

PsittaScene



IN THIS ISSUE
Blue-throated Macaw (10 years)
Yellow-crested Cockatoo



www.psittascene.org

August 2012

Psitta Scene

World Parrot Trust
Glanmor House, Hayle,
Cornwall, TR27 4HB, UK.
www.parrots.org

contents

- 2 From the Director
Jamie Gilardi
- 3 10 Years
Blue-throated Macaw conservation
- 8 Few and Far Between
Yellow-crested Cockatoo
- 12 Profiles in Conservation
Stewart Metz - Indonesian Parrot Project
- 14 A Tale of Two Psittacines
BFDV - Mauritius and New Zealand
- 18 PsittaNews
Parrot Events and News
- 19 WPT Contacts
- 20 Parrots in the Wild
Red-crowned Parakeet



Editor: Joanna Eckles
joanna@worldparrottrust.org
Production: Karen Whitley

The World Parrot Trust does not necessarily endorse any views or statements made by contributors to *PsittaScene*. It will of course consider articles or letters from any contributors on their merits. Go to parrots.org/publications for Guidelines. Anyone wishing to reprint *PsittaScene* articles in full or in part needs permission from the author/photographer and must state that it was copied from *PsittaScene*. All contents © World Parrot Trust Printed by Brewers - part of the Martin Luck Group Tel: 01326 563424

fromthedirector

Blue-throated Macaws, Yellow-crested Cockatoos, and Grey Parrots are extremely different birds but they have one key thing in common. They've all been loved to near-extinction by humans. The macaws were devastated in the 70's and 80's, the cockatoos in the 80's and 90's, and the Greys, well, I'm afraid the decimation is still going on today.

I think you'll enjoy this issue's stories about our work over the past decade to save the Blue-throated Macaw and about our first year of work on the Yellow-crested Cockatoo.

Many of you know, the Grey Parrot has been in the news lately as their fate was being decided by the CITES Secretariat in Switzerland. The dust hasn't settled yet, but I thought I'd share two pieces of news, one good, one bad.

First the good news: upon learning that CITES was to review the suspension of trade from Cameroon and maybe Congo, we thought parrot lovers might like to make their views known. Did you ever! Using every trick we could think of, we sent the word out, and within 9 days, we had over 41,000 signatures of people from 139 countries! I can't tell you how encouraging it was to see that kind of rapid and heartfelt outpouring of enthusiasm for stopping the trade in wild grey parrots.

The bad news: ignoring scientists, the public, and their own rules, CITES reopened exports from Cameroon to the tune of 3,000 birds per year. The same thing happened previously with Yellow-crested Cockatoos. Tens of thousands continued to be trapped while CITES contemplated trade restrictions. Similarly, over 80,000 Greys have been taken from the wild since CITES's review of this trade began in earnest over 10 years ago. Hopefully, it's not too late to save both the Timneh Grey and the African Grey, but to do so, ending all legal trade is the highest possible priority.

Thank you for your support and please stay tuned for ways to help us achieve this goal in the coming year.

Jamie Gilardi
Director

onourcovers

FRONT As with other white cockatoos, the Yellow-crested (in this case *Cacatua sulphurea parvula*) is boisterous and their bright white plumage makes them relatively easy to detect and follow, even without binoculars. Surveys of these rare birds on several Indonesian islands indicate that wild populations are under increasing threat. See "Few and Far Between", page 8. © Mehd Halaouate

BACK A Red-crowned Parakeet (*Cyanoramphus novaezelandiae*) on Tiritiri Matangi Island, New Zealand. Parakeets come down relatively low to the ground when feeding on native flax flowers like this. That behaviour presents researchers with a great opportunity to catch and sample individuals for Beak and Feather Disease Virus (BFDV). See "A Tale of Two Psittacines", page 14 © Steve Murphy



© Jamie Gillardi

blue-throated macaw

10 years

ANSWERING THE QUESTION of “How many Blue-throated Macaws are there?” is not an easy one. Their habitat, the seasonally flooded savannah in northern Bolivia, is difficult to access and birds can be spread out over relatively large areas despite their limited distribution. Still, attempts have been made to assess their numbers based on surveys of known birds. In the early 80’s information from local people yielded population estimates ranging from 500 to 1,000 individuals.

However, by the late 1980’s the birds had all but disappeared. In 1992 Jordan and Munn discovered a small population which provided the starting point for hopes to expand the species range. Since then, independent surveys have revealed consistently low numbers of observed birds and population estimates between 120-200 individuals. While it is difficult to use limited census data to determine population size across years and between different sites, there is sufficient evidence to show the critically low density of the Blue-throated Macaw, thus confirming the Critically Endangered status of this species, and making it certainly one of the rarest of all parrots.

Since 2002, preserving the remaining wild population of *Ara glaucogularis* has been the focus of an intense ongoing World Parrot Trust project. This project has developed into a complex conservation program, comprised not only of population surveys and searches for additional Blue-throated Macaw sites, but also components of habitat investigation, direct protection of wild nests and outreach with local and national groups.

The World Parrot Trust has had a team in the field in Bolivia since 2002 - working to preserve the Blue-throated Macaw, a critically endangered species. Above, project leader Igor Berkunsky checks the health of a nestling.



© Igor Berkunsky

© Sarah Faegre



© Toa Kyle



© Benoit Gangloff



© Igor Berkunsky



© Igor Berkunsky



Threats and Actions

Our existing Blue-throated Macaw conservation project focuses on direct conservation actions aimed at providing long-term solutions. But first we had to identify the threats facing the Blue-throats and devise plans to address each of those limiting factors.

Wild bird trade | Trafficking is a threat to many parrot species, which are particularly vulnerable to over-harvesting due to their low reproductive rates. The potential of the wild-bird trade to quickly destroy the last remaining wild population of Blue-throated Macaws is a serious issue warranting immediate attention.

The intensity of trade in Blue-throated Macaws during the late 1970s and early 1980s is likely the main factor responsible for the current low population numbers. Thankfully, recorded incidents of active trade during our time in the field have been minimal, likely due to the species' low numbers, its protected status in Bolivia, and our presence throughout their nesting territories.

A shortage of cavities | Quality natural cavities proved to be a very basic limiting factor identified early for the Blue-throats. Over time we have experimented with a variety of nest-boxes to determine what the birds would accept and use successfully. We have tried an assortment of materials, orientations, shapes, sizes and opening dimensions. Macaws curiously investigated all models and in the end they laid eggs mostly in wooden, vertical boxes with large entrance holes. We now have nest-boxes in all the areas we know Blue-throats are breeding.

Since 2007, 4 pairs have used nest-boxes in eleven different attempts. Not only do nest-boxes fill a necessary void for the wild birds, they are also safer than most natural cavities. Boxes don't flood, a major problem with many natural nests, and they are less prone to predation. Bees are also less of a problem with artificial boxes, especially those made of PVC, because bees tend to abandon the boxes after a few months. Nest boxes are also easier and safer for scientists to protect and access, minimizing disturbance around the nest.

Nest failure | Nests fail for a variety of reasons. Predation has historically been our #1 problem. The quest for solutions is challenging, as it can be difficult to identify the predators. Anti-predator defenses are now installed at all nest sites. These can be as simple as metal flashing wrapped around tree trunks and branches pruned back from cavities to abate climbing predators. Maintaining a high level of daily monitoring by volunteers is also a great defense against predation. We have also installed surveillance and trap cameras inside nests to identify visitors. We catch a surprising number of visitors around nests – the most frequent being enormous cockroaches, along with frogs and bats.

In order to help the parents defend their nests we also sought to reduce the time they needed to be foraging far away. We did this by offering bunches of motacú palm nuts, a favourite natural food, near some of the active nests. Because of this, 2010 was the first year in the history of Blue-throat nest monitoring with zero predated nests.

Flooding | The rains can at times be relentless – with some seasons being plagued by days of downpours. In the past, some cavities have filled with water at the expense of either chicks or eggs. Fortunately we have identified all those nests prone to flooding and created drainage holes or roofs to protect the birds from this significant natural hazard. To our delight, no nests have flooded since 2008.

Botflies | When botfly eggs hatch on a macaw, their parasitic larvae burrow under the skin. They are generally benign, especially for larger species. However, we have lost very young chicks (~5 days) to botflies. We have also had older chicks (~45 days) infested and in this case, it is possible for us to remove the larva without harming the chicks.

Brood reduction | A natural phenomenon limiting the Blue-throat's recovery is known as brood reduction. It is a common result of the normal hatching asynchrony in parrots. It

From the top:

Chicks nearly ready for fledging; the day of fledging from a natural nest; a plump, healthy chick at 2 months; success with nest-boxes; installing a PVC box takes teamwork.

happens when those chicks that hatch first and are larger and stronger, outcompete the smaller, later-hatching chicks (see photos pages 4 & 6). While fledging only one chick might work for other species, it is not sufficient for recovery in this case! As a response, we monitor nests daily, identify any chick(s) that need a boost, and help them by hand-feeding. Thanks to our hands-on management, since 2007, no chicks have died because of brood reduction and we have increased the average number of fledglings per nest from one to two.

Plans for the Future

The reality is that the Blue-throated Macaw is now a “conservation dependant species.” That is, we believe the population cannot recover without significant proactive conservation action. Actions include, but are not limited to, all the tactics we have employed over the last decade to increase nest site availability, protect active nests against predators, increase nestlings’ survival, and establish protected areas.

In addition we will focus attention on some new efforts in the coming years.

a) To ensure long-term genetic variation of *Ara glaucogularis* in Bolivia we have been setting the stage for a captive breeding and release program. Birds will be raised at an in-situ breeding and release center and released on protected government land with approval of the Bolivian government.

b) To determine priority release sites and candidate birds for each site, we will be analyzing genetic variability in wild and captive individuals and identifying potential release sites based on the quality of available habitat and current threats.

c) To better understand how this species is using the habitat we will use telemetry and satellite tracking. The Beni savannahs remain flooded for six months every year, making it impossible to follow the flocks during the non-breeding season. As a result, we have no information about bird movements. To know where the birds are during the

rest of the year will help us to propose protected areas for Blue-throats.

d) To increase awareness and advocacy for the species within Bolivia and internationally, we will develop and distribute print and online materials, articles in popular press, and survey the materials’ effectiveness.

Through this decade-long sustained and collective effort, many important discoveries have been made about the Blue-throated Macaw’s habitat, its unique nesting ecology, and the issues limiting its recovery. Key factors include the protection and management of wild nests, the restoration of select habitat areas that have been affected by cattle ranching, and the education of local stakeholders in determining long-term land management strategies.

The future of this species will be determined by the actions we undertake within the next few years. Timing is urgent and the need is great. We appreciate and welcome your support in helping to save this critically endangered species.



Contributors: Igor Berkunsky, José A. Díaz Luque, Federico P. Kacolis, Gonzalo Daniele, Steve Milpacher, James D. Gilardi, & Steve Martin. *Edited by* Joanna Eckles



(Ara glaucogularis)

Status: Critically Endangered. Found only in the seasonally flooded savannahs in northern Bolivia.

Wild Population: 115-120 known individuals

Reproductive Activity: 10-15 breeding pairs per year

Project Focus: The species was rediscovered in the wild in 1992. Since 2002 intensive conservation work has been conducted by World Parrot Trust biologists in order to identify and solve the critical parameters delaying the population’s recovery.



blue-throated macaw

stories



© Jamie Gilardi

In late 2005, we were closely watching one of the few successful pairs of Blue-throats. They nested in a unique cavity with an unusual gap in the side and multiple entrances, and their chick was in superb condition, a week or two from fledging. Normally after parrots feed their chicks mid-morning, most will fly a long way off to feed, preen, rest, etc. But on this one day, the adults stuck close to the nest. It was fascinating to watch them relax and preen one another and evidently just enjoy each other's company. At one point, the female leaned into her mate and rested her head on his shoulder and they both perched motionless. To complete this captivating scene, the parents could actually see their chick in the nest ... and the chick could see them.

We may never know what motivates parrots to form these powerful pair bonds – and to sometimes stick with them for decades. And while it's generally unwise to project human emotions onto any animal, I was just thrilled to have had this brief and enchanting peek into the intimate world of a wild parrot family. I came away thinking that there was something about the adults' calm satisfaction with their relationship, their nest site, and their chick which gave me hope that these critically threatened birds may yet make it back from the brink of extinction.

-Jamie Gilardi, World Parrot Trust Director

It wasn't a normal day. A technician of the National Natural Resources Agency was supervising our work in order to approve our Rescue Center. We decided to visit a site where we usually have good luck finding macaws. We approached on foot, walking behind some palm trees when we heard a group of Blue-throats behind the pens.

The first thing we noticed was the voice of juveniles in the flock. Sure enough, the first group we spotted was a family of five – the parents and three juveniles! Through the scope the birds were so beautiful in the sunrise light! We looked closer and YES! all three juveniles were leg banded, their bands shining in the sunlight.

We were excited. There can't be a better scene to show, especially for the visiting technician's first sighting of Blue-throated Macaws!

We started to scan the tree and found more birds! To our surprise they were also leg banded! In a single tree we had seven leg banded birds plus another adult pair! Then we



favouirites

The 2007-2008 breeding season was the best on record with the unprecedented survival of 2 and 3 chicks per nest. Below is the first family of five wild Blue-throated Macaws ever recorded (January 2008).



© Steve Seibel

Photos © Toa Kyle, Sarah Faegre and Igor Berkunsky



© José A. Díaz Luque

heard another call 100 m away and there, perched in one of the artificial nest boxes, was another pair.

I can't imagine a better situation that could summarize all our conservation efforts with the Blue-throated Macaws. All those leg banded birds we had taken such care of - some we have fed, some were infected by botflies which we removed. And those adult pairs using the nest box... it was so beautiful.

-Igor Berkunsky - Blue-throated Macaw Project Leader since 2007



© José A. Díaz Luque

When I joined the Blue throated macaw project in 2008, all I had in mind it was an incredible passion for the parrots. I was really excited to be involved as a volunteer with the team in Bolivia.

That first season was hard with unfavorable conditions causing few parrots, including blue-throats, to breed anywhere in the area. I was so happy to return in 2009. We all had high hopes for the new season. Sure enough, things got exciting right away. We found nests as soon as the season started.

Two out of three eggs hatched from the nest I was monitoring. At first the parents fed both chicks but soon, the small chick's development began to fall behind. The possibility that the chick would die was high. Its was a critical moment - we needed to assist the chick by feeding it formula. If we didn't, it would die.

However, if we assist these small chicks during that critical period, the parents usually start to feed them again. That's exactly what happened!



© Steve Millpacher

I remember the first time we flew a Blue-throated Macaw outside! They are magnificent flyers and wonderful additions to our educational shows. They truly eat up the sky as they soar high over the theater.

They are also the most destructive of all the parrots in our collection! They chew anything and everything. The browse, wooden perches, and toys we provide are modified or destroyed in minutes! The nest boxes for the breeding birds have to be replaced each year. But, the most amazing thing to me is how fast a Blue-throat can take apart its cage. For the Blue-throats, the special screws holding their cages together are little more than a mildly challenging enrichment item. Almost all the pairs in our shows know how to remove the screws. One pair removed over 20 screws in less than an hour! We now modify their cages so the screws are all on the outside. Still, that doesn't stop them from getting their beaks through the wire to work on the screws or to unlock a clip and open the door.

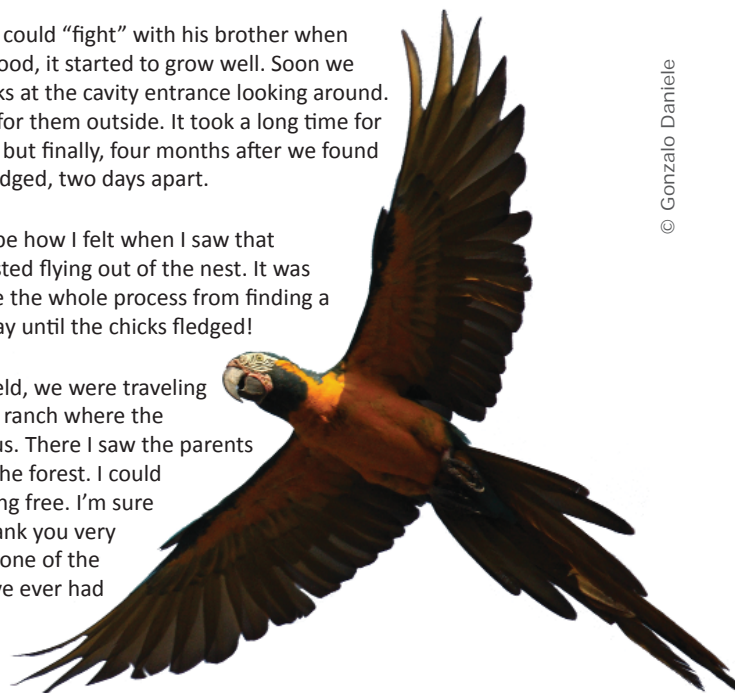
Blue-throats also have a tendency toward aggression after a few years. They are difficult parrots, that's for sure. But, they are incredibly beautiful, intelligent and spectacular in flight. I so look forward to the day when our birds return to their native homeland and eat up the sky over Bolivia. - Steve Martin, *Natural Encounters, Inc.*

As soon as the little one could "fight" with his brother when the parents came with food, it started to grow well. Soon we started to see both chicks at the cavity entrance looking around. There was a new world for them outside. It took a long time for them to be comfortable but finally, four months after we found the eggs, both chicks fledged, two days apart.

It's impossible to describe how I felt when I saw that small chick that we assisted flying out of the nest. It was wonderful to experience the whole process from finding a nest with eggs all the way until the chicks fledged!

On our last day in the field, we were traveling on horseback to a cattle ranch where the airplane would pick up us. There I saw the parents and both chicks fly out the forest. I could see all four of them, flying free. I'm sure they were telling us "thank you very much." It was definitely one of the best moments that I have ever had doing field work!

-José Antonio Díaz Luque, Field assistant, Blue-throated Macaw Project



© Gonzalo Daniele

FEW AND FAR BETWEEN

Saving the Yellow-crested Cockatoos

By Dudi Nandika & Dwi Agustina (Konservasi Kakatua Indonesia)

Contributors: Stewart Metz (The Indonesian Parrot Project)

Jamie Gilardi, Mehd Halaouate & Steve Milpacher (World Parrot Trust)

It may be difficult for any parrot enthusiast to imagine that a white cockatoo with a yellow crest could be a critically endangered species, given the abundance of the Sulphur-crested Cockatoo (*Cacatua galerita*). However, while Australia's most iconic parrot species is thriving, one of its closest relatives, the diminutive Yellow-crested Cockatoo (*Cacatua sulphurea*) is in serious decline and now considered one of the world's rarest parrots.

THE FUTURE of the critically endangered Yellow-crested Cockatoo is uncertain. In the past 40 years it has suffered massive population declines, estimated at more than 80%. While its habitat requirements have proven somewhat flexible, its decline is due almost entirely to unsustainable exploitation for trade. Large-scale logging and conversion of forest to agriculture across its range has exacerbated its loss. In fact, on Sumba Island, over the last hundred years, the decline in numbers of cockatoos has paralleled closely the loss of usable habitat. The use of pesticides since 1989 is a further potential threat.

The World Parrot Trust (WPT) joined the ongoing efforts of the Indonesian Parrot Project (IPP), and Konservasi Kakatua Indonesia (KKI), building upon a multi-year collaborative effort to study and conserve the Yellow-crested Cockatoo. Our combined work to save this imperiled species focuses primarily on:

- Field research intended to bring about a better understanding of the species' ecology and how it uses its environment;
- Census work to assess the current number of birds remaining in the wild.
- Educational efforts to reach people in the local populations to both help

them understand the value of keeping these birds in the wild while at the same time engaging them in our work. By educating the local community we hope to help researchers and local park staff to better support the birds.

Staff members from all three organizations contributed to this effort. Most of the work in the wild has been carried out by field staff consisting of Dudi Nandika and Dwi Agustina, researchers from Indonesia, as well as Mehd Halaouate, professional field guide and Indonesia Program Director for the World Parrot Trust.

The team initiated surveys of *Cacatua sulphurea* to gain new information about the remaining wild population and to understand the conservation needs of this cockatoo to survive. Sadly, what we found was significantly less birds than have been recorded in surveys over the past 10 years.

Into the Field

There are four generally accepted subspecies (three sub-species are endemic to Indonesia and one sub-species is shared with Timor Leste): 1) *C. s. sulphurea*, the nominate race, found in Sulawesi; 2) *C. s. parvula*, found across Nusa Tenggara (a necklace-like chain of islands in the southern part of Indonesia) with the largest population

on Komodo/Rinca Islands and also found in Timor Leste 3) *C. s. abbotti* found solely on Masakambing Island in the center of the Java Sea; and 4) *C. s. citromocristata* found solely on Sumba Island (map page 9).

The first studies started in September 2011 when a team from KKI/IPP travelled to Masakambing. In January and February 2012 they went on to Sumba. A later trip from March to June included Dudi and Dwi (KKI/IPP) along with Mehd and Jamie Gilardi (WPT). All told, they travelled over hundreds of miles by air, by boat and on foot, visiting several islands in Indonesia to assess the current status of these birds.

Komodo National Park, East Nusa Tenggara: It is here that perhaps the highest density of Yellow-crested Cockatoos may still occur. Analysis of satellite maps shows that of all surveyed locations, this is the island where substantial tracts of forest can still be found.

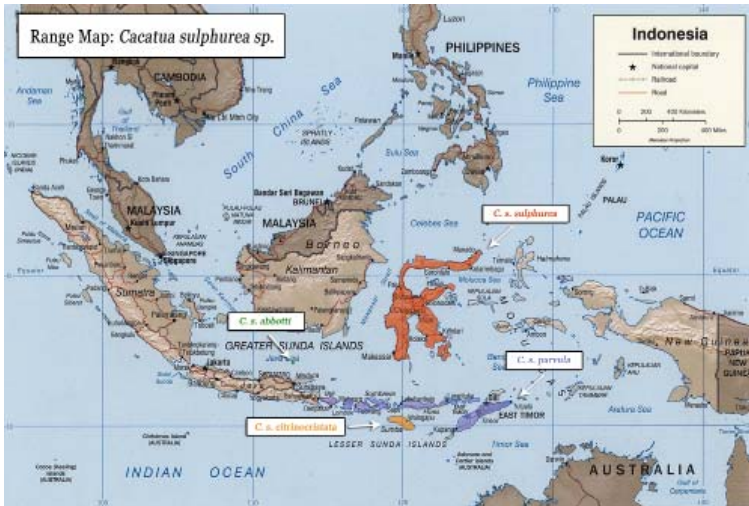
The ironic thing about the cockatoo population on this island is that it has benefitted from the protection and conservation of the Komodo Dragons (*Varanus komodoensis*). The chicks are certainly on the menu of the young dragons during the breeding season, as the reptiles spend the whole of their young lives on the trees avoiding being eaten by adults. It is easy for a young dragon to enter a nesting cavity and help itself to anything inside. Future efforts to protect the parrot will no doubt benefit from efforts to protect the cockatoos' nesting sites from this predatory pressure.



© Dudi Nandika & Dwi Agustina



© Mehd Halaouate



YELLOW-CRESTED COCKATOO
(*Cacatua sulphurea* sp.)

AKA Lesser Sulphur-crested Cockatoo

Extremely rare. Now classified by IUCN as Critically Endangered with population declines estimated at more than 80%. The nominate race and all related subspecies have been reduced to small remnant populations of only a few hundred birds scattered throughout Indonesia. Three subspecies, *sulphurea*, *abbotti*, and *citronocristata*, are the most imperilled. Threats include exploitation for the bird trade and deforestation for logging and agriculture. The subspecies *parvula* is a bit healthier though the population likely remains under 1,000 birds.

(clockwise from top)
A pair of *Cacatua sulphurea abbotti* inspect a tree hole;

C. s. citronocristata perched and calling on the island of Sumba;

C. s. parvula on Nusa Penida, an island of the south coast of Bali;

Researchers Dudi Nandika and Dwi Agustina watch a Komodo Dragon on the island of Komodo - where cockatoos seem to be holding their own.

(facing page)
C. s. abbotti



© Jamie Gilardi



© Mehd Halaouate



Pasoso Island, Central Sulawesi: This island holds one of the best possibilities for the species' future. The birds are still found in relative abundance and most importantly can be protected with minimal funding and effort. The best way to achieve this is to involve the five families living on the Island in the conservation work. As on Komodo Island, the cockatoo benefits from an unrelated local conservation program – a sea turtle program already in place. Unlike on Komodo, with its famous predatory lizard population, the turtles present no danger to the cockatoos.

Manupeu Tanah Daru National Park & Poronombu Forest at Sumba, East Nusa Tenggara: In some sites on Sumba the cockatoo populations are still good enough to proceed with conservation fieldwork. Implementing ways to boost the birds' breeding efforts and protecting nest locations are high priorities. Suitable nesting trees are very few, and the competition between different bird species is high.

At other sites such as the forest in Poronombu, the main problem is that the forest is outside the National Park boundaries. Even though the cockatoos are nominally protected, the trees for nesting and for foodstuffs are not, and some logging is still taking place here for local use in building houses. As such, the numbers of Yellow-crested Cockatoos here may not increase and the birds may disappear from this region. The only way to save the Poronombu forest is to declare the region a Nature Reserve as it is too small to be considered for a National Park.

Another factor that will no doubt affect the population of the Yellow-crested Cockatoo is the agricultural changes happening in the whole of Sumba, where every single patch of land is turned to paddies and rice is becoming the staple diet on the Island. Whereas corn, papaya and other

human foodstuffs previously served as supplements in the cockatoos' diet, those foods are more and more in limited supply. Without them, the birds will have to rely entirely on what the dwindling rainforest produces.

Masakambing Island, Masalembu, East Java: Over the past 15 years, the population of Abbott's cockatoos (*Cacatua sulphurea abbotti*) has vacillated between only 5 and 10 individuals, likely making it the rarest of all cockatoos. Fieldwork from September - November 2011, and then again in 2012, found 15 cockatoos, a clear increase, including 5 adult pairs (apparently mated), one "teenager" male and two juveniles. Ongoing educational efforts on the islands initiated by KKI/IPP including school visits, posters, and community presentations appear to be working as the birds' population remains intact, and very slowly on the rise.

Future Outlook

On some islands the outlook for the Yellow-crested Cockatoo is more desperate than on others. Prioritizing which area to focus on first is vital and at the same time, a difficult decision to make. In some places there are so many factors affecting the birds that the conservation of the species in those locations may be nearly impossible to achieve. As indicated, the situation appears far worse than was previously known, such as in Sulawesi. The results of this fieldwork are being used to formulate and implement further conservation efforts in key locations where they can have the greatest impact. These efforts will likely include:

Field Research: Conducting bird counts to further census current wild populations, assessing availability of foodstuffs and use of habitat, and assessing causes of poor reproductive success.

Community Involvement/Education: Implementing a C-A-P (Conservation, Awareness and Pride) program for schoolchildren and adults in several

islands, coordinating the program and assessing the response. These efforts originated by IPP and KKI have proven to be an essential and effective means of affecting local attitudes in favour of protecting the cockatoos and away from viewing them as a resource to harvest.

Conservation: Maximizing the species' reproductive potential through the implementation of nest predator avoidance protocols, maintenance of wild nests to avoid losses due to nest flooding and decay, and the provision of artificial nests to increase overall nest availability. We also aim to build local capacity by training local researchers and project participants.

Reduce Illegal Wild Bird Trade: Recruiting local conservation officers, law enforcement officials, and village leaders to collaborate with us in efforts to emphasize the problems inherent in non-sustainable trapping and the critical need to suppress it.

PARROT SPECIES facing impending extinction are not isolated to the wilds of Central and South America, but are found across all bio-geographical regions where psittacines are found. The IPP/KKI and WPT team is proving that in-situ programs in developing nations can achieve significant change in addressing the decline of threatened and endangered species, with relatively limited resources, but through collaboration and partnership building at a local level.

The Yellow-crested Cockatoo and its sub-species will require the on-going aid of many organizations to ensure numbers are stabilized and future populations are safeguarded. IPP/KKI and WPT are committed to supporting the work needed to achieve that goal.



Acknowledgements: This important work in 2011/12 was made possible by the outstanding financial support from the Ocean Park Conservation Foundation (Hong Kong) and the Disney Worldwide Conservation Fund.

(clockwise from top)

An education program termed C-A-P (Conservation, Awareness, Pride) engages both youth and adults;

A school visit on Sumba;

C. s. parvula on Nusa Tenggara;

Nest boxes under construction - Sumba.

(facing page)

C. s. parvula



© Jamie Gilardi



© Mendi Hataoutate



© Dudi Nandika & Dwi Agustina



Conservation Hero

<< Stewart Metz

Stewart Metz has been a physician for 32 years, having graduated with honors from Yale University and Yale Medical School. He was a tenured Professor of Medicine at two major universities before leaving medicine in 2001 to dedicate himself to parrots – specifically their welfare in captivity and conservation in the wild.

In 2002 Stewart was appointed as Director and CEO of the **Indonesian Parrot Project** (then called Project Bird Watch), a Non-governmental Organization dedicated to the conservation of Indonesian Parrots.

What was your first experience with parrots? I was visiting a “parrot zoo” in Miami with my family. All the parrots were stunning but I quickly became captivated by the Salmon-crested (Seram) Cockatoo (*Cacatua moluccensis*) in the center ring. Then, after six-months of studying up on parrot care and especially cockatoos, I obtained my first bird, an “Umbrella” Cockatoo (*C. alba*). A year later, I took home “China,” a Salmon-crested Cockatoo who played a major role in changing my life’s goals towards parrot conservation.

How did you become aware of the welfare challenges facing captive parrots? I quickly recognized their special needs (their “parrotness”) in captivity. I also realized that many of these sentient creatures were not being treated well in captivity. My initial thoughts were to focus on education and to promote new laws providing at least the same minimum care for parrots as are given to dogs and cats. My first foray into these issues included forming the “World Parrot Welfare Alliance” in 2001, with the support and help of Jamie Gilardi and the World Parrot Trust. This action, while limited in its success, did open my eyes more to the problems.

Did you focus on welfare of captive parrots or wild parrots first? I first experienced the problems in keeping parrots in captivity, but I saw a bigger opportunity to make a difference in the wild, especially in Indonesia where so little, relatively speaking, had been done. When I discovered that the then nascent Internet yielded virtually no information about the status of wild Indonesian cockatoos, I thought that there might be a role for me there.

Tell us about your travels to see and help parrots. I first travelled to Indonesia in 2001 - not surprisingly, to Seram. It was then, and remains, a magical place. I’ve also had the good luck to “follow the parrots” to Brazil, Ecuador, Belize, Costa Rica, and Australia.

The Indonesian connection resulted in part from the complex behaviour, beauty, and intelligence that I had come to appreciate, especially of *Cacatua moluccensis*, reinforced by my own Salmon-crest “China”. However, at the same time, I saw that these spectacular characteristics could easily stagnate in captivity. When I finally made it to Seram, I was immediately impressed by the gentleness of the villagers in the remote parts of the Archipelago. I never had a threatening episode in my 11 years visiting there. Of course, the depressing poverty - as well as the widespread lack of concern about the welfare and conservation of birds - were immediately striking as well. To earn the people’s trust and collaboration, it was critical to indicate that we were not leaving in a year or two after our own work was done. So many westerners had come, studied the animals and forest there, and then left when their studies were completed.

You’ve befriended many people while doing parrot conservation in Indonesia. How have those experiences influenced you? I’ve had so many incredible experiences! One that taught me a lot and stands out, even after so many years, revolves around Sopi, a cockatoo trapper on Seram Island. One day, Sopi said to me: “Father, we know now that we were wrong to trap parrots; you have shown us a better way.” I reminded him that the trappers had not done anything wrong—they merely did what poverty forced them to do. Not too long after that, Sopi came down with cancer which quickly spread through his body and reduced this strong, proud man to a frail and obviously scared one.

A few months later (it was 2006), we returned to Seram for the first release of rehabilitated cockatoos back into the wild. Immediately after the release, we literally ran to the village to see how Sopi was doing.

We were told that he had died just minutes ago, simultaneous with the release of the cockatoos. Just before he died, he had been asking over and over “Have the birds been released yet?”

It seems that Sopi received his freedom from suffering at almost precisely the same time the cockatoos received theirs. He died in the very clinic which we, members of the Indonesian Parrot Project (IPP), had built (with funding from Seacology) for the villagers. I was invited to his funeral, an honor rarely granted to an outsider, and was asked to sit alongside Sopi in the presence of only his widow and the Priestess. I was then allowed the honor of being the first to scatter petals into his grave. My treasured interactions with Sopi put a human face on the bird trappers and remind us that there is no justification of demonizing them. Sopi also made me realize that poverty can not hide the fundamental goodness of many people.

What do you feel have been the most successful efforts to improve the welfare of captive birds? As it is in Indonesia, education (a “paradigm shift” in the way that we “see” and treat captive parrots), reinforced by better legislation, provides the best hope for sustained welfare. Improvement in veterinary care remains critical. Ironically, the principles for the compassionate treatment of parrots were actually espoused by some writers as early as the 18th C. France and 19th C. England and have only recently been “re-discovered” by parrot behaviourists.

Tell us about the Indonesian Parrot Project. IPP actually started in 1999 as “Project Bird Watch”. I became the Director in 2002, when we changed our name to IPP. I think that our successes lie first in our program to teach children about the need to conserve their living heritage. Seeing excited and proud Seram children watch our release of cockatoos back to the wild is a big



© Stewart Metz

part of that program. I consider our Rehabilitation and Release Program on Seram largely a success—not because of the relatively limited number of Seram Cockatoos we have released (about 150 already) but because these releases, with the accompanying fanfare, have helped children to appreciate the special nature of their birds.

After working for about eight years on Seram, we have turned our focus to Yellow-crested Cockatoos (*C. sulphurea*), especially the ultra-rare Abbott’s Cockatoo, over the last five years. Since there are only about 15 individuals left in the wild, this work has the possibility of yielding very productive, if not critical, achievements in conservation. We were able to continue our studies with recent funding by Loro Parque and Disney, and especially now that we have started a collaborative effort with the World Parrot Trust.

What do you think are the most important conservation concerns for the parrots of Indonesia? Trapping and habitat destruction are the most important concerns, although risk varies from species to species. These may be best addressed, in my opinion, through education plus the provision of sustainable resources to allow a subsistence which does not depend on trapping. For IPP, “education” has been embodied in our C-A-P (Conservation-Awareness-Pride) program for children. This program is being led by our remarkable Indonesian collaborators

Dudi Nandika and Dwi Agustina, in our “sister NGO”, Konservasi Kakatua Indonesia (“Conservation of Indonesian Cockatoos”).

Our work leading eco-tours, collaborating with Seram authorities to actively fight smuggling, and working for new laws to protect parrots were, I think, helpful, but were largely restricted to North Seram and therefore were of limited lasting or widespread value. However, all of us in IPP are proud that these efforts have led to stoppage of all trapping in the area where we worked—demonstrating that this model can be used successfully to reduce or even eliminate smuggling. Preservation of habitat for these long-lived parrots goes hand in hand with that. BirdLife Indonesia (now Burung Indonesia) said it best: “How would you like to live in a cage?”

Parrots give me great joy and life enrichment. I think that all who truly “love parrots” need to repay that debt for both captive and wild parrots in whatever way they can. If we can do that, we can receive rewards that far exceed the “costs,” especially the thrill of seeing these miraculous birds flying free in their own homes in the wild.



(top L) Stewart with a *C. sulphurea* he found hidden in a bird market.
(above) A wild Salmon-crested (Seram) Cockatoo (*C. moluccensis*) after rehabilitation.
(background) This group represents perhaps the entire world population of *C. abbotti* in a single photo.



On two different islands, two different psittacines - The Red-crowned Parakeet (L) and the Echo Parakeet (above) - face the challenge of one famous disease.

a tale of two psittacines

by
Bethany Jackson
and
Claire Raisin

ACROSS THE GLOBE, parrot conservation programs are managing a growing suite of threats. Arguably, the most sensitive of these threatened populations are the island endemics – those that are found nowhere else. Not only do these species have to cope with introduced predators and competitors, habitat destruction and urban encroachment, they have to do all of this within the geographic limitations of an island. Many of these populations have low genetic variability due to founder effects, bottlenecks and small size. This can reduce the population's ability to respond to rapid environmental change or threats such as new diseases.

The endangered Echo Parakeet (*Psittacula echo*) of Mauritius is a conservation success story, having been recovered from approximately 20 known birds in the 1980s. It is the last remaining endemic psittacine in the Mascarene Islands in the Indian Ocean. Echos now exist on an island that has less than 1% of the original native forest cover remaining, with introduced competitors and predation from cats and rats presenting a constant threat. In 1987, the Mauritian Wildlife Foundation (MWF), the Government of Mauritius

National Parks and Conservation Service (NPCS) and a number of international conservation bodies intensified the recovery program to save this important species. As a result of intensive management actions that included nest site monitoring, assisted rearing of chicks, and supplementary feeding, the population increased to an estimated 300 birds by 2005, and looked set to continue growing.

It seemed all was well.

a CROSS THE INDIAN OCEAN, the story was much the same but with different characters. New Zealand's parrots evolved in isolation, free from mammalian predators and human mediated habitat alteration. They developed some extraordinarily unique and iconic characteristics, typified by the large, flightless, nocturnal Kakapo (*Strigops habroptilus*). With the arrival of humans came habitat destruction and the introduction of stoats, rats and cats. This suite of new threats cut a swathe through native bird populations, causing the extinction of at least 51 species in New Zealand in just 150 years. Many,

such as the Red-crowned Parakeet (*Cyanoramphus novaezelandiae*) are now rarely seen nesting on the mainland where these threats still exist. Instead, they exist mostly on predator-free offshore islands.

NEW ZEALAND has led the way in island restoration projects, removing predators and restoring habitat to enable the persistence and recovery of many native species of birds. The Tiritiri Matangi open island sanctuary is one such haven for threatened species. This island was converted in the 1980s from barren farmland to a native fauna and flora ark, through the inspirational efforts of a volunteer army who planted nearly 300,000 trees during a 10-year period. Active removal of all mammalian pests, and the ongoing management by the Department of Conservation and the volunteer community group (Supporters of Tiritiri Matangi), enables 30,000 visitors each year to experience an island alive with native birdsong. The Red-crowned Parakeet is abundant on this island, with their vibrant green plumage, proud red crowns, and characteristic chattering calls.



Beak and Feather Disease Virus has now been found on both New Zealand and Mauritius. Feather damage can be dire (below) and results deadly. If birds live through infection, they may carry permanent signs (above).

RECENTLY RESEARCHERS HAVE FOUND there is something else these two parakeets have in common – Beak and Feather Disease Virus (BFDV - also known as PBFV). More than just a bad hair day, this parrot virus can be a serious threat to some species, with young birds dying, and adults succumbing after months of feather loss and immune system collapse. This is a challenge any species could do without, let alone the endangered Echo Parakeet, or recovering populations of Red-crowned Parakeets. Having survived the challenges associated with human colonisation, these two parakeets now face a new, and perhaps more insidious, threat – one that can affect them in even the most pristine of habitats. As we are learning, the impact of this virus in the wild is complex and the challenge for conservation management of these birds is to understand the diverse ways in which it presents itself.

In 2008, BFDV was detected for the first time in wild Red-crowned Parakeets of Little Barrier Island, by researcher Dr Luis Ortiz-Catedral. Since then, Tiritiri Matangi Island and Fiordland (South Island) have also confirmed the presence of the disease. BFDV was found in the Echo Parakeet in 2006 by the Mauritian Wildlife Foundation field team, and was associated with some mortality in this

species. Researchers from the Durrell Institute of Conservation and Ecology in the UK have since detected the virus in blood samples taken from birds both before and after the apparent disease outbreak. Though the Echo population now numbers over 500 birds (*PsittaScene*, August 2010) the disease is still cause for extreme concern.



KNOWING HOW CONTAGIOUS BFDV can be, the Echo Parakeet field team had to rapidly change the way the population was managed. All invasive techniques such as rescuing, clutch manipulations, hand-rearing, fostering and releasing were stopped immediately and no more birds were taken into captivity. The management program assumed a much more “hands off” approach and from this point, no matter how poorly a chick was developing in the wild it

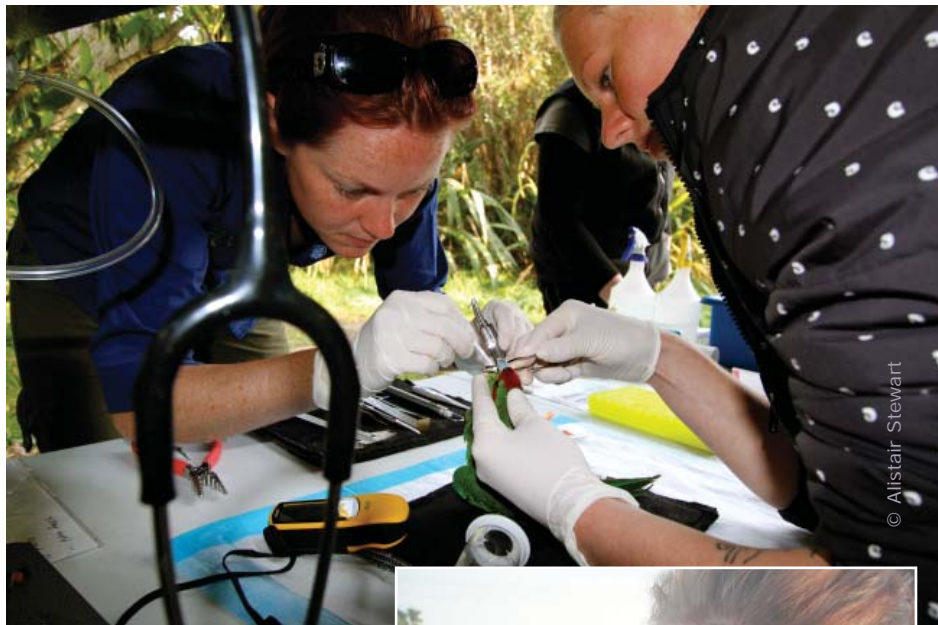
would not be removed from its parents. It was hoped these steps would reduce the spread of infected feather dust and material between sites. A program of systematic sampling for BFDV was also initiated with all chicks and fledglings being screened. Adult birds were also regularly sampled to assess their infection status.

In New Zealand, the Department of Conservation and local researchers launched a response to survey parrots across the two main islands, trying to determine the distribution of this virus, and whether it threatened more critically endangered parrots such as the Orange-fronted Parakeet (*Cyanoramphus malherbi*) and the Kakapo.

EASTERN ROSELLAS (*Platycercus eximius*), a species exotic to New Zealand but established mainly on the North Island since the early 1900's, are known to carry the virus and most likely maintain it in the wild. The challenge for conservation managers of endemic New Zealand parrot populations is to determine the role rosellas may play as a disease reservoir. If they are able to sustain the disease at a higher prevalence, their presence may limit the options for native



© Bethany Jackson



© Alistair Stewart

Birds like this Red-crowned Parakeet are first carefully caught in mist nets. Each is then tested for a number of diseases using samples from feathers, blood, faeces and skin.



© Tamsin Dunn

species restoration where native parrots and introduced rosellas co-exist in the wild. Given that the major focus of parrot conservation in New Zealand is through reintroduction and translocation programs, understanding where the virus occurs is critical to inform management decisions around the movement of birds.

Disease and conservation

THE ISSUE OF DISEASE affecting the conservation status of wild birds is not new, and the risks of emerging diseases have become more prominent with some recent dramatic examples. In 1999, American Crows (*Corvus brachyrhynchos*) were reported to be literally falling out of the sky in New York City. It was not long before scientists discovered West Nile virus had reached America, and was infecting and causing mortality in a range of bird species, as well as in humans. Crows seemed to be particularly susceptible, and research suggested that in some states declines of up to 60% of the population occurred. The impact on crows was so obvious, they became a reliable indicator of the spread of the virus, and crow deaths became one of the surveillance tools used to monitor this disease.

Fortunately, the emergence of BFDV in most populations is not so apocalyptic. The virus usually causes deaths only in

very young birds, so it is less common to see a population crash. However, it may be that subtle effects such as failure to breed, and egg and nestling deaths are harder to see in a wild population, and can cause longer term setbacks for recovery programs. For small populations of endangered birds, even a low mortality rate can have a significant impact on the long-term viability of the species. These effects can be particularly severe when considering their impacts on the founding individuals of new populations that result from translocation or reintroduction projects.

Global disease spread is not a new concept; however BFDV presents an interesting case study. How did it reach across the globe from its presumed origins in Australia? What role does the legal and illegal trade in parrots play in moving this virus? Did it really originate in Australia? Experts in the virus and molecular studies are still testing the possibility of multiple strains of the virus that may include variants that originated in other countries. Molecular studies have led to a CSI-like approach to this disease, tracing its origins and tracking its movements. With technology that lets us determine each virus' genetic "signature", we can now tease apart the ways in which this virus moves and changes. The key to understanding the history and origins of

BFDV lies in this level of investigation - DNA finger-printing of the virus. This is one part of the puzzle that will help us understand, and perhaps manage, this threat.

Understanding the threat

ALTHOUGH WE KNOW A LOT ABOUT BFDV, particularly in pet birds, there is much to be learnt about the way this virus affects wild populations, particularly those under pressure from other threats and small population sizes. BFDV does not cause the same symptoms or mortality rates in all species, and testing, whilst far more advanced these days, still has some limitations that further hamper our understanding. The way countries manage this disease will depend on the parrot species they have, the environment in which those species exist, the local threats and other stressors such as habitat alteration, climate



Birds are released after testing and conservation managers use test results to help stem the spread of disease, a real risk to threatened or recovering species like these.

change, and perhaps most importantly, the way in which that country prioritises conservation of their native species.

What can we do?

WHILST VACCINES HAVE BEEN DEVELOPED and are theoretically possible, the cost to bring these to the point of commercial availability, and to test them in a range of critical species, means they are unlikely to be a realistic option for the future.

It is very possible that many of the wild strains of BFDV around the globe have been the result of accidental or deliberate release of pet or exotic parrots into the wild. Engaging and educating owners of pet parrots on the risks for local/native parrots, and responsible parrot ownership is a crucial part of managing any further outbreaks in both New Zealand and Mauritius, as well as other parrot conservation hotspots. There are many other diseases that can make their way into the wild this way.

The illegal trade of parrots, by virtue of its covert nature, is not subject to standard quarantine measures or disease identification during movements of individuals. Globally, the illegal trade in wildlife is considered second only to the illegal trade in narcotics, and is a largely unquantifiable risk. The

historical expansion of BFDV was likely due to both illegal and legal trade in wildlife. However, in countries such as New Zealand with current import restrictions on exotic psittacines, it is the illegal trade that will pose an ongoing risk for introduction of novel strains, as well as other exotic diseases. Illegal trade is driven by ongoing high prices and demand for species that are either CITES listed, or subject to trade restrictions imposed by various national policies. The impacts of this trade are felt at many levels; not only through disease risks, but also the effects of removing breeding individuals from often threatened or critically endangered species can have long term impacts on the survival of small populations. Understanding these impacts, as well as the risks of disease spread, and assisting local authorities with policing this trade, are vital components of parrot conservation worldwide.

a large part of the conservation management for endangered parrot species worldwide is to reintroduce birds to new areas and create insurance populations, as well as provide varying levels of intensive management. It is important we learn more about BFDV so that we can understand the impacts of this disease on establishing or recovering populations. Active management of threatened species can

also introduce disease threats through translocations, and so conservation managers have a role to play in controlling the spread of this and other diseases. However even owners of pet parrots can help address this threat, with responsible pet ownership, education of other parrot owners, and prevention of accidental releases.

Special thanks to: the New Zealand Department of Conservation, the SoTM (Supporters of Tiritiri Matangi), Murdoch University, Auckland Zoo staff and Auckland Zoo Conservation Fund for supporting this work; and to Dr Arvind Varsani, Molecular Virologist at University of Canterbury who processed the majority of samples free of charge as a service to understanding this disease further.



Bethany Jackson is a PhD candidate at Murdoch University studying BFDV in New Zealand psittacines. She is a veterinarian at the Auckland Zoo and has worked in private practice and on conservation projects in Australia, New Zealand and South America.

Claire Raisin is interested in the conservation management and genetics of small and recovering populations. During her PhD she studied the spread of PBFD, the inbreeding and genetic diversity in the Echo Parakeet and the impacts of conservation management on species recovery.



Psitta News



Photo: © Dana Allen PhotoSafari-Africa.net

parrotnews

CITES fails to protect Greys

The CITES (Convention on International Trade in Endangered Species) Standing Committee recently approved the annual export of 3,000 African Grey Parrots from Cameroon.

Despite the best efforts of the World Parrot Trust and the over 40,000 signatories who supported our petition against the trade in Grey parrots in Cameroon and Congo, CITES' ruling ultimately failed to protect the birds from unsustainable trade, ignoring sound science, global public opinion, and the terms of their own Convention.

Rather than ruling to protect these Globally Threatened Species, they instead chose to reopen trade from Cameroon, allowing 3,000 birds a year to now be legally exported from that country. As a result 6,000 birds will be taken from the wild as roughly 50% of these birds die between trapping and export. CITES also failed to suspend trade from the Democratic Republic of Congo. This is despite Congo's repeatedly exceeding their annual quota of 5,000 birds.

But we'll continue the fight! The wild bird trade has been devastating to Grey and Timneh Parrots - with massive population declines taking place in nearly every country where they are found. But despite the CITES setback, the trends are overwhelmingly positive: ten years back, there were seven countries exporting these birds; today there are only two. Back then, over 30,000 birds were being legally exported each year; today the combined quota is limited to 8,000 birds - a decline of over 70% in one decade.

In the coming months WPT will redouble our efforts by:

- Pushing to ensure that both species - Grey and Timneh parrots - are uplisted to Appendix I (meaning no commercial trade allowed)
- Helping local governments to crack down on trade
- Supporting efforts to rescue, rehabilitate and release confiscated birds back to the wild

within the family environment. A huge lecture theatre featured four speakers: Neil Forbes, John Hayward, Rosemary Low and David Woolcock discussing Veterinary care, Diet & Nutrition, Behaviour, Training & Enrichment, Security and Breeding.

WPT had a very popular stand and successfully raised over £1,040.44.
-David Woodcock, Paradise Park

Grey Petition - by the numbers

Our change.org petition to the CITES Secretariat asked that the CITES Standing Committee suspend all trade in African Grey Parrots (*Psittacus erithacus*) from the countries of Cameroon and the Democratic Republic of Congo.

The outpouring was tremendous. In just 9 days we exceeded our goal of 40,000 signatures and delivered the petition to CITES. While in the end, they failed to protect the birds, we are heartened by the level of care and support for this work from throughout the world.

Total signatures = **41,387**

Total countries & territories: **139**

Country	Count
United States	30,789
United Kingdom	2,049
Japan	1,433
Canada	1,081
Australia	612
Italy	507

+ Full listing by country on psittascene.org

Source: <http://www.parrots.org/flyfree/cites-results.html>

Training with Art and Science

Natural Encounters, Winter Haven, FL
February 2-7, 2013

In this 5-day workshop attendees will learn the tools to effectively and humanely create a relationship that will enrich both their parrots and themselves.

☎ (407) 938-0847

🌐 www.naturalencounters.com

parrotevents

Think Parrots 2012

Woking Leisure Centre, May 20th

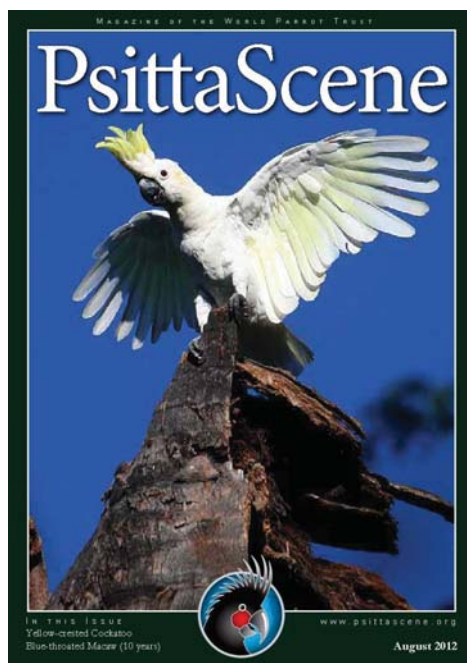
The World Parrot Trust was proud to be part of this brand new parrot event. The event included numerous trade stands offering everything the parrot owner could want. A display of free flying birds did a marvellous job of demonstrating the possibility of training pet parrot to live happily



Parrot Releases on Bonaire

In July 2011, 112 parrot chicks, including 16 Yellow-shouldered Amazons, were confiscated from a poacher on Bonaire. This Amazon, Sid, was just a one-week old chick. The birds were released this summer by the local conservation group Echo.

moreonline



Read more online with easy links to related information including:

- Links to years of articles and reports on Blue-throated Macaws
- Blue-throat photo extras
- A full report from this year's Yellow-crested Cockatoo field-work
- Links to all the websites in our articles, news and events

www.psittascene.org

L:ANGUAGES AVAILABLE: Dutch, German, Italian, Portuguese, Spanish and Swedish

ourmistake

On our back cover from May 2012 we were proud to feature Steve Murphy's excellent image of a Fig Parrot (*Cyclopsitta diophthalma marshalli*). We stated that the Fig Parrot is the only Australian bird to excavate their own tree hollow from scratch. Well, such a bold statement just begs for a contradiction! It turns out that the Red-cheeked Parrot (*Geoffroyus geoffroyi*), with subspecies throughout Indonesia, Papua New Guinea and N. Australia, also excavates its own cavity. Thanks for your careful reading!



Main: www.parrots.org
 Change your Address:
www.parrots.org/addressupdate

Main - UK & World

Karen Whitley, (Admin)
 Glanmor House, Hayle, Cornwall,
 TR27 4HB UK.
 Tel: (44) 01736 751026
 Fax: (44) 01736 751028
uk@parrots.org

USA

Glenn Reynolds, (weekdays eastern standard time)
 PO Box 935, Lake Alfred, FL 33850, USA.
 Tel/Fax: (1) 863 956 4347
usa@parrots.org

Africa

Dr. Steve Boyes,
 PO Box 149, Hogsback, Eastern Cape
 Province 5721, South Africa.
 Tel/Fax (27) 45 962 1378
africa@worldparrottrust.org

Australia

Nicholas Bishop,
 c/o Manager of Animal Encounters, Zoos
 South Australia, Frome Rd,
 Adelaide, SA 5000 Australia.
 Tel: (61) 408 011 443
australia@worldparrottrust.org

Benelux

Ruud Vonk, Tel (31) 16 847 2715
benelux@worldparrottrust.org

Netherlands

Ria Vonk, (Mem)
 Steenpad 4,4797SG Willemstad,
 The Netherlands.
 Tel (31) 16 847 2715,
netherlands@worldparrottrust.org

Belgium

Ronald Coens, (Mem) Tel (32) 3 314 44 83
belgium@worldparrottrust.org

Brazil

André Saidenberg,
brazil@worldparrottrust.org

Canada

Michelle Kooistra,
 4377 Gordon Drive, Kelowna, BC,
 V1W 1S7, Canada.
 Tel/Fax: (1) 250 766 9363
canada@worldparrottrust.org

India

Avin Deen,
india@worldparrottrust.org

Italy

Cristiana Senni,
 Via di Vigna Murata 350,
 00143 Roma, Italy.
italy@worldparrottrust.org

Japan - New

TSUBASA,
 2-2-22 Nakano, Niiza-city,
 Satiama, 3520005 Japan.
tsubasa0615@gmail.com

Spain/Central America

Rosa Elena Zegarra,
centralamerica@parrots.org

Sweden

Lars Persson,
 Allmogevägen 13, SE-74022 Bälinge,
 Sweden.
 Tel: (46) 1835 5832
sweden@worldparrottrust.org

Parrots in the Wild

