

PsittaScene



Twenty Years

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Saving Parrots

May 2009

Psitta Scene

World Parrot Trust
Glanmor House, Hayle, Cornwall,
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www.parrots.org

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fromthechairman

Every now and again it's good, just for a while, to put to one side the worries of the world and do some positive thinking. War, disease and financial turmoil - it's easy to feel powerless. Let's make time to enjoy our friends, family and the animals we share our lives with, let's revel in important steps forward for the wildlife that we care so much about, like the Puerto Rican Parrots you can read about on page 16.

Another reason to be joyful is that the World Parrot Trust reaches its 20th anniversary this year! I'll be pleased to welcome you at the home of the Trust - Paradise Park in Cornwall for our two day celebration. Read more at www.parrots.org/invitation.

I'm looking forward to showing you around the Park, listening to people with many years of experience such as Carl Jones who will talk about his lifetime of work on the conservation of island species, EB Cravens with his wealth of knowledge on parrot health and behaviour, Sam Williams on his field research and WPT Director Jamie Gilardi with news from projects he has visited around the world. I'm imagining the warm summer evening, sitting in our beautiful gardens with jazz playing, accompanied by the calls of all manner of birds. We'll catch up on new research in parrot conservation, swap ideas about aviary design, compare notes on companion parrot care and come away with lots of plans about how we can help our favourite birds.

OK, we can't change the world with positive thinking alone, but when my father, Mike Reynolds started the World Parrot Trust all those years ago, he inspired us all to bring practical help to dozens of parrot species in need. Let's take this opportunity to get together and celebrate the amazing world of parrots which so enrich our lives!

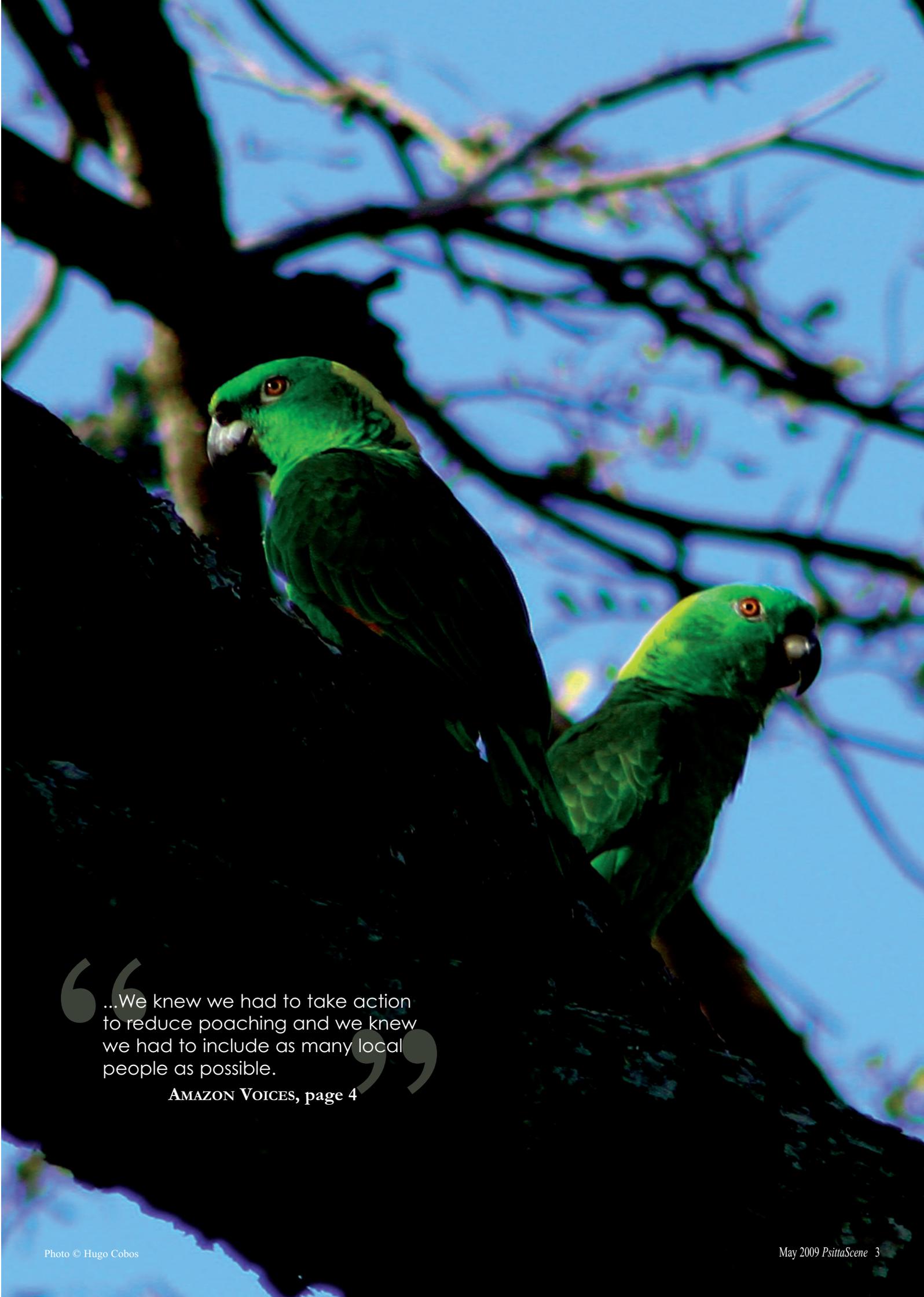
Alism

Alison Hales
Chairman

onourcovers

FRONT Once ranging throughout Central America the Yellow-naped Amazon (*Amazona auropalliata*) is one of the most iconic parrots in the region. It has been hit hard by the pet trade and habitat fragmentation and has all but disappeared from much of its range. Community education is making a difference for the Yellow-napes of Costa Rica and new research is increasing our understanding of vocal learning in wild populations. See Amazon Voices, page 4. © Hugo Cobos

BACK The Monk (or Quaker) Parakeet (*Myiopsitta monachus*) is the only parrot species to build a stick nest. This bird and his flock-mates set up shop in the basement of an enormous Jabiru stork nest. It's possible that the nesting opportunities created by Jabirus played a role in the evolution of nest building in the Monk Parakeet. © Jamie Gilardi



“...We knew we had to take action to reduce poaching and we knew we had to include as many local people as possible.”

AMAZON VOICES, page 4



Amazon Voices

Linking Science and Conservation in Northern Costa Rica

By Alejandro Salinas, New Mexico State University

I didn't know what to expect as I prepared to talk to the Costa Rican cowboys about Yellow-naped Amazon parrots (*Amazona auropalliata*). The Guanacaste people view themselves as tough people able to resist the heat, the drought, and the heavy rain of northern Costa Rica. Fortunately, everything went fantastically...

Not only were the workers very interested in my talk, they lingered with questions and stories of their own. As I talked to people, a familiar voice arose. It was Jose, one of the main workers in this finca, or ranch. He asked, "What happened to those Yellow-naped Amazons you translocated here?" Jose was very interested in the experiment I told him about on a previous visit.

Seeking allies. The area where Jose works, and where we had this conservation awareness talk, is a very important nesting area for yellow-napes. However, its importance is well known by poachers too. Virtually all the nests are poached every year in this place, and only those less accessible are left behind. We knew we had to take action to reduce poaching and we knew we had to include as many local people as possible.

The Programa de Investigacion Biologica (PEB) of the Area de Conservacion Guanacaste, the Santa Rosa Park, and the World Parrot Trust became our allies in developing an educational program in an effort to stop the poaching in the area. The PEB-ACG is an important link between the local society and the research we conduct, as they involve local schools in nature related topics. For example, some students participate in a complete parrot-related

day, visiting a nest in the field and receiving WPT wristbands (see *PS Vol 19, No. 3 May 2007*).

Despite the success raising awareness among children, one actor was missing in our efforts – those cowboys roaming the area moving cattle from one pasture plot to another, who see these beautiful birds every morning. We knew we needed to include the cowboys in our efforts to protect these parrots, locally known as "loras." Because of their continuous presence in the area, they could pinpoint where nests were, and let us know if strange people were in the area looking for nests.

We wanted those "sabaneros" (the local name for cowboys) to understand the lora's critical conservation status and need for protection and the importance of mutual cooperation for the good of these birds. During my speech, I could not help notice that one of the workers wore a WPT wristband we had given the students the previous year. It was a pleasant feeling to see how far our actions had gone, spreading the word from the children to their parents. Everything indicated one more ally had just joined our efforts, and one more set of eyes was going to be in the field to watch the nests.

Speaking in tongues. During my previous field season I had talked to Jose about the lora's vocal dialects here in Costa Rica, and that we were going to transfer individuals from one dialect to another to see if the translocated birds picked up the calls from the new dialect. Jose was fascinated with the dialects. This parrot species has a specific way of communicating in each region. Populations a few kilometers apart could have a completely different voice. People traveling from Nicaragua into the Costa Rican capital San Jose, have to go across 2 dialects. Jose was even more thrilled to learn there is another dialect in Nicaragua.

My advisor, Tim Wright, previously found out that the response of breeding pairs to duets (a kind of call performed by one male and one female) from the same dialect is much stronger than to those duets from a different dialect. These calls are so different that the untrained human ear can tell one dialect from the other. If call types are so different, dialects could work as barriers to the movement of individuals between dialects. However, genetic analysis suggests individuals actually cross boundaries in search of a place to settle. These parrots are good learners, and in captivity, they can learn to



Photo © Hugo Cobos



Photo © Hugo Cobos

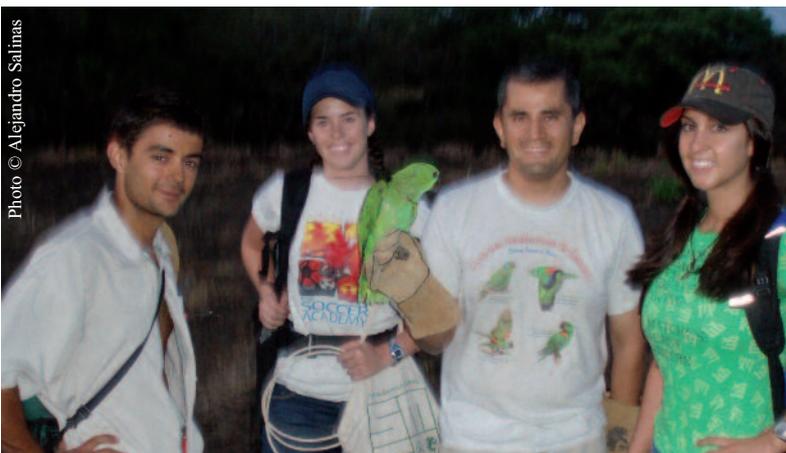


Photo © Alejandro Salinas



Photo © Alejandro Salinas

Educating the community about their local parrots has proven beneficial and rewarding. The Costa Rican cowboys not only keep a watchful eye against poaching, but find the research fascinating. Experiments showed for the first time that Yellow-naped Amazons can learn a new dialect when translocated. Neck-mounted radio collars allow individuals to be tracked but do not interfere with their typical behavior.

mimic. So, if dispersal is that likely, learning the new call type upon arrival seemed possible.

The idea behind this translocation experiment was to find evidence that a foreign parrot may “vocal match” local dialects. Regardless of the flux of individuals between dialects, it seems neither dialect boundaries nor the call types change over time. If I could find individuals vocally matching the local dialect after being transferred, I would have evidence of vocal matching as the mechanism Yellow-naped Amazons use in maintaining dialects.

And so it happened, we found evidence of vocal matching in one juvenile.

Kelly. We translocated several yellow-napes across dialects, including one juvenile my field assistants named “Kelly”. Several weeks post-translocation, Kelly had not shown much activity when Shannon and Holly (two of my field assistants) came to me very excited. They had seen what seemed to be two other birds vocally displaying to Kelly. This bird had become special for us because it had been very hard to track, and when spotted, it offered us interesting and sometimes entertaining observations.

The most rewarding day with Kelly was when we learned the bird had modified its call to the local call type in the north dialect. This bird was a juvenile translocated from the south dialect to the north, when, six weeks post-release, it was vocalizing “wawas” – the contact call made by parrots from the north dialect. Holly and I tracked Kelly to the edge of a creek where we found two birds playing with no other birds around. We could not see which bird was wearing the transmitter, but the signal was pointing to the pair. They were flying and doing some turns in the air before perching in a tree. Soon 3 other birds joined them. One pair flew, then the other, leaving our bird alone for a while. When it flew to the local roost it was vocalizing wawas while flying. We could see the transmitter clearly hanging from its neck.

This encounter with Kelly was something exciting and unexpected, and I almost missed recording those new calls. We were completely thrilled and the next day we went looking for Kelly again to corroborate the vocal matching. We found the bird alone on the edge of another creek in the same area. This time, our observations were even more rewarding. Kelly

was perched in a tall tree. After a while, one unmarked bird approached vocalizing, and Kelly replied and joined it in the air. Both of them flew some metres to the other side of the creek, and after several minutes they returned to the place where we first saw them. Kelly landed on a completely leafless, tall tree, vocalizing, and the other bird landed on a higher branch. The sunshine was striking directly on Kelly’s transmitter, so we could see the shining gold and the twisted antenna. Suddenly, we got another surprise as the unmarked bird began allofeeding Kelly. It seemed the new kid in town had found a partner, as this behavior generally indicates some bond has formed between two individuals.

I talked to Jose once more after that awareness talk, but before I had learned about the vocal matching with Kelly. Next time I talk to him he will be amazed by our findings. If we are lucky we will get more people as interested as Jose. We need more allies from all of Guanacaste who are interested in the conservation of these amazing birds, who gave us joy, fun, and at the same time made us sweat.





Only Único

By Igor Berkunsky

Photos by Gonzalo Daniele



In a *flash* of iridescent *turquoise* and gold,
a young *macaw* launched into *flight*.

There are few things more exciting and spectacular than seeing a macaw fly for the first time. Everything had been going well for this fledgling Blue-throated Macaw (*Ara glaucogularis*) – his parents selected a great nest site, his mother incubated his egg just so, and both parents fed him all the right seeds and fruits. But “Único,” as he came to be known, had one big problem. His right wing developed with a deformity and he couldn’t extend it properly to fly. For most wild parrots, the loss of one chick would not be a grave concern, but for Único (“oo-nee-koh” meaning “unique”), the situation was truly unique. He wasn’t just the only chick to make it out of his own nest this year, he was the only Blue-throated Macaw chick to “fledge” in all of 2008. None of the other known nesting pairs in the wild produced chicks, and most never even laid eggs! How could this be?

As we've reported many times over the past seven years, the World Parrot Trust has been working in Bolivia with this spectacular bird – the rarest wild macaw – to locate, protect, and help each nesting pair produce as many chicks as possible. We do this by deploying a number of

conservation tools, many developed specifically for this project, such as upgrading existing nest sites, installing new nest boxes, protecting the nests and chicks from predators, and providing chicks with medical and nutritional support as needed. Just last season (2007), our years of work paid off with the strongest breeding performance on record, and ten chicks fledging. And, for the first time ever, we saw cases of three Blue-throat chicks fledging successfully from a single nest.

On the heels of 3-chick nests, the dismal breeding in 2008 came as a shock. We had only seen a similar situation once before in the past, also when the species’ primary food source, the motacú palm simply failed to produce fruit. As it turns out, 2008 was one of the driest years on record, so it was not terribly surprising the palms made no attempt to flower and fruit. In fact, nearly all the other parakeets, amazons and macaws living in this region held off on breeding as well, presumably in hopes that more food would be available next year.

Unfortunately, the Blue-throats have no time to waste. As a critically endangered species, every chick and every breeding season is an important part of their hoped-for recovery. The remaining 15-20 wild pairs which attempt to breed in the good years are scattered over a vast seasonally-flooded region, roughly the size of the country of Wales, or twice the size of the state of Connecticut. For the population to grow and recover, these remaining adult pairs not only have to breed successfully year after year, but their youngsters must make it to adulthood, find other available Blue-throats of the right sex and age, and form a functional pair bond. In an area so vast with so few young birds produced each year, finding any Blue-throat is a considerable challenge. Finding just the right bird is an especially tall order. Even then, the difficulties aren’t over, as the new pair must find a suitable and available nest site, and get all the other details right before they can produce chicks of their own and help the population grow.

While we see the protection and support of the wild birds as our first conservation priority, it may be that a full recovery under current



Extremely dry conditions in Bolivia this season caused most parrots, including the critically endangered Blue-throated Macaw, to forego breeding. Record breeding in 2007 was followed by a single nestling in 2008. Sadly, a wing deformity made this otherwise picture-perfect chick unable to fly. Fortunately, "Único" will serve as an ambassador for wild macaws in his own country.

conditions just isn't in the cards. They may have just too many challenges to face. More intensive nest work to reduce predation risk further still may be a viable solution. But in the end, it may be necessary for captive birds to assist their wild counterparts, filling some of the extensive areas now unoccupied in Bolivia, and eventually making it easier for these birds to find ideal mates, breed successfully and for the species to return once again to safe levels.

For Único, the story has just begun. He's now being cared for in captivity and will hopefully become an education ambassador for his wild kin. Few Bolivians have ever heard of, much less seen, a Blue-throated Macaw. We're hopeful Único will change all that, helping locals and international tourists alike understand how precious these birds are and how precarious their situation is today. We're also working to find him a mate in hopes that he may one day raise chicks of his own to fly free over the savannahs and forests of Bolivia.

Our work to prevent the extinction of the Blue-throated Macaw has only been possible through the contributions of parrot enthusiasts around the world. With your generosity, we can put the researchers in the field to find and protect nests, install nest boxes, feed chicks and ensure they fledge successfully.





All in the Family

The Parrot Family Tree

The deep roots of the parrot family tree have long been a mysterious affair. With their stocky bodies, fleshy ceres, strongly curved bills and zygodactyl feet (two toes forward and two back) the parrots (Order Psittaciformes) are easily distinguished from all other orders of birds. However, the physical similarities shared across the parrots has made it difficult for taxonomists to agree on the ordering of relationships among different genera and species. In some cases it has been difficult to decide whether different populations of a species represent distinct species or may simply be the result of the variation within a single species. The identification of such cryptic species is vital for effective conservation. If genetic evidence shows that a small sub-population of a widespread species is actually a distinct species, then saving this rare new species becomes a conservation priority. Such a discovery might also suggest modifications of avicultural practices by zoos and private breeders. In addition to these practical issues, resolving the evolutionary history of a group is valuable for biologists who want to better understand the evolution of the very traits that make the parrots so interesting, such as their long lifespans, colourful plumage, keen intelligence and striking vocal abilities.

by Timothy F. Wright and

Erin E. Schirtzinger,

Biology Department,

New Mexico

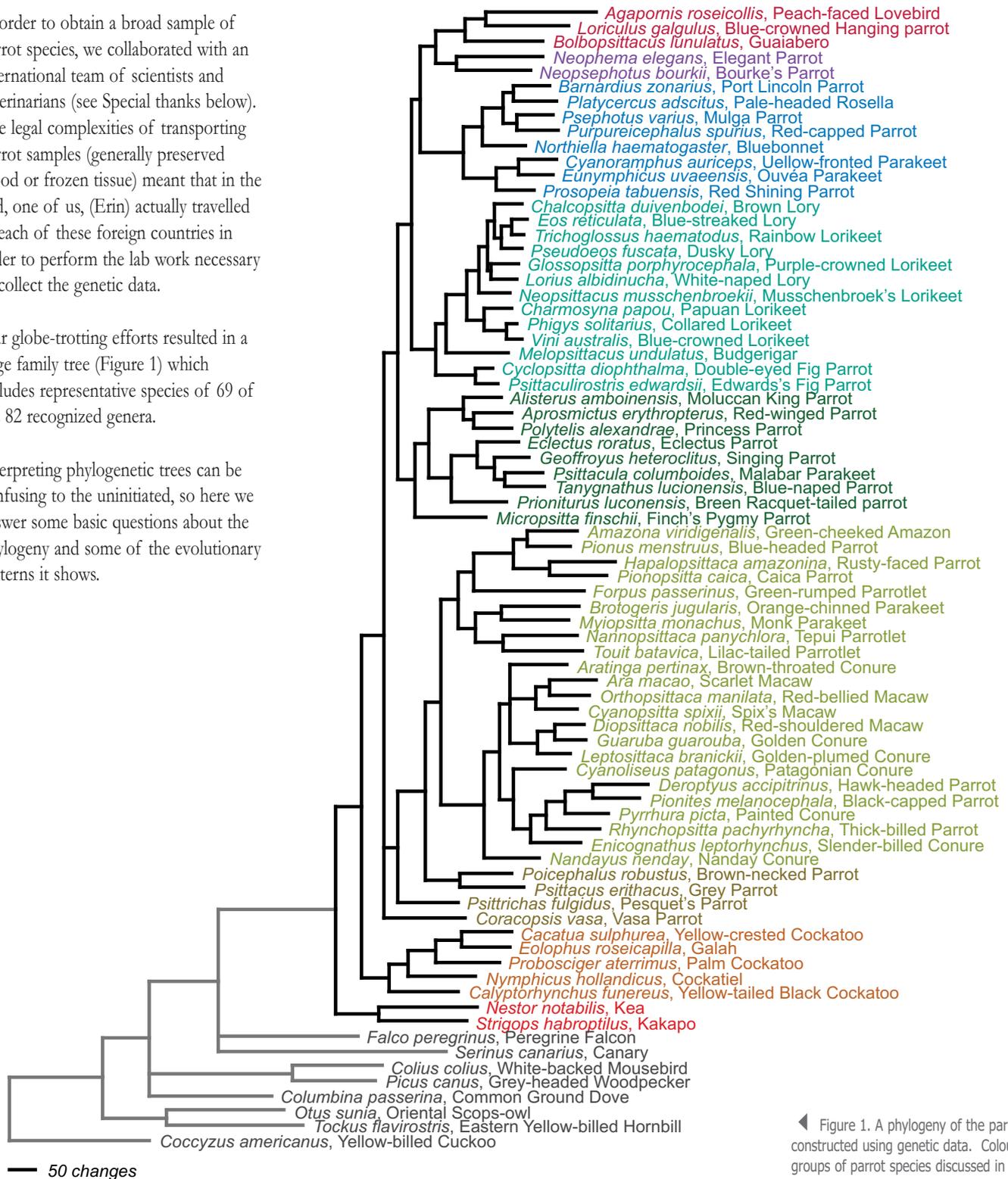
State University

To shed light on the mysterious relationships within parrots, we have worked for the last several years to create an evolutionary family tree of parrots (a phylogeny) using genetic data collected with modern molecular techniques.

In order to obtain a broad sample of parrot species, we collaborated with an international team of scientists and veterinarians (see Special thanks below). The legal complexities of transporting parrot samples (generally preserved blood or frozen tissue) meant that in the end, one of us, (Erin) actually travelled to each of these foreign countries in order to perform the lab work necessary to collect the genetic data.

Our globe-trotting efforts resulted in a large family tree (Figure 1) which includes representative species of 69 of the 82 recognized genera.

Interpreting phylogenetic trees can be confusing to the uninitiated, so here we answer some basic questions about the phylogeny and some of the evolutionary patterns it shows.



Questions? If you have further questions about the parrot family tree, please send them to Joanna Eckles, *PsittaScene* Editor, at joanna@worldparrottrust.org. We look forward to answering them in a future issue.

For more information consult our more detailed paper published in the journal *Molecular Biology and Evolution* (Wright et al 2008, 25(10) 2141-2156), a version of which is posted at our website <http://biology-web.nmsu.edu/twright/>.

Special thanks to the Smithsonian Institution, the Universidade de São Paulo in Brazil, Victoria University at Wellington in New Zealand, Loro Parque and the National Institute of Toxicology and Forensic Science in the Canary Islands, Spain.

1) How do you read a phylogeny?
Phylogenies can be thought of as a family tree with descendants branching outward from a single ancestral species. The tips of the tree (on the right in Figure 1) are the species that are currently in existence. The places where two branches join are called nodes, which represent the last common ancestor of those two living species. For example, at the top of the phylogeny, the place where the branches leading from the Peach-faced Lovebird (*Agapornis roseicollis*) and the Blue-crowned Hanging Parrot, (*Loriculus galgulus*), meet is the node and represents the last common ancestor of those two species. All the branches coming out of a node towards the tips on the right side of the tree are the descendants of that ancestor, and the species at the ends of these branches are thus more closely related to each other than to those coming from a different node. The length of the branches separating a tip from a node, or two nodes from each other, represents the amount of evolution between those nodes. In our case the length of the branches represents the amount of genetic change seen between the sampled DNA sequences.

2) How did you choose the species in your tree?
Our species were chosen to represent as many of the existing parrot genera as possible. In general our choice of which species to use within a genus was guided by availability of samples appropriate for genetic analysis, either a tissue sample in a museum or a live bird in a zoo collection from which we could obtain a blood sample.

3) Who are the closest relatives of the parrots?
The non-parrots in our tree include an owl, a songbird, a hornbill, a woodpecker, a cuckoo, a mousebird, a falcon and a dove. These orders were chosen because at one time or another they had been suggested as the closest relatives to parrots either by morphological or genetic evidence. They are shaded in grey and branch outward from the most basal node, which represents the common ancestor of all these avian orders. In this particular tree the falcon and the songbird species branch from the same node that leads to all of the parrots, suggesting that they are the closest relatives of parrots. This result, however, was not consistently found in other trees we constructed from subsets of the data or with different tree building methods.

Furthermore, other recently published phylogenies that have sampled more widely across avian orders have also found contradictory results regarding who the closest relatives of parrots might be. This continuing confusion suggests that parrots are indeed a very ancient order of birds that split from the ancestors of other modern birds a very long time ago, perhaps as long as 80-90 million years ago during the Cretaceous Period. The identity of their closest relative remains a mystery awaiting further investigation.

4) Who are the most ancient parrots?
If you work your way along the tree from the basal node connecting the parrots to the non-parrots, you will see that the first parrot group to split off from the common ancestor of parrots is a group (or 'clade') of New Zealand parrots that includes the Kea and the Kakapo (red clade in Figure 1). This split indicates they are the group that is most-distantly related to the remainder of the parrots and has interesting implications for the geographic origins of parrots, as New Zealand is one of first landforms to split from the ancient supercontinent of Gondwana, around 82 million years ago. It supports a long-standing hypothesis that the ancestors of the modern parrots originated on this continent and that present distribution of parrots in Australia, South America, southeast Asia and Africa can largely be explained by the subsequent breakup of this supercontinent into these modern continents.

5) I thought cockatoos were the most ancestral parrots?
Cockatoos have been thought by many to represent the most ancient lineage of parrots based on some unique anatomical characteristics (including their erectile crests), but this hypothesis was not supported by our genetic data. They were the next group to split off after the New Zealand species and are strongly supported as a distinct group by the genetic data (orange clade).

6) What comes next in the tree?
If you follow the tree up from the node that leads to cockatoos, you will see a large number of nodes separated by short branches, suggesting that there was a rapid diversification of parrots that led to the modern groups such as the lorries, the Neotropical parrots, the African parrots, the various groups found in Australia and Asia.

7) Why do some of these groups seem jumbled up?
There are some distinct surprises in the parrot family tree. One is that the Budgerigar is not closely related to the rosellas, bluebonnets and other Platycercine parrots of Australia. Instead it is a member of a clade that includes the lorikeets and Fig Parrots (teal clade). Also, the African parrots do not form a single clade; instead the African Grey and parrots of the genus *Poicephalus* are closely related to each other, while the Vasa Parrot of Madagascar diverged earlier in the tree and the lovebirds of the genus *Agapornis* are in an entirely different clade that also includes the Hanging Parrots of Indonesia (genus *Loriculus*) and the odd Guaiabero found only in the Philippines (top clade in magenta). This pattern suggests that Africa may have been colonized by several different lineages of parrots at different times.

8) Is nothing of the old classifications sacred?
Some historically recognized groups are strongly supported by our tree. In addition to the cockatoos and lorries (albeit with a surprising Budgerigar relative) already mentioned, a core group of the Psittaculine parrots of Australasia that includes the Eclectus Parrot, the Singing Parrot, King Parrot and the Princess Parrot received strong support (dark green clade). A second well-supported clade is the Platycercine parrots that include the Australian rosellas, the bluebonnet, Mulga Parrot and Port Lincoln Parrot, and some species found in New Zealand and as far away as Fiji (blue clade). A third strongly supported clade is the Neotropical parrots of Mexico, Central America, South America and the West Indies, which are all more closely related to each other than they are to any other parrots (largest clade in pale green).

9) What's next?
We are continuing our work by filling in missing genera and by starting to amass data for all species in certain clades. Next up, as part of Erin's PhD dissertation, is a species-level phylogeny of the Neotropical parrots. Stay tuned for more exciting revelations about the parrot family tree!



Avian Healthcare Basics

How do I know if my bird is sick?



This issue's contributor, **Dr. Brenna Fitzgerald**, is a 2007 graduate of Texas A&M University College of Veterinary Medicine.

Prior to joining the Medical Center for Birds in Oakley, California, she worked as an associate veterinarian in Dallas, Texas, where she practiced small animal, avian and exotic animal medicine. Her professional goals are to complete an internship and residency in avian medicine and surgery, to attain a board certification in avian practice and to become an associate veterinarian at an avian specialty practice.

Dr. Fitzgerald shares her home with a Blue-headed Pionus, two Timneh African Greys and three cats.

In general, healthy parrots are alert, bright-eyed, active and interested in what's going on around them. Of course, individual birds differ in their activity level and behavior, and all parrots spend some portion of the day resting and napping. A normal, healthy bird can be expected to spend portions of the day eating, playing, vocalizing, and interacting with other members of the household. Bird owners often notice that their birds are most active and noisy in the mornings and evenings, and when household activity is at its highest, and are more restful during the intervening periods.

When assessing your bird's health, consistency is very important: Provided that a stable home environment and routine are in place, a healthy bird should be fairly consistent in his or her behavior, activity level, and appetite. For this reason, you should be alert for changes, even if they may seem insignificant.

It is a good idea to regularly monitor your bird's body weight. You can do so at home using a small scale that weighs in grams. Although you can purchase a scale marketed specifically for birds, you can also obtain an inexpensive postal scale from an office supply store that works just as well. Checking your bird's weight once a week or so can help you recognize significant changes; both large losses and gains can be important and should be brought to the attention of your veterinarian.

You can also feel your bird's breast musculature to assess his or her pectoral muscle condition. The pectoral muscles of most birds are well developed to support flight, and lay on either side of the "keel," a pronounced bony ridge that is part of the sternum. Begin by gently feeling

your bird's breast to identify the keel, and then slide your finger to either side to feel the softer muscle tissue. Pectoral muscle is more developed in some individuals than others, and may be somewhat reduced in birds that do not fly frequently. What's important is familiarizing yourself with your bird's normal muscle condition, so that you can better recognize changes that can accompany illness.

Recognizing Signs of Illness

In addition to familiarizing yourself with your bird's normal behavior and monitoring his or her pectoral muscle condition and body weight, you should also pay attention to changes in your bird's energy or activity level, appetite, droppings, or behavior. Birds are notorious for exhibiting



Teaching your bird to step onto a scale allows you to get regular weights. Weight change can be an important first sign of illness.

Article and Photos by Dr. Brenna Fitzgerald

very subtle early disease symptoms, with signs of illness not becoming apparent until the illness is very advanced. Some have theorized that this represents an evolutionary adaptation: birds that can disguise illness are more likely to avoid being picked off by predators in the wild. Regardless of the reason, early symptoms are often overlooked or discounted by bird owners, such that veterinary care is not sought until the bird is very ill. Clearly, early awareness is very important, as it may make the difference between life and death.

Birds that are not feeling well may become quieter and less active, and may show reduced interest in socialization or play. You may notice that he or she spends a greater proportion of the day sleeping or resting, keeps his or her feathers fluffed, or is less energetic when going about normal activities. Furthermore, a sick bird may choose to stay on a lower perch or on the cage bottom, often because it takes less energy to do so. Changes in a bird's typical behavior, including the way he or she interacts with others, can also be important.

You should also observe your bird for changes in appetite. This not only includes a loss of appetite (termed anorexia), but also a relative increase or decrease, or a change in preferred foods. Birds can sometimes become more "finicky" when ill, showing interest only in highly palatable foods and abandoning their primary diet.

In addition, the character of your bird's droppings can provide a wealth of information. The dropping contains three components, the feces produced by the gastrointestinal tract, and the urates and urine produced by the kidneys. Fecal color, volume, and consistency can vary tremendously and are affected by numerous factors, including dietary intake. Birds on a seed-based diet typically have primarily green feces, while those on formulated diets (pellets) have more

voluminous feces that take on the color of the pellets consumed. Looser feces may be produced when birds consume a greater portion of fresh fruits and vegetables. Urates, a waste product eliminated by the kidneys, are typically white in appearance, but can also be cream-colored or light yellow in color. Urine, accounting for the liquid portion of the dropping, is most often clear, light green, or may take on the color of colored pellet varieties offered in the diet.

Be alert for changes in your bird's droppings, or in your bird's ability to pass droppings, as these can be indicative of disease. Notable abnormalities include passage of black feces (called melena), which can occur with upper gastrointestinal bleeding, blood in the feces, loose feces (diarrhea), passage of undigested food, or malodorous feces. Abnormal urates may appear bright yellow, green or pink, and abnormal urine may be dark green, brown, or contain blood. Changes in urine volume can also be important; if you notice a consistent increase in urine volume, especially if this is accompanied by increased thirst, you should consult your avian veterinarian.



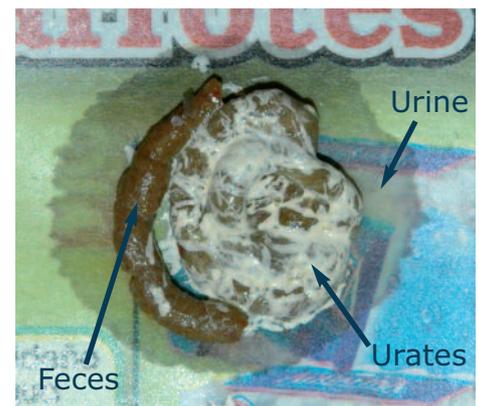
Healthy Blue-headed Parrot is bright-eyed, alert and engaging in normal preening behavior.

Choosing an Avian Veterinarian

For any animal, people and parrots included, preventative healthcare is of crucial importance, as it can allow early detection of disease and timely treatment. This is especially true of birds, as signs of illness can be subtle and delay in care can have devastating consequences.

The first order of business is choosing an experienced avian veterinarian. This can be more difficult than it sounds, because there are many veterinary practitioners out there with different levels of expertise and different skills to bring to the table.

Normal dropping from a parrot on a formulated diet.





Once birds show symptoms like this Cockatiel, they are often very ill.

All veterinarians are required to complete a four-year course of veterinary training to earn their degree (Doctor of Veterinary Medicine (DVM) or Veterinary Medical Doctor (VMD)). During these four years, students learn about many domestic animal species, and usually have the opportunity to choose a primary focus. Students with a special interest in exotic species, including birds, reptiles, and small mammals, may take special classes and gain hands-on experience in the care of these species. However, most veterinary programs provide only basic knowledge of exotic medicine. Therefore, students with a special interest in exotics must pursue ongoing continuing education after graduation in the form of additional classes, conferences, and mentorship. Alternatively, they can pursue more formal training, in order to become “board-certified” in the specialty of their choice. For an avian medicine specialty in the United States, this credentialing process is overseen by the American Board of Veterinary Practitioners (ABVP), which requires candidates to have completed five years of veterinary practice, and to pass specialty testing, among numerous other credentialing requirements. In the UK this process is overseen by the Royal College of Veterinary Surgeons (RCVS) known as DipZooMed or a European College Diploma, known as DipECAMS.

Board-certified specialists in avian medicine have some extra letters behind their names (ABVP-avian) and are relatively few in number. There are also many non-credentialed practitioners with a special interest in birds, who have gathered

considerable experience and strived to remain up-to-date via continuing education. Furthermore, many of these individuals appreciate the importance of consulting with more experienced colleagues when presented with a case that exceeds their level of expertise. When appropriate, they may recommend referral to a board-certified colleague or hospital with additional diagnostic or surgical capabilities. There are many great veterinarians out there, both board-certified and not. The challenge lies in choosing one that meets the needs of you and your bird, inspires confidence, and is willing to consult with other veterinarians when appropriate.

When making your choice, consider not only the practitioner’s level of knowledge, but also his or her comfort level when handling birds, including an emphasis on gentle handling that does not cause undue stress. Look for someone who sees a large number of avian patients and makes an effort to stay current in the field. If in doubt, ask questions that will help clarify your concerns. Lastly, seek advice and recommendations from reputable individuals such as other veterinarians, experienced breeders, retailers, or other bird owners.

Preventative Health Care

Once you have decided on an avian veterinarian, it is important to bring your bird in for “regularly scheduled maintenance,” including annual physical examinations and appropriate grooming. In principle, such a visit should be structured to improve your bird’s health and welfare by helping you learn details of training and other forms of enrichment. In addition to these foundational

components of the annual examination, your veterinarian may recommend routine, screening diagnostic tests, such as blood work, to monitor your bird’s systemic health. Although these types of tests and procedures definitely have merit, it is prudent to keep in mind that they are not necessarily mandatory, and that the true definition of wellness is not delineated by tests and test results alone. Many veterinary practices also offer boarding services, and knowing your bird is under veterinary supervision while you’re out of town can provide some extra peace of mind.

When Should You Consult a Veterinarian?

The best rule of thumb is: If in doubt, GO. When it comes to birds, it is always preferable to err on the side of caution. If you are unsure, call your veterinarian’s office to discuss the situation.

It is also important to locate a veterinary emergency center that is equipped to handle bird emergency care after-hours. It may be unrealistic and unfair to expect emergency veterinarians to be well versed in all aspects of avian medicine, but it is fair and appropriate to utilize their services to stabilize your bird prior to transfer to your regular veterinarian. This may include control of bleeding, fracture stabilization, pain control, and fluid therapy.

No one knows your bird better than you. For this reason, you should always trust your intuition if you think that your bird may be ill. Even if the signs are subtle, they should not be discounted because they may truly be significant.



By René Valdes, Javier Cruz, Gabriela Ortiz, Francelia Torres and Jose I. González.

IT WAS THE END OF APRIL 2008 and the Thick-billed Parrots (*Rhycolapsitta pachyrhyncha*) of “Madera” in Chihuahua, Mexico were choosing new nest cavities for the upcoming breeding season. In just two months the first eggs would be laid. Based on our 14 year knowledge on the species and their preference for aging (unstable) aspens, we designed, built and set out 20 artificial nest-boxes.

In 1995, Instituto Tecnológico y de Estudios Superiores de Monterrey (ITESM) began studying this species and working on their conservation. In 2008 with the support of the World Parrot Trust, local “Ejidros” (land owners) and government authorities, we had a meeting about the importance of this project and the implementation of the new recovery plan for the parrots. Land owners agreed to allow the installation of boxes and asked that the ITESM keep them informed on the project’s development and parrot’s nesting success. Local interest in Thickbills is very different from in 1995 when the project began. Now conservation and sustainability have involved a new generation.

Nest box design was guided by aspects of the parrot’s natural nests such as entrance width, depth, and internal diameter. In the same way we considered parameters of the natural cavities to install the nest-boxes such as hillside exposure, altitude, slope, and height from ground level. Nest-boxes were mounted on three species of trees: Douglas fir, Mexican White Pine and Durango Pine.

On June 20th, just fifty days after the installation process ended, nest-box use was 30% (6 nests). The six artificial nests were used by the parrots during the breeding season but nesting was confirmed at only one of them. With this, we have confirmed the first ever successful use of a nest-box by this endangered species. Three eggs were laid, 3 chicks hatched, but unfortunately one of them died during the first week. The other two fledged 2 months after hatching.

The other five nests were used for roosting, but we also observed nesting behavior. The parrots put in nesting material such as feathers. They also created sawdust by interior scratching. This is a positive sign for the coming years even if the parrots were not successful on their first attempt this breeding season. They liked the boxes and used them so quickly!

The project team wants to thank the World Parrot Trust for funding support and especially Jamie Gilardi for knowledge and advice. We also thank Daniel Perez, representative of the Ejido El Largo south area, Esteban de Larrea and Alfonso Dominguez Pereda, Conservation and Forest Development Unity #2 (Unidad de Conservación y Desarrollo Forestal #2) from the Ejido Alfonso Dominguez, for their support and facilities at their Thick-billed Parrot conservation areas.

The first documented use of a nest-box by the endangered Thick-billed Parrot. Of 6 boxes occupied, one was used for nesting. The pair laid 3 eggs and 2 chicks survived to fledging.



Photo: © Steve Milpacher

Photos: © Javier Cruz

Photo: © Steve Milpacher

Photo: © Javier Cruz

UPs and DOWNs

Breeding Puerto Rican Parrots

Article and photos by Ricardo Valentin

THE EFFORT TO BREED THE CRITICALLY ENDANGERED Puerto Rican Parrot (*Amazona vittata*) in captivity is an endeavor that has been underway for decades. However, it is only recently that we have been able to produce significant numbers of parrots in captivity. We have been able to achieve a consistent level of fledgling production at the Rio Abajo Aviary that has far surpassed all previous efforts in the history of the captive propagation of this species. Many important insights and events came together to help us achieve this success.



"...the simplest way to increase productivity is

The research

For many years the fact that the Puerto Rican Parrot (PR) bred poorly in captivity was variously attributed to inbreeding, medical conditions, adverse climatic conditions at the aviary location, abnormal pair behavior, or a diet that was not right for their needs. A great deal of effort had been spent over the years to address these various issues. When I started as aviculturist of the Rio Abajo aviary (RA) in 1999, I decided to study all the data available to try to determine the success of different approaches to raising the number of fledglings produced.

Unfortunately, the records for Luquillo Aviary (LU), where our birds originated, were not detailed enough to discern which initiatives were having a noticeable effect on the aviary productivity. On the other hand, RA's first aviculturist, Jose Rodriguez, produced a massive amount of information on all aspects of aviary management. This motherlode of data was the bedrock on which my initial management decisions were based.

One particularly noteworthy detail emerged from the data analysis. It was that the loss of eggs and chicks resulting from the parrot's behavior far outweighed all the other causes of poor performance in the aviary. To make sure I was on the right track I sought the advice of Dr.

Joseph Wunderle. Dr. Wunderle, an ornithologist, has kept track of the Puerto Rican Parrot program for many years and has an unparalleled understanding of the program and its history.

A new direction

Dr. Wunderle shared his personal analysis of the aviary's data with me. He confirmed my suspicion that the lack of competent, even-tempered breeders was one of the main, if not the most important cause of the program's difficulty breeding this species. In Rodriguez's aviary notes he remarked that the best breeders were the pairs composed of parent raised birds. Handraised birds often performed poorly as breeders and careful management was usually needed to get them to complete the breeding cycle successfully. Even then some pairs never did well. It seemed clear that the simplest way to increase productivity was to increase the number of parent raised birds produced by the aviary and to recruit as many as possible into the captive breeding population.

However, retaining a significant number of parent raised birds for the captive population turned out to be, at least initially, not possible. In the fall of 1999 I gave a report to the Interagency committee in which I asked for more time to build up the captive population in

RA before birds would be taken away for the release program which was set to start in 2000. My thesis was that the number of fertile pairs available in the aviaries at that time was too small to produce enough fledglings to both increase the number of birds in captivity and fill the needs of the release program. Unfortunately the committee didn't see things this way. At that time the planning for the releases into the wild had been ongoing for several years and the generally prevailing opinion was that the aviaries could both provide for the releases and increase production. So it was decided that RA would provide a significant share of the birds for release in the Caribbean National Forest.

The highly improbable

Over the next two years RA contributed 19 birds to the release program. That number was about 65 percent of the summed production of RA for those two years. Since the release program took the best birds, I found myself left with the weakest birds which usually included the hand raised ones that, as noted previously, were not only troublesome to manage but usually poor parents. Because some birds died young or got ill, the pool of potential good breeders was even tinier than the raw numbers would indicate. I despaired of ever being able to raise our bird production to more than twelve to sixteen fledglings a year. But then, something totally



The ultimate goal is for captive hatched Puerto Rican Parrot chicks (far L) to adapt successfully to life in the wild. (above and L) A wild pair defends a territory within the Aviary, including the breeding cages where they harass aviculturists during nest checks. Territoriality is a preamble to nesting and as we go to press this pair is doing just that - thrilling the RA staff who will continue to monitor their activities closely (below).

to increase the number of parent raised birds..."

unexpected happened, and as they say in novels, the plot thickened.

In December 2001 one of our surrogate Hispaniolan Parrots (*Amazona ventralis*) died after being ill for some time of a mysterious malady. When we received the necropsy results we were thunderstruck. The cause of death was identified as PDD (Proventricular Dilatation Disease). As you can imagine the news was deeply demoralizing and at RA we contemplated, despairingly, the possibility of the failure of our aviary. Shortly after the necropsy results were announced a quarantine was imposed in RA. No birds would leave the aviary until experts were totally sure that our birds didn't constitute a threat to the survival of the species. The quarantine was in place for five years. The first months of the quarantine were difficult for the staff as every bird death was contemplated with the most profound dread. But as the months went by and none of the birds that died showed signs of PDD, a glimmer of hope began to appear. I started to wonder if, with the PDD quarantine in place, we could turn the bitterest of lemons into the most delicious lemonade imaginable. It is amazing that a highly improbable event – the fact that one bird apparently died of a frightful, species-threatening sickness, never seen again in the flock – changed the history of this program.

The quarantine years

Because of the quarantine we were able, for five years in a row, to retain our whole fledgling production. In effect I had gotten what I had asked for back in 1999. During those five years we didn't spare any effort making sure our birds would grow to be well adjusted adults and eventually become the good breeders that were so desperately needed by the program. The RA aviary staff, Brian Ramos, Jong Piel Banchs and Tomas Medina played an essential part on this task. Without their dedicated work I doubt we could have succeeded. Our strategy didn't produce results quickly. The first four years of the quarantine our production numbers languished around 10 birds a year. This was mainly because there were few birds available to make pairs and not all of those were compatible or able to reproduce. But in 2006 the first birds raised during the quarantine reached maturity and everything changed.

In 2006 we added ten new breeding pairs to the population. These weren't just any pairs, they were the birds we had spent so much effort in raising properly. The results were staggering. Fledgling production more than doubled in a single year, from 12 to 29. Delightfully, not only were some pairs 100% fertile their first year, but they also raised their own chicks with a bare minimum of management. A very significant

advance was in the number of fertile pairs which went from 4 in 1999 and was 7 in 2001, then climbed to 22 in 2008. Between the years 2006 and 2008 the aviary produced ninety birds – a record level of production. An unexpected result was that, when the time came for the start of the releases in the Karst area of Puerto Rico in 2006, a large number of mature, parent raised birds were at hand as candidates for release. From 2006 to 2008, more than sixty birds have been





A very rare photo of a dominance interaction in the wild shows both dominance and courtship. The male's erect stance, cupped wings and fanned tail impress the female. Her lowered head and slightly droopy wings shows she understands his intent and accepts him. Females generally show very little interest in males that they can bully. If truly threatened, she would have an erect defensive posture or would have flown away.

released in the Rio Abajo forest, most contributed by the RA aviary. The wild population at RA Forest now stands between 32 and 40.

In 2006 after five years of testing the flock the aviary was declared free of PDD. Over the years biopsies were taken of a selected group of birds, the carcasses were carefully examined for signs of PDD and every ill bird was monitored for any symptom that might reveal the classical symptoms. In the last eight years no bird has shown any trace of being infected.

In conclusion

I don't think I can give anyone a fixed formula for success – a protocol that will ensure the birds reproduce or a particular additive to the diet that will make bird fertile. However, there are certain things that I can recommend that will probably help a captive propagation program perform better.

You have to study your bird's life histories and individual behavioral quirks deeply. A one-size-fits-all approach will always leave out birds that would breed if only their particular needs were met.

Determine the main problems that affect the breeding of the flock. Biochemical studies, mathematical analysis and genetic blueprints are extremely useful tools but they have to pass the

judgment of the people in contact with the birds. This is one area where top-down management doesn't work very well.

You need people with experience because these programs often have to deal with improbable and unexpected events. Following fixed rules just won't do in these cases.

In captive breeding programs you not only have to be able to overcome difficult challenges but also be quick to profit from whatever opportunity shows up.

Finally it is very important that you keep in mind that the animals in a captive program, in our case parrots, are not passive witness to the management techniques. Management has to be done with a particular consideration to the bird's sensibilities, I know this sounds horribly touchy-feely but in some cases touchy-feely works. I hope that some of what I have written will be helpful to those involved in this noble enterprise of saving endangered species from being lost forever.



Ricardo Valentin is the aviculturist of the Rio Abajo aviary. He lives at the aviary and cultivates orchids in his spare time. He likes photography and is rarely seen without his camera. He loves his orchids because they don't bite or scream and their attempts at escape are exceedingly slow.

For an in-depth history of the extensive work done on this species consider the book *The Parrots of Luquillo* available at www.parrots.org/estore

Psitta News

Parrot events

Lory Meeting

June 7, 2009. Essex, UK, 12:30-4:30

The programme, organised by Rosemary Low, will be held at Tropical Wings Bird Park and will include talks by Allan Manning on breeding lories, David Woolcock on the lory aviary, and Rosemary Low on feeding lories.

☎ Rosemary Low, 01623 846430

International Parrot Symposium

June 26–28, 09. Dublin, Ireland

WPT Director Jamie Gilardi will be among 16 keynote speakers from all over the world.

🌐 <http://www.parrotssymposium.com>

WPT 20th Anniversary Celebration

June 30th & July 1st, 09. Hayle, Cornwall, UK

Celebrate with us, meet WPT Staff, Trustees and Project Personnel. Enjoy a behind-the-scenes visit to Paradise Park.

🌐 www.parrots.org/invitation

Thankyou

Sculptor Alan Derrick donated over \$1,000 to WPT with the online auction of his larger-than-life amazon parrot feather sculpture. See the WPT store for another sculpture and prints of Alan's work.

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Photo: © Shutterstock



Photo: © Los Gatos Weekly-Times

Parrotnews

Parrot Hero

A parrot whose cries of alarm alerted his owner when a little girl choked on her breakfast has been honored as a hero.

Willie, a Quaker parrot, has been given the local Red Cross chapter's Animal Lifesaver Award. In November, Willie's owner, Megan Howard, was baby-sitting for a toddler. Howard left the room and the little girl, Hannah, started to choke. Willie repeatedly yelled "Mama, baby" and flapped his wings. Howard returned in time to find the girl already turning blue.

Howard saved Hannah by performing the Heimlich maneuver but said Willie "is the real hero."

Source: Associated Press

More Parrot News and Events at www.parrots.org/parrotnews

Reading Buddies

A love of literacy is taking flight at Mulberry School in Los Gatos, where students are becoming birdbrained — but in a good way. Third-grade teacher Judy Quigley said her students' learning experiences have actually been enhanced quite dramatically by reading to Starbuck, a 7-year-old Timneh African Grey parrot.

Source: By Shannon Barry, Los Gatos Weekly-Times
<http://www.mercurynews.com/cupertino/>

H.R. 669: Nonnative Wildlife Invasion Prevention Act

In the USA, a proposed congressional bill to prevent the introduction and establishment of nonnative wildlife has caused controversy due to its proposed impact on individuals possessing non-native wildlife (including parrots). After a recent hearing, the bill has gone back to its sub-committee for rewriting. WPT comments were entered into the congressional record and can be seen at: www.parrots.org/hr669

WPT Learning Centre

Tap into the knowledge and experience of leading parrot experts, right from your own computer.

Produced by the World Parrot Trust, this new series of web-based seminars (*webinars*) will help you get the answers to your most pressing parrot care questions.

Geared towards the new parrot owner as well as those who have shared their lives with parrots for years, these online training classes are sure to have something for anyone looking to learn more about basic care, nutrition, enrichment, behaviour, and more.

Be the first to know when classes start! Sign up today:
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Parrots in the Wild

