Magazine of the World Parrot Trust

PsittaScene

In This Issue

www.psittascene.org

August 2010

Volume 22 Number 3

Psitta Scene

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

contents

Editor: Joanna Eckles
Production: Karen Whitley

Printed by Brewers of Helston Ltd
www.brewersgroup.com

fromthechairman

The World Parrot Trust and the Echo Parakeet of Mauritius share a long and entwined history. As we celebrate 21 years since the Trust was established, this slim green parrot also celebrates an important milestone. Once the rarest parrot in the world, with just 2 or 3 females known to exist in the 1980s, this was the first species the Trust supported. Fast forward to this breeding season, and the fragile future of the Echo Parakeet has been turned around – its population has just reached the magic round figure of 500 birds!

The Echo is still getting support but the activities are dramatically different to the early days when the Trust persevered despite the high risk of failure. Looking back at the decades of work that secured the future of this emblematic island parrot and the complexity of its natural ecosystem, I'm aware that hundreds of people helped to implement the intensive management programme created by Dr. Carl Jones MBE. Many of the young scientists involved are now working for conservation around the world, having understood the very real threat of extinction for the *Psittacula* parrot they saved – two of the nineteen extinct parrots on the IUCN "Red List" are in this genus.

Sadly many lorikeets are also under threat, and now the Trust has a new initiative to help this colourful and lively family of parrots – the Lory Conservation Network – which we launch in this issue of *PsittaScene*.

Many lories are island species facing similar threats to the wildlife of Mauritius, and as we undertake these new conservation challenges, let's pause to celebrate the Echos and the hope they bring for all rare species.

Best wishes,

Alison Hales
Chairman

onourcovers

FRONT Speak of the Echo Parakeet (*Psittacula eques*) and speak in cliché. Every possible euphemism has been used to chart their ascent from "rarest in the world" through "on the rise" and this year finally "back from the brink." Walk with Carl Jones, Echo expert for over 3 decades, and Heather Richards, current project coordinator, through this tale of conservation success. © Gregory Guida

BACK The Kuhl's Lory (*Vini kuhlii*) is a pint-sized gem from Rimatara and the Cook Islands in the South Pacific. Formerly hunted for its coveted red feathers, the lory now faces modern island threats such as rats and other introduced species. Beloved as a group, the lories are the focus of the World Parrot Trust's Lory Conservation Network introduced on page 12. © Phil Bender

back from the brink

the Echo Parakeet story

By Carl G Jones

For 31 years I have worked on the island of Mauritius in the Western Indian Ocean on the endemic Echo Parakeet (*Psittacula eques*). When we started our conservation work with this species it was the world's most threatened parrot. A tiny population lived on the mountain tops and in the deep gorges in the remotest corner of the island and little was known about its biology. In the early days all we could hope for was a distant sighting as birds flew across the Black River Gorges.

WE COULD ONLY ACCOUNT FOR 8-12 BIRDS in the late 1980's although in some years we confirmed even fewer. In 1986 with only two or three pairs, the population was in terminal decline and no one had any idea what to do to prevent them dying out. All the other islands in the Mascarene group had already lost their native parrots and it seemed that the last species in the region would soon go the same way. The situation was desperate. Some of the mainstream conservation organisations thought it was a poor investment of conservation effort and did not want to invest in a species with such a high possibility of failure, i.e. Extinction.

That was over twenty years ago and this year we reached the landmark number of 500 birds including over 130 recently fledged young. We have been successful because we have been able to get a commitment from several organisations and work with a team of highly talented people. The financial outlay has been modest compared to other similar projects but we have had dedicated support from the World Parrot Trust and the Durrell Wildlife Conservation Trust for whom I work. This has been coupled with a partnership in Mauritius with the Mauritian Wildlife Foundation and the National Parks and Conservation Service.

It was Gerald Durrell who taught us the value of captive management and the application of this to wild populations. He also stressed that to save species, one needs a long-term commitment and a willingness to get your hands dirty and address the species' problems face-on. It was Mike Reynolds and his colleagues at the World Parrot Trust who embraced this vision and applied it to parrots.

The Echo Parakeet is restricted to an area less than 40 km² (15 mi²) of remnant native forest, part of the Black River Gorges National Park in Mauritius (background), an island in the Indian Ocean.

Nest-boxes and supplemental food were among the first items offered to the desperately declining Echo population. Neither were used immediately but eventually released birds led the way in putting these to work.

With critically endangered species there is just not time to study the problems in detail. Instead one has to be pragmatic and proactive - ensuring the basic needs of the species and addressing problems as they occur. It is the species conservation equivalent to managing patients in an intensive care unit.

Species decline because of poor survival and/or poor productivity. Improving these may be straightforward since it is a small number of factors that usually depress populations. These factors are: a shortage of food, few good quality breeding sites, disease and predators. By addressing these we can provide the conditions for the species to recover.

With the Echo Parakeet we started off with some very broad approaches. We provided nest-boxes and tried supplemental feeding although it was many years before these efforts were successful.

Nesting pairs were carefully watched and protected and we soon discovered that although the breeding pairs laid three or four eggs, few pairs fledged young. Those that did typically fledged just one or two. We had to try to improve the poor breeding success. There was a relative scarcity of good quality natural cavities in the large native trees. The Echo Parakeets often chose nest sites that were falling apart, too shallow, or would become waterlogged in the heavy summer rains. Some nests were susceptible to predators like rats and monkeys that ate the eggs and young; or competitors such as tropicbirds and mynah birds that took over the nest holes, sometimes after the Echos had started breeding.

All sites were improved, repaired and made user friendly by sawing inspection doors to the nest chamber so the eggs and young could be easily inspected. With judicious pruning and the erection of predator guards the trees could be isolated and made predator proof.

It soon became clear that those Echo Parakeets that did nest still had problems, even when they were nesting in new and improved nest holes. Some young were attacked by nest fly larvae that sucked blood from the chicks and many young were not being fed enough. We were able to eliminate the nest fly problem by replacing the nest substrate with wood shavings treated with insecticide and we developed a protocol of removing any eggs or young from nests that looked likely to fail. We soon developed a good idea of how healthy chicks should develop and harvested all young if their weight dropped below 20% of the healthy growth curve. These chicks were taken into captivity and hand reared. They either became founders of our captive breeding programme or were released back to the wild.

Echo timeline

1973

Conservation efforts initiated by the Mauritian Forestry Services and International Council for Bird Preservation

1974

Artificial nest boxes trialled for the first time; none used

1986

Scientists estimate the Echo Parakeet population at 8-12 known individuals including 2-3 females

Conservation efforts intensified by Mauritian Wildlife Foundation and the Government of Mauritius' Conservation Unit

The striking neck collar and red beak distinguish the male Echo Parakeet from the female, whose beak is black. Unique combinations of coloured bands or rings are used to allow the monitoring of individual birds in the field.

Between 1997 and 2004 (when we completed the reintroductions) we released 139 captive reared Echo Parakeets (84 derived from harvested eggs/young and 55 captive bred). These released birds have been integrated into the free-living population and many are breeding. During this time the wild birds fledged 143 young.

In the early days we tried to improve breeding success by providing nest boxes and providing food for the adult birds but we were largely unsuccessful. However, the released birds soon started using both nest boxes and supplemental food and they attracted wild born birds. This gave the population a great boost.

We hope we can get the population up to about 600 birds, but realize we are probably getting close to carrying capacity within the Black River Gorges National Park. In the coming years, we are hoping to establish additional populations in the mountains of eastern Mauritius where there are currently no birds and perhaps also on the neighbouring island of Reunion.

Looking back it is encouraging to see the support we have had in restoring the Echo Parakeet population. In addition to the supporters already mentioned we have had long-term help from the International Zoo Veterinary Group and the North of England Zoological Society (Chester Zoo) as well as other organisations. We have received generous grants from both the Parrot Society and The Loro Parque Fundación and have had a long relationship with the Department of Conservation (New Zealand) with a regular exchange of staff with the Kakapo project. It was Don Merton who started this relationship and has nurtured it over many years. In recent years we have had the help and expertise of the Durrell Institute of Conservation and Ecology (University of Kent) who are helping us with studies on the genetics of the Echo Parakeet and Psittacine Beak and Feather Disease (PBFD).

While the recovery of the parakeet gives me great pride, I also derive satisfaction from the generations of field workers and researchers who made this success possible and many of whom are now working worldwide, running their own conservation projects.

Carl Jones is an International Conservation Fellow at Durrell Wildlife Conservation Trust and Scientific Director of the Mauritian Wildlife Foundation. His work on the conservation of endemic wildlife in Mauritius began in 1979 with the Mauritius Kestrel. He used a variety of techniques to rescue them and has since directed similar successes with the Mauritius Pink Pigeon, Echo Parakeet, Mauritius Fody and many other species of animals and plants on the island.

1989

The World Parrot Trust is formed and takes on the Echo Parakeet as its first parrot conservation priority with funding towards the management of the remaining wild birds

1993-96

Intensive population management commences followed by successful captive breeding

1997

First Echo Parakeet release. Three hand reared fledglings (2 from wild parents, 1 from captive) released in the Black River Gorges National Park

the 500 mark
a landmark season

By Heather Richards

The Echo Parakeets had another fantastic breeding season with a record 134 chicks fledging in the wild in 2009/2010. This new class boosts the wild population to an estimated 500 individuals!

A TEAM OF 5 FIELD STAFF are dedicated to the Echo Parakeets during the breeding season (September to February) with two staff maintaining the project over the non-breeding period (March to August). The Echo Team is based at the Plaine Lievre field station, known as "Camp", in the Black River Gorges National Park. This is the largest supplementary feeding station and within the area most densely populated by Echos.

The Echo population suffers from limited natural nest sites, limited natural food, threats from exotic predators and competitors and disease. The shortage and competition for natural cavities means that 78% of nesting attempts this year occurred in artificial nest boxes. The provision and maintenance of nest sites remains an essential part of the conservation of the Echo Parakeet. Wooden nest boxes require regular replacement as a result of damage by termites, Echo chewing and rot. A new durable PVC nest box was developed to reduce the need for replacement and to minimise management. Following a successful trial, 10 new PVC nest boxes were erected in the forest, 9 of these were accepted by Echos and used this year.

The number of breeding pairs increased with the population increase. This year 78 pairs were monitored with 74 laying eggs. The proportion of females successfully fledging at least one chick rose to 82% this season. Over 220 eggs were laid from which 156 chicks hatched. The increase in

1997

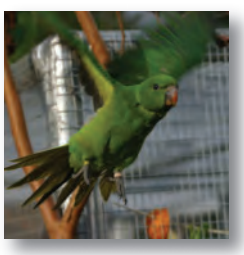
Provision of supplementary food provided for released birds

2000

The first artificial nest box is used by hand reared and released female 'Gabriella', who is the first released bird to breed in nest boxes. She successfully fledges 2 chicks

2002

Echo Parakeets released at Bel Ombre




© Dennis Hansen


© Heather Richards


© Christopher Kaiser

Released female Zoe (in nest-box and feeding a fledged chick), is a staff favourite. She is now in her ninth breeding season and has been known to perch on the shoulder of the person checking on her chicks!

young females successfully fledging chicks is very encouraging for the future. Chicks fledged from 11 nests where the female was three years or younger. Breeding attempts outside of the managed nest sites are either limited and / or unsuccessful. In the past 3 years, only 3 un-ringed fledglings have been seen.

Female Zoe, a much cherished Camp favourite, successfully fledged two healthy chicks this year in what is her ninth breeding season. Zoe and her chicks played a starring role recently in the "Museum of Life" documentary on BBC2. Zoe used the last of the old, heavy, large nest boxes located in the forest only about 20 m (66 ft) from the Camp feeding hoppers. The tree died and it was no longer safe to climb. In March 2010 a new PVC nest box was erected in a nearby tree and Zoe inspected it with great interest. She has since been seen going in and out and we hope for more healthy chicks next year in her new abode.

A host of exotic competitors including Indian Mynahs (*Acridotheres tristis*), Ring-necked Parakeets (*Psittacula krameri*), Ship Rats (*Rattus rattus*), Honey Bees (*Apis mellifera*) and Yellow Wasps (*Polistes hebraeus*) compete with Echos for nest sites. The native White-tailed Tropicbird (*Phaethon lepturus*) has been effectively excluded from Echo nest sites by restricting the size of the entrance hole.

Ship Rats, Indian Mynahs and Crab-eating Macaques (*Macaca fascicularis*) pose a predatory threat to Echo eggs and chicks. Ship Rats are exceptional climbers and egg predators. We protect nest sites from rats by isolating the canopy of the tree and tightly wrapping black plastic around the tree. All nest sites have a minimum of 1.4 m (4.6 ft) of rat guard, and this prevents rats from climbing up the tree and accessing the nest. This method has proved to be highly effective; rats have not predated eggs or nestlings at known nest sites for the past three years. A baffle is included in nest boxes and natural cavities are deepened to prevent Macaques from reaching eggs or chicks.

Honey bees have become an increasing problem at nest sites. Bees have been known to use a nest site which could have been used by breeding

2004

New wooden nest box developed and produced in quantity


© Heather Richards

2005

Echo Parakeets released at Combo to create a new sub-population where they were not previously known. Release failed due to large Ring-neck Parakeet population and suspected PBFD infection


© Nancy Bunbury

PBFD became visible in the population


© Suzi Hogg


© Jason Malham

Bees are one of many threats facing wild cavity-nesting birds. They are evicted from Echo nest-boxes using a bee smoker and full protective gear. To evade climbing predators like rats, all nest trees are tightly wrapped with plastic.

Echos but of more concern they have also forced females to abandon eggs or chicks and therefore reduce breeding productivity. We remove bees and wasps from nest sites wearing a bee suit and using a bee smoker to encourage them to leave - this is very hot work! The nest site is sealed off for a few days to ensure the previous tenants do not return and then it is opened hopefully for Echo business. Last year the team were devastated to find dead Echo females, Dodo and Glen Gandhi, in nest boxes when we went to remove the bees. They were both incubating eggs and when the bees moved in they obviously did not abandon their nests. Dodo was a young female breeding for the first time and Glen Gandhi was an excellent mother fledging 5 chicks in total. We want to prevent this happening again. It was suggested that a potential way to exclude bees was to ensure a smooth surface as this deterred them from building comb. This breeding season black plastic was attached to the underside of the baffle on most nest boxes. There were less bee problems this year, only one clutch of eggs was lost and there was no adult mortality as a result of bees. It remains to be seen whether this reduction in bee trouble is a result of the "anti-bee" plastic but the initial results are promising.

As a result of habitat destruction only 1.27% of native forest remains, much of it degraded by exotic plants. Natural foods and nesting cavities are limited. Following the release of birds which were trained to use the feeding hoppers, supplementary food has become a key management tool. Before supplementary feeding, food shortages during the breeding seasons were the major limiting factor on population growth in the Echo Parakeet. Supplementary feeding ensures that the birds are in optimum condition for breeding. During breeding, adults are able to obtain their nutritional requirements more easily. Wild birds have also learnt how to use the feeding hoppers by watching released birds, now over 50% of the population feed on supplementary food. Within the National Park there are five supplementary feeding stations where Kaytee® parrot pellets are provided. The number of birds using the feeding hoppers continues to increase. A new feeding hopper has been constructed and introduced with a much greater capacity to ensure that the feeding stations do not run out of food. All Echos still forage for natural food even though there is supplementary food available. Echos feed on the flowers, fruit, leaves and bark of natural and exotic plants.

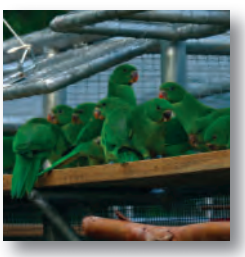
The disease (PBFD) is a significant threat to the Echo population. PBFD was first observed in the

2005

Intensive disease screening of the Echo population begins


© Andrew Skinner

Move to a new phase of minimal management



2006

'Zeus' a supplementary fed female fledges the first brood of 4 chicks recorded


© Shane McPherson


© Elaine Fraiser


© Heather Richards

Psittacine Beak and Feather Disease (PBFD) hit the Echos in 2004, prompting extensive disease screening and strict new management protocols. Fortunately strong breeding, including the survival of several four chick nests, has outpaced high PBFD mortality.

Echo population in 2004/2005, although there was an isolated case in 1996. Echos suffering from the virus are seen with yellow feathers and missing tail feathers and those with severe symptoms appear dull, with down showing and bare patches where feathers are missing and may eventually lose the ability to fly as primary flight feathers fall out. An intensive disease screening programme began in 2005, attempting to obtain blood samples from all birds to test for PBFD. Over the past 5 years, a total of 552 Echos have been tested for the active virus. Despite initial worries for the survival of the population, we have found the disease principally affects young birds less than 2 years old. Although the virulence of the disease varies each year, 40-50% of fledglings are lost to PBFD and associated infections.

The results of the blood tests for the active PBFD virus and presence of antibodies together with observations of PBFD symptoms are helping us answer questions about the virus and the Echo population. PBFD is widespread with over 30% of the sampled birds having encountered the virus. Mortality rates are difficult to calculate, but at least 50% of birds observed with PBFD symptoms are thought to have died. It is very sad watching previously good looking birds deteriorate in condition as a result of PBFD. It is not all bad news, however as 29 birds have been shown to recover through the disease screening and many more have been observed to recover from symptoms. Lolita tested positive for the active virus and was observed with yellow feathers on her back. She now looks great, has successfully bred twice and fledged 6 chicks, one of her young fledged a chick of her own this year! We are looking into the long term implications for birds which recover from PBFD, particularly whether they remain PBFD carriers and are potentially passing the disease to their offspring. Research into the role of the Ring-necked Parakeet (*Psittacula krameri*) is ongoing. There is speculation that the exotic parakeets could have introduced PBFD to the Echos or that they act as a reservoir for the disease. Ring-necked Parakeets have tested positive for PBFD, however, it seems to have less of an impact on their population in comparison to the Echos.

Strict hygiene measures and PBFD protocols have been introduced to ensure that management does not act to spread the disease. Field staff wear chemical suits whilst accessing nest sites, clean all equipment between nest sites and disinfect feeding hoppers regularly. So far these measures seem to be effective. There are concerns that providing supplementary food is increasing the spread of PBFD. Large groups of Echos gather around the feeding hoppers in close proximity to

2007

IUCN status of Echo Parakeet down listed from 'Critically Endangered' to 'Endangered'

2008

Plastic PVC nest box trialled and accepted by female 'Omarama' who fledged 2 chicks

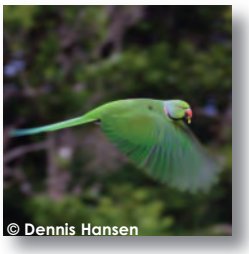

© Suzi Hogg

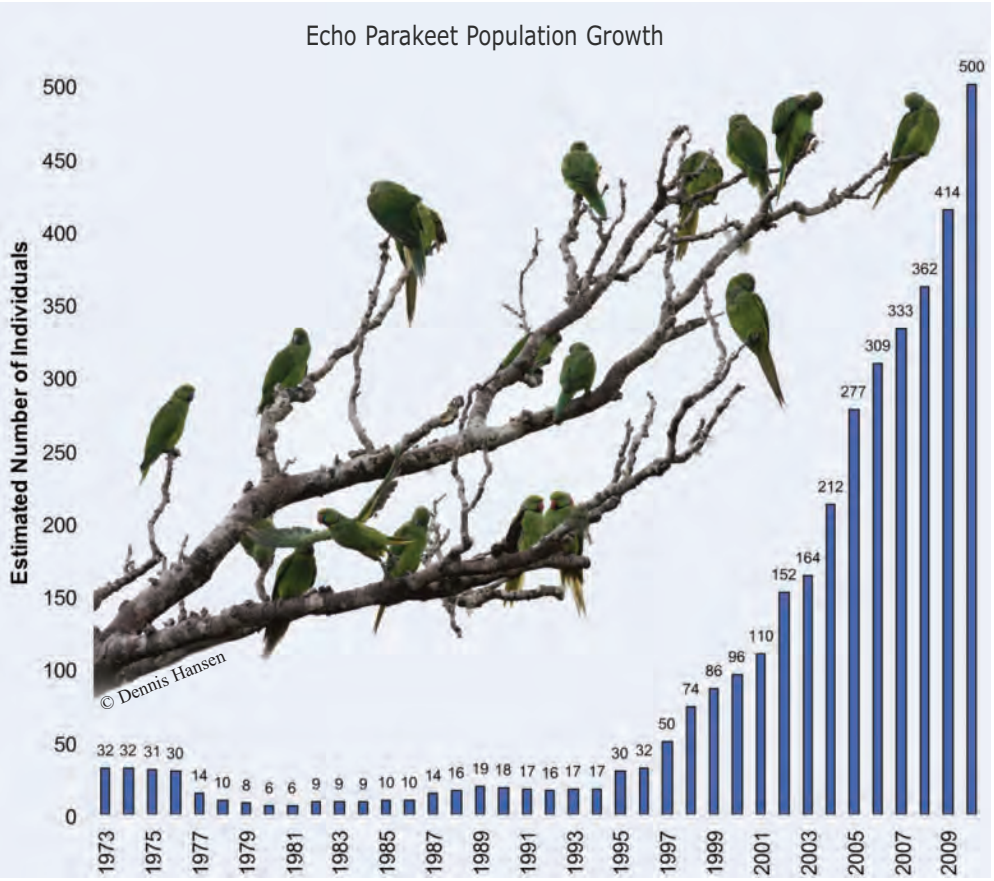
2009

Plastic PVC nest boxes produced in quantity and 10 erected in the forest

2010

Echo Parakeets reach a critical conservation milestone with an estimated population of 500 birds


© Dennis Hansen



Thirty years ago it was hard to imagine treetops filled with thriving Echo Parakeets and nest-boxes holding four hopeful eggs. Thankfully, chick by chick, it wasn't too late for the last of seven parrot species that once inhabited these islands. Bravo – the 500 mark!

each other. The role of supplementary feeding in spreading PBFD is currently being investigated to inform decisions about potentially reducing management further.

I felt very privileged to be asked to join the Echo Parakeet Team 3 years ago and was extremely excited to have the opportunity to contribute to this successful conservation project. Waking up as the sun rises to the sound of Echos calling as they gather in the trees surrounding the feeding hoppers is a great delight. As I approach my fourth Echo breeding season the thrill of the first eggs does not diminish. I've found, the better you know the Echo individuals the greater the anticipation for the breeding season. Seeing birds you knew as chicks fledging their own young is fantastically encouraging.

The team joke that at some point I refer to every bird as my favourite. This is probably true. They all have their own character and appeal. My favourite nest site is the Library cavity in Grande Gorge; it is a decent hike to get to, with a view across the National Park to the sea which is stunning. It is always lovely to see Penguin sitting in her usual spot in the tree opposite her cavity. We rarely see her otherwise as she does not take supplementary food. The frustration of hanging on a rope, attempting to cling to a tree, whilst stapling rat guard plastic to the tree trunk or spending hours maintaining the clearing around a nest site with a machete is more than worth it when eggs are not predated because of these protective measures and a brood of noisy chicks are found. Laughing at the antics of fledglings attempting to use the feeding hoppers for the first time is the successful outcome of all the effort that has been invested.

The sharing of knowledge and skills within the conservation world is essential in order to combat the global trend of species decline. The techniques and methods which have made the Echo Project so successful are applicable to other parrot and bird conservation projects. The ongoing research into PBFD should not only inform the future management of the disease within the Echo population but also hold value for other parrot species. The Echo Parakeet population provides a wonderful research opportunity as over 90% are ringed, therefore individually identifiable, with known case history and parentage.

The Echo Programme continues to thrive due to the contributions and generosity of many interested organisations and individuals. Without this collaboration, the Programme would not have been so successful in enabling the Echo Parakeet to move from the brink of extinction and make the year on year progress that is now taking place.

Thank you to the MWF volunteers and staff, in Mauritius the National Parks and Conservation Service; Ireland Blyth Foundation, Euro CRM, Le Mount, Rey Lenferna, Forex Direct, Air Mauritius, Rufford Maurice Laing, Victoria (Candos) Hospital; OPP Ltee and La Vanille Crocodile Park; in the UK, World Parrot Trust; Chester Zoo; Durrell Wildlife Conservation Trust, Kaytee® Products Inc; the International Zoo Veterinary Group; University of Kent.

Heather Richards is the Echo Parakeet Coordinator responsible for running the Echo Parakeet field team, staff recruitment and training, field logistics and organising and undertaking all day-to-day Echo Programme tasks.

More Echo news and photos online: www.parrots.org/echos

> > 20 Years of PsittaScene

The Complete Collection 1989-2009

EXPLORE 20 YEARS of amazing discoveries, fascinating field research, expert advice on parrot care, and some of the world's best parrot photography with this exciting compilation of the World Parrot Trust's quarterly *PsittaScene* magazine.

This definitive collection includes every issue of *PsittaScene* from 1989 to 2009, all digitally reproduced in stunning high resolution.

The easy-to-use menu enables you to search for specific issues, topics, authors, or browse by year of publication. Discover the amazing world of parrots through hundreds of articles and photographs, many published only in *PsittaScene*.

£12.50 / US$19.99

visit www.parrots.org/20years

> > Book Review: Always Blue for Chicu

Written and illustrated by Karen Dugan

IF YOU WERE TO LIST all the many parrot issues Karen Dugan touches on in her children's book *Always Blue for Chicu* you might raise your eyebrows. Really? All in one story? But she pulls it off, not only brilliantly but beautifully too, with whimsical illustrations in stunning full page arrays.

As you follow Blue-fronted Amazon Chicu's journey through the decades and continents and people of his life you quickly see how his story is the story of so many millions of birds. Perhaps you know a bird that has lived through a similar breadth of experiences and serves, like Chicu, as a testament to the resilience of parrots.

When Karen contacted the World Parrot Trust while researching her book she showed an impressive grasp of the many issues facing parrots, both in the wild and as pets in our homes. She weaves that understanding into a graceful story that is powerful yet not hard-hitting. She grapples with freedom gained and lost, friendships forged and broken and the sometimes comical, sometimes heartbreaking and surely complex life of a bird taken out of his element.

Always Blue for Chicu received high marks from my school aged reviewers who were mesmerized by the story and the characters but also the detailed and captivating illustrations. They were also completely hooked by the clever use of repetitive graphics and phrases which delicately tie the story together from beginning to end.

I whole-heartedly agree with World Parrot Trust Director Jamie Gilardi's conclusion, included on the book jacket, and couldn't say it better. "This touching and hopeful tale will capture children's imaginations and win their hearts; I highly recommend it for animal lovers of all ages."

Always Blue for Chicu was published in 2010 by Gryphon Press, which prides itself in beautifully illustrated picture books for children which explore the human-animal bond.

Book Review by Joanna Eckles

visit www.parrots.org/chicu

Lory Conservation Network

Linking Lorikeet fans with Lorikeet Projects

A GIRL OF 9 OR 10 TENTATIVELY HOLDS OUT A SMALL NECTAR CUP. In a flash they are on her. One perches on her outstretched arm, while another sizes her up from a nearby tree. She looks startled then lights up as she is lit upon by two, then three, then four lories; ornaments in their frenzied brilliance. They lean in from both of her arms, intently focused on the sweet treat. They chatter and jostle for position around the cup as grandma snaps a photo, freezing the moment in time.

You Can Help!

To join or support the Lory Conservation Network visit www.savelories.org or contact smilpacher@worldparrottrust.org

Walk-through Lory aviaries provide magical moments for people of all ages throughout the world. Those same exhibits are now connected in another mission – to help save imperiled lories in the wild.

The Lory Conservation Network (LCN) is a World Parrot Trust initiative that connects zoos, bird parks and lory exhibits around the world with effective conservation programs to save lories. Network participants work together to support field conservation and research projects, encourage habitat restoration, facilitate reintroduction and release programs and increase awareness of the plight of lories.

Vividly coloured and full of energy, lories are unique among their parrot cousins. Known as Loriinae, this family group is usually divided into two classes of birds: lories and lorikeets. Lories are larger, heavier-bodied birds with squared-off tails. Lorikeets are more slender, with longer, tapering tails. Most lories are very brightly coloured with glossy feathers in rainbow hues. They are known to display great agility due to their strong feet and legs.

Lories have specialized brush-tipped tongues for feeding on nectar and soft fruits from as many as 5,000 species of plants. Their high energy diet makes them hyperactive and clownish in personality, both in captivity and in the wild.

Lories are widely distributed throughout the region of Australasia, including South-eastern Asia, Polynesia, Papua New Guinea and Australia. Several species face threats that affect their populations in the wild. These threats will vary by location but may include pressures from hunting activities (for their plumage), changes in habitat (due to agriculture, logging, or other forms of alteration), capture for the pet trade (although illegal in many countries) and introduced predators (such as rats, cats and stoats).

LCN Projects

- Kuhl's Lory (*Vini kuhlii*): Post-reintroduction census and follow up myna census on the island of Atiu. See *PsittaScene* 20.4 (November 2008).
- Blue Lorikeet (*Vini peruviana*): Post-cyclone census on the island of Aitutaki. These two projects are being done by masters students from University of Leeds, in collaboration with the Cook Islands Biodiversity and Natural Heritage Trust.
- Ultramarine Lorikeet (*Vini ultramarina*): Survey work on the island of Ua Huka.
- Mitchell's Lorikeet *(Trichoglossus haematodus mitchellii):* Survey to determine current status on the island of Lombok as well as a rehabilitation, captive breeding and release program.

LCN Partners

The World Parrot Trust created the Lory Conservation Network to help imperiled lories (www.savelories.org). WPT works with parrot enthusiasts, researchers, local communities and government leaders to protect and restore parrots.

Banham Zoo is a privately owned and run Zoological Park in the county of Norfolk, England. The Friends of Banham Zoo is a charitable association that aims to raise awareness and funds for conservation projects within the Zoo and in the wild.

Blackpool Zoo is a 32 acre site in the United Kingdom with over 1,500 animals including Rainbow Lorikeets.

Chessington Zoo and World of Adventures are a zoo and theme park in south-west London, England. The zoo has been open for more than 75 years and has a walk-through lorikeet aviary.

Natural Encounters Conservation Fund is a non-profit supported entirely by Natural Encounters and highly committed to raising funds for conservation projects.

NOAH Nature Alliance is committed to supporting conservation initiatives like the Lory Conservaton Network that improve our local and international communities.

Paradise Park in Cornwall, UK was opened in 1973 by Mike Reynolds, who founded the World Parrot Trust. The Park houses the Trust as well as hundreds of birds, including lories in a walk-through aviary.

San Diego Zoo houses the largest publicly displayed lory collection in the US as well as a walk-through lory experience at the Wild Animal Park. Active field conservation supports the restoration of the Kuhl's Lory to Atiu, Cook Islands.

Vogelpark Avifauna is home to 2,000 birds representing more than 250 species. A new lorikeet enclosure is home to 100 free roaming Rainbow Lorikeets (*Trichoglossus haematodus*).

P·A·R·R·O·T do tell!

Best Practices for Teaching Animals

Hidden in the word PARROT are six core principles of effective, humane behavior management: Power, Approximations, Reinforcement, Repetition, Observable Behavior, and Teaching Opportunities. These principles are relevant to working with all species of animals. Understanding each principle and arranging the environment to reflect them affords animals the best possible chance of achieving behavioral health and sustaining lifelong relationships with their caregivers.

Susan G. Friedman, Ph.D., is a psychology professor at Utah State University. Over the last decade, she has helped pioneer efforts to apply to animals the scientifically sound teaching technology and ethical standard of Applied Behavior Analysis. Susan teaches two on-line courses, one for veterinarians and other animal professionals, and another for pet owners; and she presents cross-species seminars around the world. Her articles appear on the Internet in 10 languages.

POWER to control one's own outcomes is essential to behavioral health. Behavior is a tool, an evolved mechanism that enables animals to change their environment in some way that has personal value. Research suggests that controlling outcomes is also associated with emotional well-being, even with human babies as young as three months old. Animals from dozens of species have demonstrated the contrafreeloading phenomenon: they choose working to get valued outcomes over freeloading (i.e., response-contingent reinforcement over non-contingent reinforcement). Therefore, one way to empower animals is by designing more complex environments rich with choices, problems to solve, and purposeful activities that run the gamut from species-typical behaviors (e.g., foraging) to novel behaviors (e.g., dunking basketballs).

The power to say no is perhaps the most overlooked provision in the lives of companion animals. It is the freedom to use behavior to escape events perceived as aversive to the individual. Blocking an animal's escape responses works against its nature to behave for an effect. If response blocking persists, animals can learn that their behavior is ineffective. This leads to learned helplessness, depression, learning disabilities, emotional problems and even suppressed immune activity.

We can empower companion animals to say no by ensuring that they have an escape route, a runway, to move away from imposing hands, and unfamiliar people and items, whenever possible. For instance, a 6" long T-perch used for training restricts a parrot's escape but a 36" long perch (with the caregiver at one end of the perch) allows the animal to express

© Natural Encounters

This Kea is first reinforced for approaching a new item (plastic tube) in his enclosure. Through successive approximations with reinforcement for each stage, he is taught to enter and walk through the tube in just a few training sessions.

This African Grey Parrot much prefers to destroy a tissue box for hidden treats rather than to take the treats for "free" from a dish - a phenomenon called contrafreeloading.

© Joanna Eckles

its choice to move away. This strategy may seem counterproductive to caregivers who hope to have close relationships with their pets; however, the apparent relationship that results from forced interaction is only an illusion. True relationships are the result of choice and a preponderance of mutually reinforcing interactions – not force. The goal is for animals to choose to approach their caregivers, which can be achieved by following these teaching principles.

APPROXIMATIONS

The key to teaching new behaviors is reinforcing approximations toward the end goal. People often expect animals to instantaneously perform complete behaviors. For example, many caregivers expect a parrot to perform the complete "step up" behavior just because they (or anyone else for that matter) offer a hand. When animals don't meet this expectation, caregivers too often resort to coercion, such as cornering the bird to make it step up. Coercion can result in big withdrawals from the trust account, which may not be easily recouped.

Animals tend to learn better when they are reinforced for smaller, approximate responses that ultimately lead to the end goal. This procedure is called differential reinforcement of successive approximations, also known as shaping. It is the sharpest tool in any teacher's toolkit. To illustrate, the complete step up behavior for a parrot can be broken into the following approximations:

- Looking at the hand
- Leaning toward the hand
- Moving a foot in the direction of the hand
- Taking a step toward the hand
- Taking several steps toward the hand
- Walking next to the hand
- Touching the hand with one foot
- Resting the foot on the hand
- Transfering weight to one foot on hand
- Bringing the other foot onto the hand

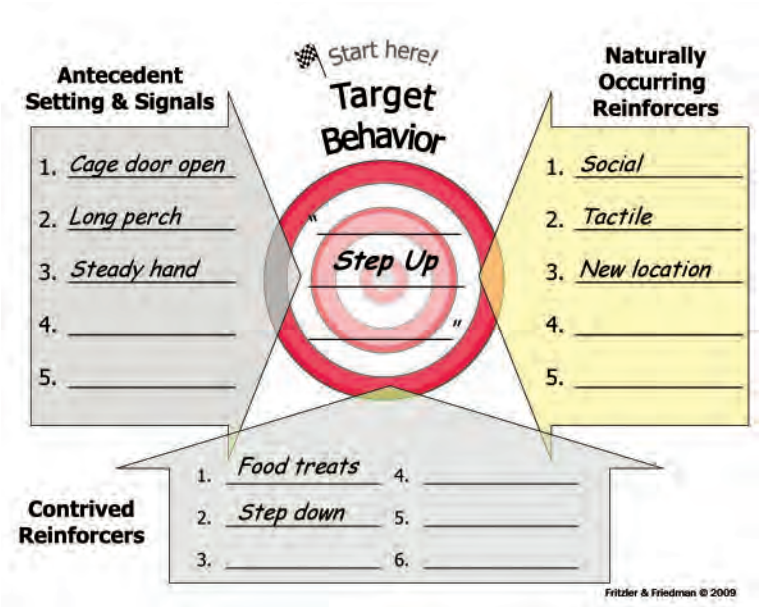
After describing the complete target behavior in observable, measurable terms, shaping starts by reinforcing the closest approximation the animal already does (e.g., looking at the hand). It is well-timed reinforcement that accounts for the animal offering the behavior again. Once the first approximation is performed without hesitation, only a closer approximation in the sequence is reinforced (e.g., leaning toward the hand). The natural variation in responses produces the next, closer approximation (e.g., looking with a slight lean). As training progresses from one approximation to the next, the reinforced responses become progressively more like the final behavior.

Shaping requires sharp observers with excellent mechanical skills to notice the small variation in responding that can lead to the final behavior and to catch that approximation with timely reinforcement. If the learner (or the teacher) experiences difficulty advancing from one approximation to the next, it is best to go back to the last successful approximation rather than withhold reinforcement to the point of eliciting frustration in the animal. The most effective ways to create the momentum needed to steadily advance through the approximations is to reinforce smaller approximations, avoid staying on one too long (which reduces variability in responding over the repetitions), use stronger reinforcers, and communicate a clearer response criterion by precisely timed and consistently delivered reinforcement.

REINFORCEMENT

Reinforcing consequences are essential feedback about how to behave in the future. Positive reinforcement is not manipulation, and reinforcers are not bribes. Positive reinforcement is the natural process by which behavior is maintained or increased by consequences. Learning is the process of behavior change due to experience. This inherent flexibility to learn is surely one of the animal kingdom's most astounding survival mechanisms.

The schedule with which reinforcement is delivered matters. To be used effectively, reinforcement should be delivered contingently (only if the behavior occurs) and contiguously (closely following the behavior). Continuous reinforcement (a 1:1 ratio of behavior to reinforcer) is best for teaching new behaviors because it clearly communicates the contingency, if behavior x, then reinforcer y. Intermittent reinforcement (a ratio between 1:1 and 1:0) results in persistence, i.e., behavior that, in the



Contrived reinforcers, like treats, are good for jump-starting new behaviors like going into a crate. Once mastered, many behaviors can be maintained by naturally occurring reinforcers. The naturally occurring reinforcers for going into a crate are access to new locations and activities.

absence of reinforcement, continues longer before inevitably decreasing (i.e. extinguishing). It is quite likely that behind every problem behavior is a lean intermittent reinforcement schedule that accounts for its persistence.

We can reduce problem behaviors without using punishment by applying the matching law, which describes that the relative rates of a particular behavior tends to match the relative rate of reinforcement the behavior produces. This means that we can increase desirable behaviors and decrease problem behaviors just by offering relatively more reinforcement for desirable alternative behaviors. When the environment is arranged so that desirable behaviors are both easier to perform and more reinforcing than undesirable behaviors, animals naturally perform the desirable behaviors more.

A related strategy is to withhold the reinforcer that maintains a problem behavior (extinction) and to deliver super-sized reinforcers (positive reinforcement) for an appropriate alternative behavior. This two-fold strategy is called differential reinforcement of alternative behaviors (DRA). A DRA schedule is generally more effective and less intrusive than extinction alone or punishment. With a DRI schedule, where the targeted alternative behavior is incompatible with the problem behavior, changes can be accomplished even more quickly (e.g., a parrot can't stand tall and lunge at the same time).

When using a secondary (conditioned) reinforcer to mark the instant the right behavior occurs (e.g., a praise word, click, or whistle), closely follow it with a back-up reinforcer every time (e.g., a food treat or tactile reinforcer). This "twofer" (click-treat) approach will maintain the secondary reinforcer at full strength. Delivering a secondary reinforcer to mark the right behavior without consistently pairing it with another reinforcer will eventually drain the strength of the secondary reinforcer resulting in a weak marker.

Once a behavior is mastered, it is often possible and beneficial to slowly shift from so-called contrived reinforcers (rewards arranged for training sessions) to naturally occurring reinforcers (the spontaneous outcome of behaving). For example, teaching a parrot to step up may initially involve reinforcing approximations with a contrived reinforcer such as sunflower seeds. With each repetition, naturally occurring reinforcers are also available, such as interacting with the caregiver and moving to a new location away from the cage. These naturally occurring consequences can maintain the step up behavior in the long run, especially if the contrived reinforcers are thinned very slowly. When teaching a new behavior, contrived reinforcers should be considered for the short term, and naturally occurring reinforcers should be considered for the long term (see Figure above).

REPETITION A high rate of repetition across different conditions builds fluent, generalized behavior. The term behavioral fluency describes quick, accurate performance of a behavior. Fluent behaviors are emitted without hesitation in the presence of appropriate cues or conditions. Generalization is the extent to which a behavior occurs in different settings or situations (i.e., stimulus generalization). When it comes to good citizenship behaviors – behaviors that keep animals in their homes – the goal is fluent, generalized behaviors. Positive practice is the means to achieve this goal. Positive practice refers to high rate of repetition that results in a high rate of reinforcement.

It's easy to underestimate how much positive practice is needed to build a fluent behavior in one setting and to generalize that behavior across different settings and situations. When an animal doesn't respond to a cue or request, people often feel frustrated and insist, "He knows this behavior. I've seen him do it a dozen times!" Effective teachers define what an animal knows by observing what it does, and they interpret an animal's failure to respond to a request as an indication that more positive practice is needed.

It may take hundreds of reinforced repetitions, in several different settings for an animal to reliably respond to a cue. Research indicates that learning generally proceeds more successfully

Animals like this Amazon parrot are empowered by exercising choice to solve problems and interact with novel items in their environments.

when practice is distributed over many short sessions rather than less frequent, long sessions. Therefore, positive practice doesn't need to be very time consuming. A few quick repetitions a day can build and maintain behavioral fluency. One positive side effect of this approach is the strong bond that develops between the teacher and learner due to the high rate of reinforcement associated with positive practice.

Observable Behavior

For an objective understanding of behavior, focus on describing observable behavior and observable conditions. Most caregivers never consider how their descriptions of behavior are really just value labels of what they think an animal is rather than what it does. They wish for a companion animal that is friendly, is docile, or is sweet. However, we can't really teach animals what to be; rather we teach them what to do, given certain conditions. For example, we can train an animal to approach people, relax when touched, and take food from human hands. If an animal is observed to do these behaviors, then we label it friendly.

Among professionals, there is a tendency to describe behavior in terms of diagnostic labels based on hypothetical, psychological constructs. Ostensibly, these constructs tell us what an animal has or lacks, such as anxiety, dominance, or motivation. A construct is a concept that is inferred from commonalities among observed phenomena and used to explain those phenomena. However, constructs are abstractions by definition, and abstractions cannot cause behavior. Although constructs can have a place in theory building, and conveniently summarize behaviors with a single word, they lack the specific information we need for an objective understanding of behavior.

Behavioral descriptions are critical to solving behavior problems. Describing what an animal actually does is central to the behavioral level of analysis, the level at which observable behavior and observable conditions act upon one another. The behavioral level of analysis is one piece of the behavior puzzle without which no accounting of behavior is complete.

Teaching Opportunities

See teaching opportunities instead of punishment opportunities: misbehavior is a lack of information, motivation (weak reinforcers), or practice. An important goal (if not the most important goal) is for animals to respond to our requests because they possess the skills and the motivation to do so, not because they have to. Animals learn something with each and every interaction they have with humans, and what they learn influences how they behave in the future. There is no off switch where learning is concerned. Therefore, it is most productive to think of every interaction with an animal as a teaching opportunity. Instead of punishing problem behaviors, identify what the animal should be doing instead and teach that behavior.

There is a saying among behavior analysts that the rat is never wrong. This expression is meant to remind us that the responsibility for a learner's behavior rests largely with the learner's teachers. As Kay Laurence eloquently wrote, "[It] is not about teaching impressive behaviors; it is about impressive teaching of behaviors."

Conclusion

It is the nature of all animals to use behavior to achieve valued outcomes. Given the power to choose, animals can be taught to behave successfully by shaping small approximations that lead to the end goal. Reinforcement is the crown jewel of teaching. To use it most effectively, positive reinforcers should be certain, swift and strong. A high rate of repetition and planned generalization builds fluent behaviors and a strong human-animal bond. To understand behavior, our main focus should be on observable behavior, not vague labels or intangible constructs. Be aware that information is exchanged in every interaction we have with animals; thus, every interaction is a teaching opportunity. Next time you walk up to an animal, consider carefully what you want it to learn about you. The principles represented by the letters P-A-R-R-O-T are fundamental to facilitating behavioral health and building trusting, long-term relationships with the animals in our care.

Psitta News


© World Parrot Trust


© 2005 World Parrot Trust

Parrotnews

Funds for Orange-Bellied Parrots

Australia has dedicated $260,000 in an urgent bid to save the Orange-Bellied Parrot *(Neophema chrysogaster)* from extinction.

The parrot was listed as critically endangered in 2006 with only 180 mature birds in the wild. The wild population could become extinct within three to five years. A controversial wind farm on Victoria's southeast coast was blocked by Canberra in 2004 because of concerns about the turbines chopping up parrots, although the state government rejected the concern.

A "parrot recovery team" was working on an 18-month action plan to improve the species chances of survival. The wild population is in decline because the proportion of females breeding in the wild was very low. A captive breeding program has become more critical to ensure the parrot's survival but it is hoped that breeding in the wild can be encouraged.

Source: www.heraldsun.com.au

National park on Cape York

A new national park has been declared on Cape York Peninsula covering an area home to endangered parrots and rare rock-wallabies.

The 42,500-hectare park, west of Cooktown, was named Alwal National Park and is a significant nesting ground for the endangered golden-shouldered parrot. It is also home to the endangered red goshawk bird and the rare Cape York rock-wallaby.

In another milestone for indigenous land rights and another win for conservation in Queensland, a second property, covering 37,000 hectares, has also been handed back to traditional owners under the same agreement and will include a 2,700-hectare nature refuge.

Source: www.couriermail.com.au

Czech parrot seizures

Customs officers and wildlife inspectors from Czech Environmental Inspectorate (CEI) seized 18 very rare parrots (Appendix A, CITES I) during house searches and road checks of cars.

The most important is the seizure of 3 juvenile Lear's macaws (*Anodorhynchus leari*), a critically endangered species. It is estimated that only a small remnant population of some 700 individuals remain in the wild in two small areas in Eastern Brazil. There are almost no Lear's Macaws in captivity. Loro Parque Foundation's breeding centre at Tenerife Island is the only one legally breeding Lear's Macaws in Europe.

This seizure is part of "Operation Lora,"a long-term investigation by Czech customs officers and CEI inspectors, focused on uncovering international gangs of parrot smugglers. The gang is specialized in smuggling eggs or hatchlings of very rare species of macaws, Amazons, cockatoos, etc. They use couriers to Europe and report the birds as bred in captivity in the EU. Falsified EU ring numbers and certificates from dead specimens are also being used.

Source: Czech Environmental Inspectorate


© A Hales

Argentina bird trade victory

A resolution published in May 2010 approves the reclassification of all Argentina´s birds according to their current conservation status. The move is significant because while Argentina has technically protected all native bird species, they had a loophole in their wildlife law exempting any animal classified as a pest from protection.

Using this loophole, Argentina remained among the largest exporters of wild caught parrots in the world. The government set up a legal harvesting and export program called Proyecto Elé which oversaw and approved the harvest and export of tens of thousands of parrots from Argentina each year, including Blue-fronted Amazons, and Patagonian Conures.

In response to the EU ban in 2007 which removed much of their export market, last year the Argentine government closed the Elé program and ceased virtually all legal parrot exports. This new resolution appears to be the final word on the trade being closed down for good, as even if they found a market for their parrots in the Middle East or Asia, since the birds are no longer deemed pests, they are now completely protected.

Source: Jamie Gilardi

Parrot Pampering Day

To celebrate the July 2007 permanent ban on the import of wild-caught birds into the EU, Paradise Park held a "Parrot Pampering Weekend" for their visitors in Cornwall, UK.

"People really got stuck in and were very creative. They made toys and feeders from fruit, nuts, flowers, leaves, honey and seeds, plus rope, wood and other materials. The keepers placed the items in the enclosures and visitors were able to walk round and see the birds enjoying the 'fruits' of their labour!" according to Director Alison Hales. You can find free ideas at parrottraining.org.uk

Source: www.paradisepark.org.uk


© IBAMA/SC

IBAMA catches illegal breeders

With the support of the Federal and Military Police, the Environmental Agency in Brazil (IBAMA) exposed illegal operations in two breeders in the state of Santa Catarina, south of Brazil. In one case, 54 threatened species were found including Amazon parrots, conures, toucans, toucanets and woodpeckers. The breeder was arrested and received a fine of $108,000 (US). Birds were being sold illegally on the internet.

The second breeder had a legal permit but had been banned from selling due to improper documents. Despite this prior investigation, forged documents and reports were found and 69 birds with no legal origin had already been sold. Finches, parrots, toucans and woodpeckers were found. Several had mutilations and fake leg bands. The breeder was fined $446,000 (US) in addition to a criminal lawsuit. Birds were confiscated and sent to trusted breeders and zoos of that state.

These actions are significant because IBAMA was willing to arrest the so-called breeders, levy heavy fines and make them an example to others doing the same.

Source: Badaró Ferrari - Ascom IBAMA/SC

UK Parrots eMagazine

Parrots magazine announces the launch of its new eMag. Issue 151 (August 2010) can be downloaded as an interactive PDF file for just £1 as a special introductory offer for a limited period.

Once downloaded, the eMag can be viewed in either full screen or PDF view. There are live links to articles and other pages like Facebook, as well as advertisers' websites.

In either mode, there are convenient features for ease of reading and searching. Try the free demo version available at the Parrots Magazine website.

Source: www.parrotmag.com


© Sam Williams

Parrottrips

2010 Parrot Cruise: Southern Caribbean

November 7 - 14, 2010

Join us on the 2nd Annual Parrot Lover's Cruise sailing from San Juan, Puerto Rico.

With three exclusive shore excursions, parrot lovers will look for:

- Puerto Rican Amazons in Puerto Rico,
- Brown-throated Conures in Aruba,
- Yellow-shouldered Amazons in Bonaire,
- Red-necked and Imperial Amazons, and many more parrots, all flying free!

Starting at USD $765 | £532 – includes onboard seminars with Steve Martin and Steve Milpacher and a donation to the World Parrot Trust.

☎ Carol Cipriano +1 570.226.2569

baldmantravel@gmail.com

www.parrotloverscruise.com


© A Hales

2011 Pantanal Wildlife Safari: Brazil

May-June. 2011 with optional Hyacinth extension

Join the World Parrot Trust and Tropical Nature on this marvellous adventure to Brazil.

More to come!

www.parrots.org/parrottrip

liz@tropicalnaturetravel.com

☎ Elizabeth Sanders +1 877-888-1770

Contacts

Online

Main: parrots.org

Change your Address: parrots.org/addressupdate

Languages: Dutch, Finnish, German, Italian, Portuguese, Spanish and Swedish

Main - UK & World

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

USA

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

Andre Saidenberg,
R: João Alexandre Rochadel, 25, São Paulo - SP
Brooklin Novo. Brazil, 04565 010.
Tel/Fax: 55 11 9964 7314
brazil@worldparrottrust.org

Canada

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

Italy

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

Spain

Rose Elena Zegarra,
spain@worldparrottrust.org

Sweden

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

Parrots in the Wild