

The Bladen Passage from Belize, Central America

Volume 1 Issue 3 December 2010



HARPY Holidays from BFREE!



A Holiday Newsletter From Belize Foundation for Research and Environmental Education

Inside this Issue:

Letter from the Director	1
Turtle Conservation	3
Avian Conservation	4 - 6
Gratitude	7
In Memory	7

Letter from the Director

What an incredible year 2010 has been for BFREE! Thanks to the hard work of our incredible staff and the support of so many of our members and partners, this past year has been one of the most productive and successful periods in our 15 year history. Every year that goes by BFREE continues to grow, from improvements to our infrastructure at the field station, to expanding our scientific programs and environmental education outreach efforts. This year has also proved to be a year of growth with new partnerships and programs, promising that 2011 will be a year of exiting new opportunities. After 15 years of growing BFREE from a dream shared by Kelly and myself, I feel like we are still just getting started! I want to share some of the accomplishments of 2010 with you, of which there have been many. I must begin with the discovery of the **first Harpy Eagle nest ever found in Belize**, documented just a few weeks ago by the BFREE avian research team (see article on page 4, also see article on E. News Network website, www.enn.com/press_releases/3604). The adults and a **5 week old chick** represent a reproductive population of this rare and charismatic raptor, over 700 miles north of their known range. Congratulations to William, Liberato, and Alejandro for this magnificent discovery! Some of the additional highlights of 2010 include: our first 10-day Belize Family Camp attended by 6 families from across the USA; the completion of the Science Lab at BFREE co-funded by Lincoln Memorial University under the direction of Dr. Ron Caldwell; a three month internship for BFREE staff member William Garcia, our chief avian technician, at Copperhead Consulting in Paint Lick, Kentucky supported by Mark Gumbert; running our first Belize Birding Tour with Avian Pursuits under the direction of our fearless leader, Judy Dourson, Director of Programs at BFREE; successful completion of the fourth year of our research program entitled, "An Integrated Community-based Harpy Eagle and Avian Conservation Program for the Maya Mountains" under the direction of Dr. Jamie Rotenberg from the University of North Carolina at Wilmington; running numerous educational programs with Colleges and Universities, both from Belize and abroad, including some new educational partnerships including: Lincoln Memorial University from Tennessee, Independence Junior College from Belize, Lakeland College from Wisconsin, Lees-McRae College from North Carolina, St. Mary's College from Maryland, and the University of Cumberlands from Kentucky.

The New Science Lab at BFREE



The completion and distribution of the first book ever written about the Bladen Nature Reserve (BNR), “The Natural History of the Bladen Nature Reserve and its Gastropods” written by Dan Dourson, BFREE’s resident biologist; co-hosting the first international conservation forum and workshop for the critically endangered fresh water turtle, *Dermatemys Mawii*, locally known in Belize as the Hicatee (see article on page 6) in partnership with The Turtle Survival Alliance, The University of Belize/Environmental Research Institute, and the Belize Fisheries Department; facilitating an expedition into BNR to catalogue and document the unknown bat species found in the reserve in

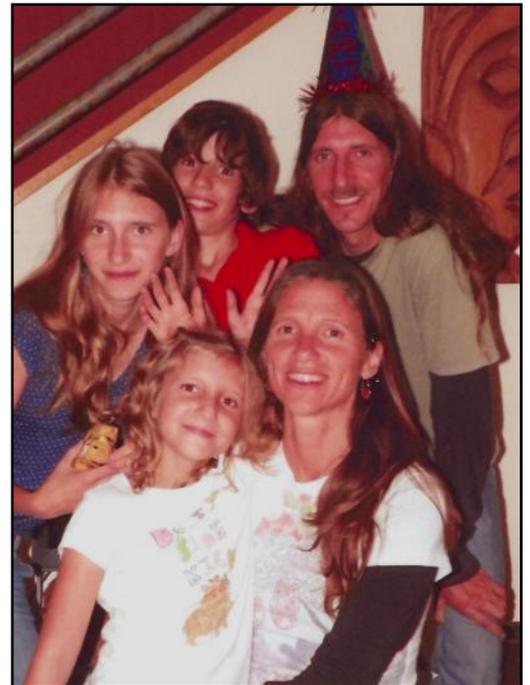
partnership with Copperhead Consulting; hosting new bird researchers at BFREE - Emily McKinnon and Ross Kresnik, Ph.D candidate and masters student respectively from York University in Canada under the direction of Dr. Bridget Stutchbury; hosting hundreds of school children from communities located near BFREE during our annual environmental education field trip program run by our excellent staff members, Oscar Hernandez, William Garcia, Alejandro Cholum, Liberato Pop, Sipriano Canti, Saturnino Teul, Judy and Dan Dourson with special thanks to volunteers Catie and Scott Mueller and the students and faculty from the University of Cumberlands; and the production of our first ever BFREE calendar for the year 2011 (available for sale or gratis to our members), created by Catie Mueller from Vermont Commons High School as part of her 3 week internship at BFREE; the renovation of the BFREE kitchen and dining room, progress on our workshop and tool room, and numerous other improvements to our facilities by master carpenter and artisan Marcelino Pop, long time BFREE staff member.

This last year was full of accomplishments, but it was also our most challenging period financially. Some of BFREE’s regular supporters were not able to fund our efforts due to the difficult financial climate we have all felt over the past two years, and we found that some Universities and Colleges had to cancel their scheduled field courses with us due to a lack of enrollment caused by shrinking budgets. This coming year looks to be equally challenging for BFREE. For those of you that have been financially supporting our efforts, our sincerest gratitude and hope that you will continue to do so. For those of you that believe in our efforts but have never given a donation to BFREE, I am reaching out to you now to do so. Whether you give a small gift of \$10 or \$25, become a member, or wish to give a larger contribution, we could really use your help now. As a 501(c)3 non profit, all of your gifts are tax-deductible, and you will receive a letter of acknowledgement for your tax records, as well as a certificate and a 2011 BFREE calendar. We rely on the financial support from people like you to continue our mission to help save one of the last unspoiled rainforests left on earth. Please join us in this worthwhile effort. You can help make a real difference.

To all, have a peaceful and prosperous new year, and of course

HARPY Holidays!

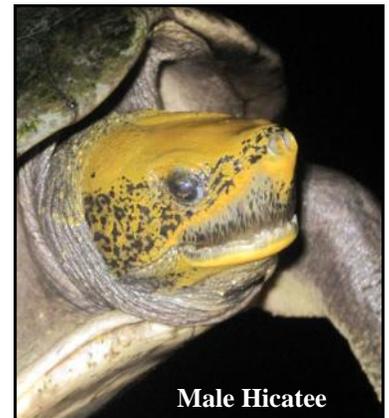
Jacob Marlin and family



Hyla’s 9th Birthday, Nov 16, 2010

BFREE Co-Hosts First Ever Hicatee Conservation Forum and Workshop in Belize

On Dec. 7th, 2010, BFREE facilitated the first Hicatee Conservation Forum and Workshop at the University of Belize. The event was held in partnership with The Turtle Survival Alliance (TSA), in collaboration with the Environmental Research Institute (ERI), the University of Belize, and the Belize Fisheries Department. The purpose of the workshop was to bring together members of the scientific community, government officials, NGO's and civil society to share information regarding the critically endangered Hicatee turtle (*Dermatemys mawii*), a freshwater turtle that lives in the rivers and lagoons of many parts of Belize, as well as parts of Mexico and Guatemala. Presentations were delivered during the morning session which focused on the legal framework and status of Hicatee in Belize, as well as research being done in both Belize and Guatemala. The President of the Turtle Survival Alliance, Mr. Rick Hudson, an old friend and colleague of Jacob Marlin, shared information about the work that his organization does to preserve critically endangered species of turtles from all over the world. TSA currently has programs in 15 countries where they assist local governments, NGO's and civil society to develop and maintain integrated approaches to turtle conservation. A roundtable discussion took place in the afternoon where stakeholders discussed actions and measures that could be taken to reverse the downward spiraling trend towards extinction. The primary outcome of the workshop was the formation of the National Hicatee Conservation and Monitoring Network (NHCMN) to provide a framework for future sharing of information and the development of conservation actions focusing in the three following areas: science, education and outreach, and legislation and enforcement. BFREE is delighted to be a part of this important conservation effort and will be working closely with TSA and the NHCMN into the future.



BFREE Staff Member Tom Pop Participates as Research Assistant in First Country-Wide Survey of Hicatee Turtles Since the 1980's.

In April-May of this year, a country-wide survey of Hicatee was conducted by TSA consultant Dr. Thomas Rainwater, with assistance by long-time BFREE staff member, Thomas Pop (see pictures to right and at bottom). Results of the survey (which were presented at the Hicatee Forum by Dr. Rainwater) indicate that the population of Hicatee in Belize is clearly headed towards extinction unless conservation measures are put in place. Local population extinctions have already been documented, and current harvesting rates have been determined to be unsustainable. Plans are underway to conduct a research project at BFREE, in partnership with TSA, to study the breeding and nesting ecology and requirements necessary for the rearing of Hicatee. This is a component to an overall conservation strategy which would include head-starting hatchlings with eventual release into the wild to restock populations that have been exploited due to over-harvesting for consumption.



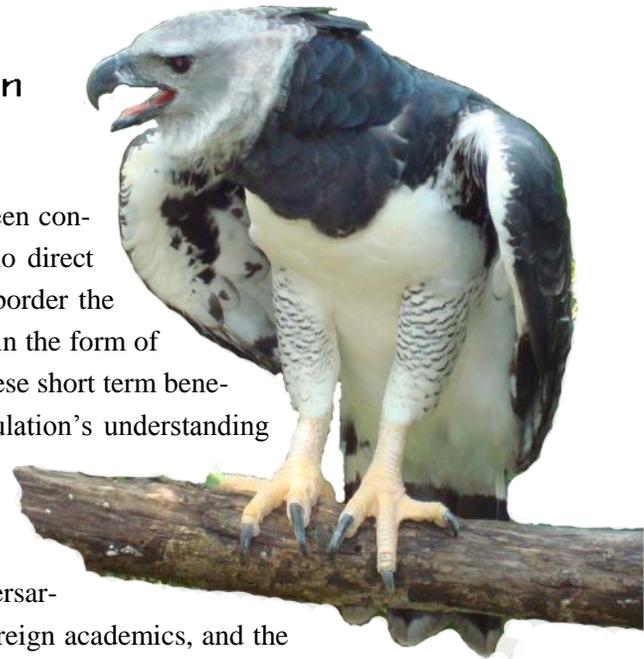
Pictures: (a) Tom measures a Hicatee turtle (b) Catch of the day "No, not for eating" (c) Tom setting nets



BFREE's Avian Monitoring and Conservation Program in the Maya Mountains of Belize

Historically, research and monitoring of flora and fauna in Belize have been conducted primarily by foreign scientists. These studies have had little to no direct benefits for local village members in the buffer zone communities that border the protected parks and reserves of Belize. The benefits to locals have been in the form of temporary jobs like porters to carry gear and supplies as well as cooks. These short term benefits, although helpful, have had little long term impact on the local population's understanding and appreciation of the protected areas themselves, and have not created a society of advocates and supporters of conservation efforts.

This disconnect between hard science and local communities created adversarial conditions in the past, with locals perceiving science as a benefit to foreign academics, and the protected areas themselves as partially set aside for use by educated non-Belizeans who do not contribute on a measurable scale to the economic development of the local economies. This is particularly true in protected areas such as the Bladen Nature Reserve, where its strict category of protection, prevents even tourism as a means of alternative livelihoods for locals such as tour guiding and providing other services.



Juvenile Harpy spotted in 2005
Photo credit: Steven Brewer

The discovery of a juvenile harpy eagle in Bladen (below left picture) in late 2005, by Jacob and Sofia Marlin, Dr. Jamie Rotenberg, Dr. Steven Brewer, Sam Meacham, and a team of BFREE scientists, provided the ideal flagship species for the development of a program that would indeed bring science, research, education, and alternative livelihoods to Belizeans. In 2006, BFREE in conjunction with Dr. James Rotenberg, Assistant Professor of Environmental Studies at University of North Carolina Wilmington, submitted a grant proposal to The Nature Conservancy Belize Program, proposing an innovative integrated science-based program with a focus on Avian Conservation and Awareness. The goal of the grant was to provide that important linkage between science, education, environmental awareness and most importantly long term direct economic benefits for local Belizeans living close to the protected areas. The project, An Integrated Community-Based Harpy Eagle and Avian Conservation Program, was funded in 2006 and BFREE's Avian Project was born.

BFREE decided to seek local participants for the project from the communities that were located closest to BFREE and BNR, particularly the villages of Trio, Bladen, Medina Bank, and Golden Stream. The selection process began in November of 2006 and by December of that year, a team of three avian technicians was in place and training had begun. Over the course of the past 4 years, a total of 11 Belizeans from 7 local communities have worked in the program. Training for the fledgling team members was conducted at BFREE, as well as other locations in Belize and abroad including: Birds Without Borders located near the Belize Zoo, Programme for Belize located in northern Belize, and the United States. The first two years of the project also benefited from the participation of



Jamie Rotenberg teaching bird banding



BFREE's resident biologist, Dan Dourson, who served as the science coordinator in Belize. Dan accompanied the team on many expeditions and also provided training in wilderness first aid. Every year, Dr. Rotenberg comes to BFREE and provides much needed oversight and additional training to the staff, ensuring the program is on track and the science is of the highest standards possible. Each of the first three years, BFREE sponsored an experienced bird bander to come from the USA for months at a time and work with the team members to provide training and assistance, including Sharna Tolfree, Julie Remp, and Mer Mietzfeld. Each of these enthusiastic and talented young women has played an important role in the professional development of our team members. The team has had the honor of working with some of the top bird experts in the world including both Dr. Jim Saracco and the man who wrote what is considered the "bible" of bird identification, Dr. Peter Pyle, from the Institute of Bird Populations at Point Reyes Bird Observatory in California. While the emphasis of the project was documenting and banding both resident and neotropical migratory birds in the area, searches for Harpy Eagles became part of the protocol. In February of 2007, the team was rewarded with their first sighting of an adult Harpy eagle in the Maya Mountains. The excitement and enthusiasm over this new find was enhanced by the arrival of Angel Muela, a Harpy eagle expert from Panama working with the Peregrine Fund. Angel conducted a three-day seminar on the natural history of Harpy eagles and provided valuable information about these majestic birds.



Dr. Rotenberg showing staff how to determine fat content of birds.



Adult pair of Harpy Eagles in BNR
Photo credit: Sharna Tolfree, BFREE
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The presence of the Harpy Eagle in the Maya Mountains represents not only a significant extension of their current known range, but also is an excellent indicator of the unspoiled nature of BNR. They were thought to be locally extinct in Belize since 2000 and extirpated from Mexico and most of Central America north of Panama. Harpy Eagles, *Harpia harpyja*, are designated as "Near Threatened" by the International Union for the Conservation of Nature (IUCN) and are considered "Critically Endangered" in Belize. The Harpy Eagle as a top predator can only survive and thrive in areas that support a healthy biodiversity of numerous organisms, each playing a role in the life history of such a large raptor. Harpy Eagles are known as the most powerful eagle in the Americas, hunting prey as large as monkeys and sloths for food. With a 7-foot wingspan and individual birds weighing up to 20 pounds, they are a formidable predator.

Each year of the project has been marked by new confirmed sightings of harpy eagles (a total of nine sightings up until now). It was during a Harpy Blitz conducted in 2008, involving numerous national and international agencies and scientists, that the first pair of eagles was sighted. We knew there must be a nest or nests in the area. Literally, it's been like looking for a needle in a haystack. Finally, just a few weeks ago, our team spotted another adult female and was able to track her to a nest which held an approximately five week old chick. Documentation of the nest is significant because it represents the first active Harpy Eagle nest ever recorded in Belize and is the most-northerly known Harpy Eagle nest in the Americas, according to H. Lee Jones, author of *The Birds of Belize*. Over 1100 km (~700 miles) separate these eagles from other wild populations.



Photo credit: William Garcia, BFREE
Copyright 2010, BFREE

While there is much excitement and buzz over this charismatic bird, other critical work done by the Avian Team continues. The team's schedule includes working an average of 20-22 days a month, monitoring four MoSI (Monitoreo de Sobrevivencia Invernal) sites that provide information on the over-winter survivorship of migratory birds in the tropics, two sites at BFREE and two in the Bladen Nature Reserve. Strict protocols are followed which include mist-netting, banding, point count surveys, and collecting and recording detailed scientific data. The data is shared as part of a regional migratory bird monitoring effort. In addition, the team has presented at several international conferences and regularly conducts demonstrations to visiting local and international students at BFREE.



Alejandro with spotting scope



**The 2010-2011 BFREE Avian Team:
William Garcia, Liberato Pop
and Alejandro Cholum**

The BFREE Avian Project has provided these young Belizeans the necessary training, education, and experience to become bona fide scientific technicians, working hand in hand with master and Ph.D students, and top ornithologists from around the world. William Garcia, with the project since its inception, is the present Avian Project Coordinator. He was distinguished by being selected for a 6-month ParkFlight International Internship at the Oregon Caves/Klamath Bird Observatory in Oregon in 2009. Here he successfully completed the North American Banding Council (Bander and Bander/Trainer) certification which is very difficult to achieve. William was recently sought out as a potential trainer for a regional North American Banding Council training in Costa Rica, a testimony to his skills. This month, William was selected as the Partners in Flight (PIF) National Coordinator in Belize, helping coordinate country wide bird conservation efforts. The credit goes to William for his hard work and dedication. Liberato Pop ('07- to present) from Bladen Village and Alejandro Cholum, (08-to present) from Trio, round out the 2010-2011 Avian Team. These outstanding young men have shown commitment, exceptional ability and perseverance working in the toughest conditions imaginable. In addition to the scientific aspects of the project, BFREE, in collaboration with Belize Zoo Harpy Eagle Reintroduction Program, began educational outreach efforts in 2007 that focused on teaching young people about birds and conservation and the important roles they play in the ecosystem. The bird team and other BFREE staff visit local schools and bring students to BFREE for a day of learning and fun. Since 2007, BFREE has hosted well over 700 Belizean students for educational activities.

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Liberato teaches students how to use a spotting scope



Students in Trio Village experience a life-size replica of a Harpy eagle during a day of educational activities.

Each year, the BFREE Avian Program refines its objectives and goals, and each year brings new and exciting opportunities. However, the recent economic downturn has provided its share of challenges. The organization that has provided the primary funding for the avian program was not able to support the team last year nor will they be able to provide funding for 2011. BFREE has received some small grants but in order to expand the project in light of the recent developments with the harpy eagle nest and broaden our educational outreach programs, more funds are needed. If you are interested in becoming part of this innovative and exciting program, or want to help in any way, please contact us for more information.

AN EXPRESSION OF GRATITUDE

BFREE would like to acknowledge and thank the following donors who supported us with contributions of \$100 or more during 2010. We would also like to thank those of you who gave smaller donations, because every dollar really makes a difference, no matter how small or large.

Disney Worldwide Conservation Fund, Biodiversity Research Institute, Jamie Rotenberg and Vibeke Olson, The Community Foundation - David and Jackie Marlin, Copperhead Consulting - Mark Gumbert, Lincoln Memorial University, Cumberland Mountain Research Station-Ron Caldwell, The Nature Conservancy - Belize Program, Institute for Bird Populations, William Dennler, Natural Encounters Conservation Fund, Optics for the Tropics, Gary and Alice Woody, Philip Garofalo, Heather Barrett, Brumberg Publications, Wayne Hall, Rob Crook, David Manser, Catie and Scott Mueller, and Elissa Graff.

We wish to make a special acknowledgement of thanks to **RAFFA P.C.**, based in Washington D.C. and their wonderful supportive staff for their valuable assistance to BFREE with in-kind financial management services. Also to **Tom Ankersen and Joanna Reilly-Brown and The Levin College of Law** at the University of Florida, for their professional and helpful legal assistance during the year. Also, thanks to **LightHawk** for partnering with BFREE for 17 years in a row providing in-kind flights for our conservation work. In addition, we would like to thank the **Belize Forest Department** for providing permits for our Avian program, and **Ya'axche Conservation Trust** for support and assisting the Avian program in BNR.

Interested in contributing to a specific project? The following menu of projects planned for 2011 need your support.

- Avian Project (\$10,000)
- 5 canoes (\$800 each)
- New thatch roof on dining room (\$3,500)
- 5 Private deluxe cabins (\$15,000 each)
- Trail system expansion (\$1,500)
- Solar upgrade (\$3,500)
- Recycling center (\$750)
- Road upgrade (\$5,000)
- Hot-water showers at bunkhouse (\$600)
- Composting toilets at bunkhouse (\$2,500)
- Industrial oven/stove for kitchen (\$2,500)

In Memory of Bruce Cullerton

Our good friend, Bruce Cullerton, passed away on October 25th of this year. Bruce played an important part in the development of BFREE. He was with us from the very beginning in 1993 and helped with projects ranging from fixing our vehicles, construction of both the 145' communications tower and the 112' Forest Fire Lookout Tower, and numerous



building projects, too many to name. If anything was broken at BFREE, Bruce would fix it. I remember spending many Christmas holidays with Bruce at BFREE over the years. His presence will be sorely missed. We wish his family and friends a peaceful holiday season. This edition of our newsletter is dedicated in his memory. Rest in peace Bruce, you will never be forgotten.

How YOU Can Help!

Join BFREE in its effort to promote conservation, research, unparalleled environmental education, and sustainable livelihood strengthening in Belize.

BECOME A MEMBER OF BFREE!

Membership includes subscription to newsletters, a 2011 calendar, and a 10% discount on items purchased from our upcoming BFREE Store!

Student \$40

Individual \$75

Institution \$200

CHARITABLE CONTRIBUTIONS

All contributions include a one-year membership and a 2011 BFREE Calendar!

Red-Eyed Tree Frog

\$100-\$249

Howler Monkey

\$250-449

Fruit-eating Bat

\$450-749

Scarlet Macaw

\$750-\$999

Jaguar

\$1000-\$2499

Harpy Eagle

\$2500+



BFREE is a registered 501c3 non-profit organization. All memberships and donations are fully tax deductible.

Contributions can be made payable by check to:

US for BFREE

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c/o Kristin Burnett

RAFFA

1899 L street N.W. Suite 600

Washington, DC 20036