-shaped exit hole in the nest box to help chicks fledge. One forgetful pair skipped this step—until our expert ranger César carved the exit himself, allowing the chick to fledge the very next day.

*To Sponsor a Nido Adoptivo Nestbox, please visit: www.BirdEndowment.org





Table 1. Summary of nestboxes used by the Blue-throated Macaw during the 2025 breeding season. A total of 11 nest boxes were occupied, 32 eggs laid, 24 chicks hatched, and 19 chicks fledged. For more detailed information see annex 1 & 2.

Nido Adoptivo Sponsor	Code	Eggs	Chicks	Fledglings
Debbie Schweikardt /Arizona Bird Store	ABS	3	2	1
Alicia McLaughlin, in honor of Tango	AM	3	2	2
Bill Christian	ВС	4	4	3
Jennifer Perez and Winsly Pierre	JW	2	2	2
Kansas City Zoo and Aquarium	KCZ 2	3	2	2
Kansas City Zoo and Aquarium	KCZ 3	3	2	2
Kansas City Zoo and Aquarium	KCZ 8	2	1	1
Matt Honig /American Bird Bands, in memory of Brian Livesay	MH1	3	2	2
Paul Tremblay, in honor of Midge Gorman	PJT	3	3	1
Wendy Froistad	WF	3	3	2
Lena and William Proebsting	WP	3	1	1
Total		32	24	19





New Challenges - Territorial Disputes

The 2025 season revealed unexpected behavioral observations among our Blue-throated Macaw pairs within the Laney Rickman Reserve. While interspecies competition has significantly declined (with only 2 nest boxes occupied by other species), we observed intense intraspecific territorial behavior concentrated near the Laney Rickman base.

- Intensified same-species competition: Multiple pairs aggressively defended specific nestboxes throughout the breeding season and continuing their vigilance as late as June an unusual behavioral pattern we are documenting for the first time.
- One severe case of harassment: A breeding pair stopped feeding their nearly fledged chicks due to persistent harassment from another pair (who showed no interest in claiming the vacated nest). The parents did not completely abandon the nest as they were found perched nearby, though they had stopped feeding.
- Successful intervention: Our team implemented emergency hand-feeding protocols, ensuring the survival and successful fledging of both chicks (BO-19-2025 and BO-20-2025). Fortunately, both were adopted by their biological parents after fledging.

The reason behind this territorial dispute remains unclear. While our nestbox designs appear to deter competing species effectively, we're now studying whether specific box locations trigger territoriality, or if there are some potential social hierarchy factors and, maybe, it is worth studying the implications of prolonged nest-site attachment

The occupancy trend between Blue-throated Macaws and Blue-and-Yellow Macaws remains consistent, with the latter continuing to show significantly lower rates. As a result, Blue-and-Yellow Macaws are no longer the primary competitors for nesting sites, providing more nesting opportunities for the Blue-throated Macaws (Fig. 1).

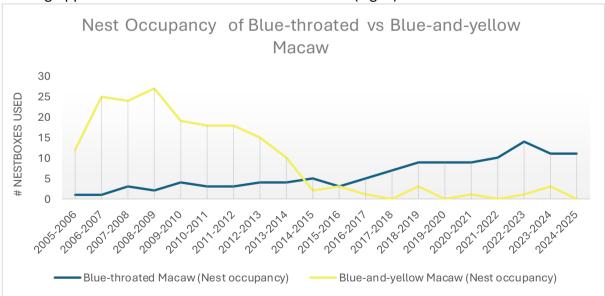


Figure 1. Nestbox occupancy rate of Blue-throated Macaw vs Blue-and-yellow Macaw presented over the 20 years of Armonía's nestbox program. Changes in entrance size between 2013 and 2015 favorably impacted the competition between these large macaws.



Long-term Results of the Armonía Nestbox Program

Over two decades of dedicated conservation, the Blue-throated Macaw nestbox program has transformed our understanding of this Critically Endangered species. From the humble beginnings in 2005 with just a single active nest, the program flourished, fledging 164 macaws and peaking in the 2022-2023 season with 46 eggs laid across 14 nests. While that record egg production saw significant losses (56% egg mortality), our most recent 2024-2025 season achieved a historic counterpoint: fewer eggs (32) but unprecedented fledging success (19 chicks). The data reveals a remarkable ecological shift—once-dominant Blue-and-yellow Macaw competitors have nearly disappeared from the boxes (down from 25 occupied nests in 2008-2009 to zero in 2024-2025), also, chick mortality rates have been halved since their 2017-2018 peak.

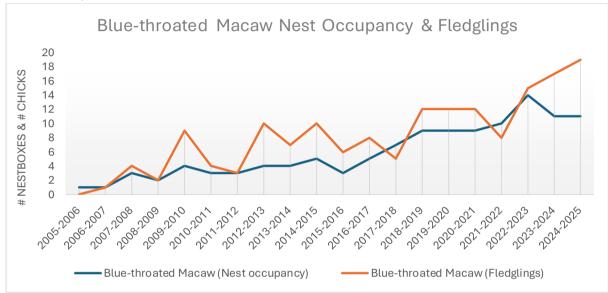


Figure 2. Blue-throated Macaw nest occupancy vs. number of fledglings presented over the 20 years of Armonía's nestbox program. The cumulative number of successful Blue-throated Macaw fledglings from Armonía's Nestbox Program reached 164 during the 2025 breeding season.





Camera Trap Insights

Our 2025 camera trap footage continues to prove essential in understanding the behavior and breeding ecology of the Blue-throated Macaw. Out of our collection of high-quality recordings captured across the Laney Rickman Reserve and La Cantina ranch, more than a third documented territorial disputes, including intense confrontations between different Blue-throated Macaw pairs.

In several cases, two pairs fought simultaneously over a single nest cavity, sometimes while a chick remained visible at the entrance. These sequences offer a vivid demonstration of the species' strong nest fidelity and fierce defense of offspring.

Interspecies interactions were also recorded, with visits from Black-bellied Whistling Ducks (*Dendrocygna autumnalis*), White-eyed Parakeets (*Psittacara leucophthalmus*), and Blue-and-yellow Macaws (*Ara ararauna*). Although less frequent, these encounters highlight remaining competition for nesting cavities and the importance of strategic nestbox placement.

The camera traps continue to be an irreplaceable tool—not only to confirm reproductive success and occupancy, but to monitor social dynamics, detect conflicts, and inform timely management interventions in support of this critically endangered species.







Our Expanding Flock and Reserve Investments

The Laney Rickman Reserve continues to grow—both in infrastructure and team capacity. Two major constructions are nearing completion: a new staff house for park rangers and a multipurpose building to support coordination, logistics, and education. These investments reflect the expanding scope of the Blue-throated Macaw Conservation Program.

The flock itself is growing too. This year, we welcomed two new cowhands to strengthen our sustainable cattle management team, and a new program coordinator to lead the overall conservation strategy. With experience in project leadership, field-based conservation, and institutional partnerships, Huascar Morales brings a collaborative and structured approach to managing diverse teams and long-term goals.

With a full team now supporting nestbox protection, habitat restoration, sustainable ranching, and community engagement, we are better equipped than ever to face the challenges ahead.

For the very first time, the full Laney Rickman team gathered in June, an important moment to align, connect, and set shared goals for the season ahead.









Left: 3D model based on the original blueprint design. Right: multifunctional building at the Laney Rickman Reserve.

The two new buildings in the Laney Rickman Reserve represent more than just infrastructure—they serve as foundations for connection, learning, and long-term conservation. The staff house will enhance daily living conditions for rangers and field teams, while the multipurpose building is designed to host student groups for environmental education, training workshops on fire management, visiting researchers, and long-term collaborators.

Global Blue-throated Macaw Census Begins at Laney Rickman Reserve

The Laney Rickman Reserve will host the teams participating in the global Blue-throated Macaw population census in September 2025, organized by Armonía. These teams will attend a two-day training course at the site before setting out to survey the species across its entire range. This census comes ten years after the first-ever population assessment in 2015, which estimated fewer than 450 individuals in the wild. The 2025 census is crucial to evaluate population trends after a decade of conservation efforts for this endemic and Critically Endangered macaw.



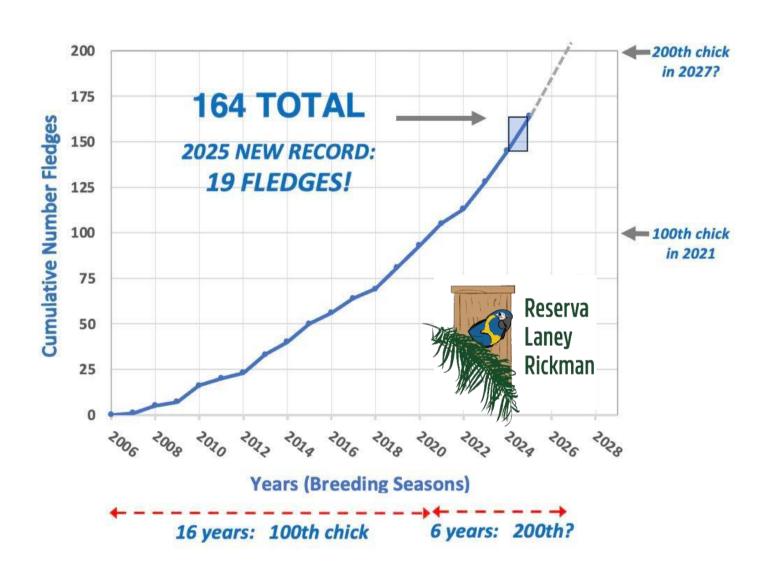


Heading Towards 200 Successfully Fledged Chicks

It took Armonía's Blue-throated Macaw nestbox program 16 years to successfully fledge its first 100 chicks. Since then, we've observed steady annual growth in the number of fledglings—and the results are remarkable. Banded Blue-throated Macaws are now returning to breed in nestboxes themselves, completing a full conservation circle.

Our annual fledging records clearly point to a hopeful future. At the current rate of success, we expect to reach 200 successfully fledged chicks by 2027—meaning the second 100 will have taken just six years instead of sixteen years. This dramatic acceleration demonstrates the long-term impact of a simple yet effective conservation strategy.

Help us build on this success. Adopt a nestbox and support the expansion of the Laney Rickman Blue-throated Macaw Reserve.







Annex 1: Summary of nestboxes occupancy

Table 2. 2024-2025 Breeding Season Summary for Blue-throated Macaws

- **Nest Code:** Unique permanent identifier for each nest box (consistent across seasons)
- **Sponsor Code:** Initials of the individual/organization funding each nest box for this breeding season
- Historic BTM Use: Total previous breeding seasons when Blue-throated Macaws occupied the nest

#	Nest code	Sponsor	Historic BTM use	Species	Tree species	# (egg, chicks, fledged)	Dates (first egg, chick and fledging)
1	PBA5	ABS	(2021-2022)	Blue-throated	Acrocomia	Eggs: 3	Eggs: FEB 11 2025
			(2022-2023)	Macaw	aculeata	Chicks: 2	Chick: MAR 10 2025
			(2024-2025)		(Totai palm)	Fledged: 1	Fledged: JUN 01 2025
2	PBA11	AM	(2018-2019)	Blue-throated	Acrocomia	Eggs: 3	Eggs: JAN 21 2025
			(2020-2021)	Macaw	aculeata	Chicks: 2	Chick: FEB 13 2025
			(2021-2022) (2024-2025)		(Totai palm)	Fledged: 2	Fledged: APR 29 2025
3	PBA15	ВС	(2024-2025)	Blue-throated	Acrocomia	Eggs: 4	Eggs: DEC 16 2024
				Macaw	aculeata	Chicks: 4	Chick: JAN 11 2025
					(Totai palm)	Fledged: 3	Fledged: APR 15 2025
4	PBA52	JW	(2010-2011)	Blue-throated	Acrocomia	Eggs: 2	Eggs: JAN 31 2025
			(2022-2023)	Macaw	aculeata	Chicks: 2	Chick: FEB 21 2025
			(2024-2025)		(Totai palm)	Fledged: 2	Fledged: MAY 16 2025
5 I	PBA55	KCZ 2	(2018-2019)	Blue-throated	Acrocomia	Eggs: 3	Eggs: DEC 17 2024
			(2024-2025)	Macaw	aculeata	Chicks: 2	Chick: JAN 13 2025
					(Totai palm)	Fledged: 2	Fledged: MAR 31 2025
6	PBA81	KCZ 3	(2019-2020)	Blue-throated	Acrocomia	Eggs: 3	Eggs: DEC 17 2024
			(2020-2021)	Macaw	aculeata	Chicks: 2	Chick: JAN 07 2025
			(2021-2022)		(Totai palm)	Fledged: 2	Fledged: APR 14 2025
			(2022-2023)				
			(2024-2025)				
7	PBA86	KCZ 8	(2022-2023)	Blue-throated	Acrocomia aculeata	Eggs: 2	Eggs: DEC 17 2024
			(2024-2025)	Macaw	(Totai palm)	Chicks: 1	Chick: JAN 12 2025
					(lotal pallil)	Fledged: 1	Fledged: APR 10 2025
8	PBA108	MH1	(2024-2025)	Blue-throated	Acrocomia	Eggs: 3	Eggs: DEC 19 2024
				Macaw	aculeata	Chicks: 2	Chick: JAN 12 2025
					(Totai palm)	Fledged: 2	Fledged: APR 01 2025
9	PBA121	PJT	(2022-2023)	Blue-throated	Acrocomia	Eggs: 3	Eggs: JAN 21 2025
			(2024-2025)	Macaw	aculeata	Chicks: 3	Chick: JAN 27 2025
					(Totai palm)	Fledged: 1	Fledged: APR 25 2025
10	PBA152	WF	(2022-2023)	Blue-throated	Acrocomia	Eggs: 3	Eggs: DEC 06 2024
			(2024-2025)	Macaw	aculeata	Chicks: 3	Chick: JAN 04 2025
					(Totai palm)	Fledged: 2	Fledged: APR 27 2025
11	PBA153	WP	(2022-2023)	Blue-throated	Acrocomia	Eggs: 3	Eggs: NOV 30 2024
			(2024-2025)	Macaw	aculeata	Chicks: 1	Chick: DEC 25 2024
					(Totai palm)	Fledged: 1	Fledged: MAR 16 2025



This season, 11 of 128 monitored nest boxes in the Laney Rickman Reserve and La Cantina ranch were occupied by Blue-throated Macaws, all in *Acrocomia aculeata* palms (Totai).

Key Outcomes:

- 32 eggs laid, with 24 chicks hatched (75% hatch rate) and 19 fledglings (79% fledging success).
- Losses included **3 nestling deaths** (natural causes), **2 predated chicks** (probably Barn Owl), and **11 unviable eggs**.

Notable Observations:

- **PBA15** was the most productive nest (4 eggs \rightarrow 3 fledglings).
- PBA121 achieved full hatching (3/3 eggs) despite losing two chicks pre-fledging.
- Six nests saw 100% survival from hatch to fledging.
- **PBA81** demonstrated remarkable site fidelity, used in five seasons since 2019.



Annex 2: Description of nestboxes used by Blue-throated Macaws

Sponsor (code): Debbie Schweikardt /Arizona Bird Store (ABS)

Nest code: PBA 005

Location: Laney Rickman Blue-throated Macaw Reserve

Out of three eggs, only 1 developed until fledging. Eggs were laid between February 11 and 19. Two chicks hatched but only one of them grew strong enough. The chick was banded with number BO 36 2025. This individual fledged on June 1st and was the last chick to fledge during the 2025 season.



February 11



February 19



March 10



March 13



March 03



April 08



Sponsor code: Alicia McLaughlin, in honor of Tango (AM)

Nest code: PBA 11

Location: Laney Rickman Blue-throated Macaw Reserve

After two seasons with no activity, this nest was used again and turned out to be successful. A total of three eggs were laid. Two chicks developed successfully until fledging. Chicks were banded with codes BO 34 2025, BO 35 2025. These individuals fledged around April 29.



January 21



February 02



February 17



February 26



March 13



April 08



Sponsor code: Bill Christian (BC)

Nest code: PBA 15

Location: Laney Rickman Blue-throated Macaw Reserve

This nest was used for the first time this breeding season and in a remarkable way. The first egg was found right before the end of 2024 on December 16. A total of four eggs were laid until January 7. Four chicks hatched (first time ever) though by January 28, three healthy chicks were left. Chicks were banded with numbers BO 26 2025, BO 27 2025, and BO 30 2025. They fledged around the 15th of April.



December 16



January 07



January 13



January 31



February 13



March 29



Sponsor code: Jennifer Perez and Winsly Pierre (JW)

Nest code: PBA 52

Location: La Cantina Ranch

Out of two eggs, both chicks successfully hatched and developed until fledging. Eggs were laid by January 31, hatched by February 21. The first chick was banded with number BO 32 2025, the second with number BO 33 2025. These individuals fledged on the 16^{th} of May.



January 31

February 21







March 18



April 02



Sponsor code: Kansas City Zoo and Aquarium (KCZ 2)

Nest code: PBA 55

Location: La Cantina ranch

Successful nest with two chicks fledging after March 21. Three eggs were laid by December 17. Two chicks hatched and developed normally. Band numbers BO 17 2025 and BO 21 2025 were used, park rangers confirm these two are in the podium for most noisy macaws.



December 17



January 13



February 05



February 10



March 04



March 25



Sponsor code: Kansas City Zoo and Aquarium (KZC 3)

Nest code: PBA 81

Location: Laney Rickman Blue-throated Macaw Reserve

For the fifth year in a row, macaws' favorite nest has brought us three eggs, two chicks, both were able to fledge. By December 17 three eggs were laid, first two chicks hatched between January 7 and 12 and grew strong and curious. Chicks were banded with BO 18 2025 and BO 23 2025. They fledged April 14th.



December 17



January 01



January 14



February 01



February 14



March 31



Sponsor code: Kansas City Zoo and Aquarium (KZC 8)

Nest code: PBA 86

Location: Laney Rickman Blue-throated Macaw Reserve

This nest box's second use brought cautious hope. Two eggs found on December 17, 2024, though only one chick (BO 22 2025) emerged on January 12. Little warrior defied the odds and took flight on April 10, 2025.



December 17



January 12



February 01



February 14



March 27



March 31



Sponsor code: Matt Honig / American Bird Bands, in memory of Brian Livesay (MH1)

Nest code: PBA 108

Location: Laney Rickman Blue-throated Macaw Reserve

Another first for the Laney Rickman Reserve. A pair of Blue-throated Macaws nested here, producing three eggs and fledging two chicks. When macaws explore, use, and adapt to new nest boxes, it provides a valuable opportunity to learn more about their behavior in selecting breeding sites. Eggs were found December 19, chicks hatched by January 12 and by April 1 both had fledged. Band numbers used were BO 24 2025 and BO 25 2025.



January 01



January 12



January 19



February 08



February 25



March 04



Sponsor code: Paul Tremblay, in honor of Midge Gorman (PJT)

Nest code: PBA 121

Location: Laney Rickman Blue-throated Macaw Reserve

Three eggs were laid on January 21, hatching into three chicks by February 11. By March 22, only one chick remained in the nest. The other two (bands 28, 31) were found dead the next day, likely killed by a Barn Owl. The surviving chick (band BO 31 2025) fledged successfully on April 25. A reminder of the threats these macaws face even in protected nests.



January 21



January 27



February 17



March 08



March 23



April 04



Sponsor code: Wendy Froistad (WF)

Nest code: PBA 152

Location: Laney Rickman Blue-throated Macaw Reserve

Three eggs were found in this nest on December 6, 2024, with two chicks hatching by January 4. The nest faced unusual challenges when another pair of Blue-throated Macaws began harassing the parents, who eventually abandoned feeding them after several days. In this exceptional case, our team provided supplemental care to ensure the chicks' survival. Both fledged successfully on April 27 as BO 19 2025 and BO 20 2025.



December 12



January 04



January 28



February 05



March 01



March 21



Sponsor code: Lena and William Proebsting (WP)

Nest code: PBA 153

Location: Laney Rickman Blue-throated Macaw Reserve

Three eggs were found in this nest on November 30, 2024, though only one chick hatched by December 25. The attentive parents provided care, but their inexperience led them to overlook preparing the nest entrance, preventing the chick from being able to fledge. When the well-fed chick struggled to fledge by March 16, 2025, we carefully widened the entrance. BO 16 2025 emerged successfully.



December 12



January 04



February 11



February 19



January 23



March 08