Schubot Mapping Complete Genome

OF BTM



While at The Blues Conservatory™ Bogie and Eureka established one of the four distinct foundational bloodlines of the Blue-throated Macaw (BTM) species in Bird Endowment's wild-caught, parent-rearing program. The protocols were designed to perpetuate the BTM wild-species culture in the domestic bird flock.

In March of 2014, the pair became part of another conservation undertaking. It was late 2012 when Dr. Ian Tizard first asked Bird Endowment about the possibility—at some point in the future—of obtaining a blood sample from a BTM in order to map its complete genome.

Tizard (the Richard M. Schubot Professor of Exotic Bird Health and Professor of Immunology and Veterinary Pathobiology at Texas A&M University) first sought to collect blood from a Bird Endowment wild-caught female BTM.

"Ideally, we would like to obtain 3 ml of fresh blood. We would like to sample a wild-caught bird since the genome can provide important data on historic bird populations as well as the amount of genetic diversity within the species," Tizard said.

"We would prefer not to use a captive-bred bird because then we really couldn't determine the population history," he said.

Offspring preens Bogie Eureka.

"I chose hair dye because it makes a statement," said Barbara Heidenreich, owner of Barbara's Force Free Animal Training. "When your hair is blue, it is likely going to raise questions and comments. That opens the door to sharing information about Blue-throated Macaws. This allowed the challenge to raise awareness beyond the photos or videos shared on social media. People don't need to be nominated to participate. Just dye their hair blue and post their photos and videos on social media. They then can challenge others to do the same. It's fun, temporary and can actually make a difference for the wild cousins of our beloved companion parrots."

We have enjoyed seeing the various ways men, women and children have found to participate. Creativity

abounds. Those who are unable to semi-permanently dye their hair have found ways to 'Go Blue' with temporary color by using DIY rinse, spray, chalk, mascara, and styling mousse and gel. Who knew there were so many blue hair products? Other options have been dyed hair extensions, feathers and blue wigs. Several men have dyed their beards blue! A few dogs and parrots have safely been included.

The most important news is that the challenge has helped bring in funds for Bird Endowment's Nido Adoptivo[™] project which has made great strides in the Blue-throated conservation effort by providing nest boxes to help increase the wild population.











After a year or so, Tizard was ready to start his work and inquired once again about the current possibility of blood samples before he made commitments to the University.

Bogie and Eureka were the last surviving wild-caught BTMs in the Bird Endowment program. They had been retired for several years. Bird Endowment offered to donate the pair to Texas A&M. This would make them immediately available to the researchers at whatever point across the future of the research program. Texas A&M accepted the offer.

"It would be a privilege to have those beautiful birds in our aviary. I see them as a unique biological resource and perhaps they can provide us with material to help start the recovery of the species," Tizard said.

As of this article, Tizard says, "We have collected DNA from both of our birds and prepared a DNA library preparatory to sequencing. In the meantime we are busy assembling the genomes of the hyacinth macaw and the blue-and-gold macaw. We are trying to complete and publish them before we move ahead with our other Ara macaws. Janice Boyd is pushing us hard to compare the blue-throats with the blueand-golds. However with limited resources they just have to wait their turn!"

In other words, they have the DNA materials and they have the skills and knowledge to do the job; now it's just a question of funding.





Our very first donation came from Ukraine! Followed by Italy, UK, Hong Kong, Netherlands, Australia, Canada, and all over the USA. Some individuals sponsored their own 'Adopted Nests' while other donations are grouped. So far, that translates into funding for the installation and monitoring of about 20 additional nest boxes for the 2014-15 Blue-throated Macaw breeding season. And more are still pending.

We are delighted by the amount of individuals who have taken the challenge, and to see the groups who have done so as well. A number of bird clubs have embraced the challenge by 'Going Blue' at their meetings. Birblr (bird blogger community on Tumblr) and retail bird stores hosted unique fundraisers. Events such as Seattle

Parrot Expo, Bird Clubs of Virginia Pet Bird Expo and Lancaster Bird Expo conducted special promotions. Members of the American Federation of Aviculture and NPRPF/Parrot Festival participated. Artists have donated paintings and jewelry for theme auctions and raffles.

What a remarkable experience this has been. We have no idea how some people heard about it or what motivated them to take part in this challenge, but the fact that they care and want to help is very gratifying. New friendships have resulted. For many years we have advocated that Saving The Blues™ is a team effort. This amazing outpouring of support is extremely encouraging for the future of Blue-throated Macaws in Bolivia.









