The Tambopata Macaw Project 2010

A year of growth, success and surprises

Donald J. Brightsmith and the members of the Tambopata Macaw Project
Schubot Exotic Bird Health Center at Texas A&M University
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I am proud to say that the Schubot Center's Tambopata Macaw Project is thriving. From our base in southeastern Peru we have been expanding our geographic scope and learning more and more about the parrots and macaws that we hold so dear. In this brief report I will update you on what we have accomplished and let you know where we are headed. In addition, I would like to thank all of you who have supported us in so many ways over the past decade of parrot research and conservation.

Parrot Nutrition goes international

Under the leadership of graduate student Juan Cornejo, the Macaw Project's nutrition program has gone international . . . in a big way. Since 2005 we have been collecting samples from the crops of Scarlet Macaws in Peru. These analyses have given us some of the first information on the nutritional content of what parents feed their chicks. We have found incredibly low sodium, and this may be affecting the health of the chicks, as Texas A&M veterinarian and project collaborator Jill Heatley has found that our macaw chicks have stunningly low levels of sodium in the blood. What does this mean? We are not sure, but we are working hard to figure it out.

To really understand parrot nutrition in general, we knew we needed to go beyond the confines of Tambopata. In the past year our team and collaborators supported by the Morris Animal Foundation and others have collected samples of adult food plants and wild chick crop contents from Buffon's (Great Green) Macaws in Costa Rica, Lilac-crowned Amazons in Mexico, Thick-billed Parrots in Mexico and Cuban Amazons in the Bahamas. Our first samples from Costa Rica have arrived here in Texas and we are currently obtaining permits to import the samples from the remaining countries. We are anxiously looking forward to analyzing the crop contents of this diverse array of species. We have so many questions to answer. Do the two macaws have similar diets? Do the diets of the two Amazon parrots which both live in dry forests have the same nutrient concentrations? How do the wild parrot diets compare to the hand-feeding formulas which are currently on the market? Will our data suggest that there is one standard parrot diet, or should we be formulating different types of food for each different species? So many questions that we are just about ready to answer.

New work on illegal markets planned as Elizabeth Daut joins the team

In August of this year Elizabeth Daut, DVM began her PhD here in the Schubot Center. She plans to study the risks and threats of the wild bird trade in Latin America. Since 2006 I have been working with the Peruvian veterinarian Patricia Mendoza to study the diseases and numbers of birds in the wild bird trade in Peru. This research, now under the auspices of the Wildlife Conservation Society, has been going well. We have documented over 14,000 wild birds in markets, many of which harbor intestinal parasites,

pathogenic viruses or bacteria. Elizabeth will be providing new insights in to the potential threats posed by disease, especially to wild populations of birds.

Nesting Scarlet Macaws at the Tambopata Research Center.

Macaw chicks, nesting and genetics: Gabriela Vigo starts a PhD

Long time macaw project collaborator, Gabriela Vigo has also begun her PhD in the Department of Wildlife and Fisheries Sciences here at Texas A&M. As part of this work, Gaby will be looking at the behavior, ecology and genetics of Scarlet Macaws in Tambopata, Peru. Her first project will be to analyze the samples collected from macaw chicks and parents to determine if Scarlet Macaws are monogamous. We know that the pairs are almost always together and appear to be among the world's most monogamous birds, but is this really the case? Do the birds sneak off while their mates are down on the clay lick and not watching? Is there hanky-panky going on at the favored fruit tree? Hopefully Gaby's genetic analyses will tell us.

Wayward wanderings or cold calculation?

Last December we put a satellite telemetry transmitter on a Blue-and-gold Macaw at the clay lick by TRC. We named her "Charming," wished her the best, and released her. Little did we know the insights she would provide. Our satellite specialist Dr. Janice Boyd told us that the bird moved off towards the foothills of the Andes and set up camp on the upper Tambopata River. Here she stayed in a small area just a few miles wide. Then in April all of that changed. She picked up and flew nearly 100 miles to the east, just north of Bolivia's Madidi National Park. We knew that these macaws moved long distance, but this was the furthest we had seen. However, she still had a trick up her sleeve. Just before Halloween, she flew back to Peru, straight to where she had been living from Dec – March, but apparently she didn't like what she saw, because within a day or two she flew straight back to her hang out in Bolivia. Nearly 200 miles in 1 week! That is a bird that knows where she is going and what she is looking for. Now we just have to figure out what it is that drives these incredibly intelligent birds.

A view of the Tambopata River and the habitats used by "Charming" and the hundreds of macaws that visit the clay lick by Tambopata Research Center.

New insights into Scarlet Macaw nesting

This year we completed our 11th year of monitoring Scarlet Macaw nests at the Tambopata Research Center. Graduate Student George Olah (Australian National University), Gaby Vigo and I have turned our attention to this gold mine of data and begun to delve deeper in to the secrets of what makes macaw reproduction work. According to our data, what type of nest is a good nest? The answer for the macaws seems quite simple, one where chicks fledged last year! By sifting through 1500 of hours of nest observations, Gaby found something which has amazed us all: observers saw macaws fighting over nests at almost 70% of the 93 nesting attempts observed. She then discovered that the more serious the fight, the lower the hatching and fledging success. Turns out that fights by macaws seem to be the leading cause of failure in nests with chicks (9 – 17% of nests), as predators only account for only 1 – 8% of nest failure. So even in a rainforest full of hawks, snakes, giant weasels, and predaceous monkeys, a nesting macaws' worst enemy appears to be other macaws.

New web page launched

In 2010, George Olah helped us launch the new Tambopata Macaw Project web page at www.macawproject.org. The new page is sleeker, more intuitive, and more informative than ever. You can find everything from how to become a volunteer, how to make a donation, popular magazine articles, and even our latest and most detailed scientific publications.

Wish list

Our research has been expanding and we have been learning more and more, but we need your help to keep the momentum going.

Supplies for macaw genetic analyses	*$60 per family*
Hang a nest box at Tambopata Research Center	*$300*
Nest camera and recording device	*$300 per nest*
Pay a Peruvian assistant to help us check and maintain nests	*$500 per month*
Pay a Peruvian Veterinarian to help us collect crop samples and support veterinary research at TRC	*$800 per month*

Please help us make 2011 an even greater success.

To make a donation please contact me at dbrightsmith@cvm.tamu.edu or make a check payable to "Texas A&M University" and mail to:

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Donations can also be made via electronic bank transfers or credit card (please contact us for details)

Thanks!

Thanks to all of you for your continued support of our project. I would also like to thank the hundreds of assistants who have made the long trip down to Peru to help us make this project a reality. Many individuals and organizations have provided us with funding and we are eternally grateful for all their support. Thanks also to the many collaborators who have provided insight and expertise. Also thanks to Dr. Alan T. K. Lee who just successfully finished his doctoral degree at Manchester Metropolitan University. His work in Tambopata and insights on macaws and parrots were wonderful. We will miss him in Peru.