Kakapo chicks in the nest (Strigops habroptilus)  
Photo by DON MERTON

The most productive season since Kakapo have been intensively managed, 26 chicks had hatched by April. The female called Flossi had two. Seen here are two young she hatched in February 1998. Our report on page 16 describes how she feeds her chicks 900 rimu fruits at each feed - at least four times every night!

PsittaScene

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Members’ Expedition!
Supporting parrot conservation in the wild and promoting parrot welfare in captivity.

‘psittacine’ (pronounced ‘sit a sin’) meaning ‘belonging or allied to the parrots’ or ‘parrot-like’
African Grey Parrot Trade in Cameroon

Lobeke National Park

By ANASTASIA NGENYI, Volunteer Biologist, WWF Jengi SE Forest Project, BP 6776, Yaounde, Cameroon

The forest region of Lobeke in the Southeast corner of Cameroon has been the focus of attention over the past decade at national and international level, owing to its rich natural resource. Its outstanding conservation importance is due to its abundance of fauna and the rich variety of commercial tree species. Natural resources in the area face numerous threats due to the increased demand in resource exploitation by the local communities and commercial pressure owing to logging and poaching for the bush meat trade.

The area harbours an unusually high density of forest mammals particularly so-called "charismatic mega fauna" such as elephants, gorillas and chimpanzees.

The avifauna of the region is very rich: more than 283 species. The forest clearings attract a lot of African Grey Parrots (Psittacus erithacus) and Green Pigeons (Treron australis).

The richness of the forest in various commercial species has attracted many timber companies to the area. Most of the forest area in Lobeke has been logged at least thrice over the past 30 years. Currently most logging practices are unsustainable and could in the long term constitute a major threat to biodiversity and conservation of natural resources in the region.

The majority of Grey Parrots in Lobeke inhabit forest clearings in which they feed on various plants and on natural soil rich in mineral salts; they nest in trees 10-30m high. Most of the birds caught are destined for parrot trade in Europe and to some extent South Africa and Asia. Eighty percent come from the Lobeke forest. Two forest clearings in Lobeke, Bolou and Djangui harbour significant populations of Grey Parrots. More than 15,000 birds are taken out from these two clearings each year with half dying due to poor handling.

Lobeke National Park

The Lobeke National Park, LNP, covers an area of 2,125Km2 and is situated in the Boumba and Ngoko Division, southeast Cameroon.

Lobeke is a dense semi-deciduous forest, characterised by a patchwork of high forest, secondary forest and low-lying swamp interwoven with a mosaic of marantaceae forest, monodominant stands and forest clearings. The vegetation is described in detail by Garlan (1989) although summarised as being swamp / transitional closed forest, part of the evergreen Cameroon-Congolese forest types. Whilst much of the habitat is natural, logging over the past 30 years has contributed to the opening of the canopy in several areas of the forest. This patchwork of the forest types promotes a high diversity and an abundance of mammals in the region.

The large marshy forest clearings that characterised Lobeke forest eco-system are locally known as "bais". They include saline soils and / or riparian vegetation associated with marsh or dry grassland habitat, notably the Cyperaceae. Owing to their rich saline soils, the bais attract a lot of forest fauna.

Forest clearing potential

These forest clearings are of great potential in terms of eco-tourism if they are properly managed. They could generate enormous revenue that most likely would surpass present income from illegal trade in parrots. In addition, a booming local eco-tourism industry involving the local communities should guarantee long-term support of these communities to conservation initiatives. Present trade in parrots does not benefit the local communities as it is disorganised and carried out clandestinely.

The "bais" are characterised by grasses (Cyperaceae) associated with marshy and riparian vegetation. Their occurrence is naturally caused by geological and hydrological factors, although the habitat is maintained by intense mammal activity. Lobeke has several forest clearings, four are prominent due to their year round access. There is already minimum infrastructure to support research work through ecological monitoring studies. These bais were highly frequented by poachers and safari sport hunters for big game hunting prior to the creation of a national park. Many bais in the region are still frequented, principally for parrot trapping, fishing and elephant hunting. This has seriously contributed to the decline in animal abundance. Current management efforts are geared towards protection of these bais, with anti-poaching patrols and effective presence of monitoring teams in the areas.

Two bais are of great importance to this study, the Bolou and Djangue. These two bais are special, due to their vegetation and rich mineral soil composition. They are also special because they are the only two bais in the entire region highly frequented by parrots and in which parrot capture is intense. It is estimated that more than 12,000 birds are captured each year from these bais for export trade. Green Pigeons although also widely captured are consumed locally and are found in almost all bais in the region.
A large number of Grey Parrots are attracted by the natural soils of Djangue bai. Green Pigeons were seen in thousands, mostly in the mornings and evenings. Parrot trapping was noted to be highest during the dry season of December and January, and September that represents the late wet season in the region.

The Bolou bai situated on the southern edge of LNP is characterised by marshes and swamps. This probably accounts for the high abundance of sitatunga compared to other species, especially during the peak rainy period of October.

A great number of Grey Parrots and Green Pigeons were also observed to frequent this bai especially in the mornings. Parrot trappers were seen in both bais during the studies. During the preliminary studies in Djangue and Bolou bais, it was noticed that Grey Parrots focused their activities in selected areas (dead palms, swampy areas etc). They concentrated their foraging activity to feed on mineral soils and several plant species such as *Oldenlandia lanciflora*. These areas selected are not too swampy or too dry.

The activities of parrot trappers negatively affect feeding habits of the birds and, more significantly, populations and distribution in the region. Given the intensity of capture, especially during the dry season periods, these birds usually "fly without landing" notably at preferred habitat sites like the bais. Parrot trappers also indulge in hunting partly to subsidise for food and also for the bush meat trade.

### Local trade

Parrot trade at the local level is organised by middlemen known as "Détenteurs", who possess official permits issued for the trade. Détenteurs live mostly in Kika and Moloundou where there is relatively good access to public transport to easily evacuate the birds once the parrot trappers are out from the forest. Some do hire vehicles if there are large quantities of birds caught. Transportation of these birds by détenteurs is mostly done in the night to avoid wildlife law enforcement officers.

Lobeke is said to be one of the highest parrot trapping zones, with 80% of the Grey Parrots from Cameroon harvested from this area and particularly from the two clearings mentioned. Of every 10 Grey Parrots exported from Cameroon, at least 7 are from the Lobeke region and SE forest region. The Grey Parrots are put into small cases of about 1.5 x 2m, 100 to 150 in each, to be transported to Yaounde (distance of about 680m).

Once in Yaounde, they are put inside what is known as "quarantine", which can take up to 1,000 parrots. On 18th September last year, the Minister of Environment and Forest, MINEF, signed a decree attributing quotas of Grey Parrots to nineteen individuals. In total, 11,950 Grey Parrots had been attributed as quota for the 2001 fiscal year. Two bidders were disqualified in the process for lack of "quarantine" and failure to pay the required fee.

### Quotas always exceeded

In 1997, CITES suspended all export of Grey Parrot from Cameroon because the country exceeded its 1996 export quota (then 11,000 birds) by almost double. Trade in Grey Parrots has been for the past years a lucrative business in Cameroon with almost every sector trying to get its own share of the cake. Although this trade was prohibited in Cameroon in 1997, trappers nevertheless continued to trap. Since then, the situation has not changed in Cameroon.

Where the Wild Greys Are

A day in the life of Africa’s Grey Parrots.

A World Parrot Trust Production – 18 minute film available on CD (PC, Mac, DVD) and Video (PAL, NTSC) via WPT UK and WPT USA or via our website £13.50 / US$20 / 22 (incl. p&p).

All proceeds go directly towards our African Grey Conservation Fund.

More than 15,000 birds are taken out from these two clearings each year with half dying due to poor handling.

The annual quota for Cameroon is 12,000 Grey Parrots, but each year more than 15,000 are exported. It is therefore important to re-established legislation to control and regulate this trade. This will lead to a sustainable management of this very important bird species and a limitation of parrot laundering through other countries. Cameroon accounted for 50% of the total specimens exported from all countries in 1995 and is still one of the highest exporters of African Grey Parrots today. Perhaps there should be a call for an alternative solution to the current commercial exploitation. This alternative should be either biological or economical, to help in one way or the other to reduce Grey Parrot exploitation and provide a strategic solution to economically support the parrot trappers. Eco-tourism seems a good idea to fit this profile (economically) and continuing studies of African Grey Parrots should help in future to evaluate the biological trend of Grey Parrots and their reproductive aspects.

Living in the wild, Grey Parrots do not quickly adapt to ordinary food like maize, due to their habit of feeding on mineral soil and special vegetation, consequently they die from starvation and stress once taken out of their habitat of origin.

Transportation over-night of Grey Parrots to avoid security checks results in poor handling and negligence of the parrots. All the trappers care about is reaching their destination without being caught when transporting extra Grey Parrots.

### Research continues

The present study is on-going and will attempt to address issues related to:

- Quantities of birds harvested in the region and, more importantly, two bais of LNP,
- Trading routes and local networks,
- Identification of other capture sites,
- Legislative aspects and law enforcement,
- Local participation in a collaborative approach in protection of bais and possibilities in development and management of a benefit-sharing scheme,
- Development of a long-term programme for monitoring of species,
- Reproductive ecology with identification of nesting sites within LNP,
- Education campaigns to educate and inform parrot trappers (to be conducted possibly by project game guards).

The Grey Parrots are put into small cases of about 1.5 x 2m, 100 to 150 in each, to be transported.

The majority of Grey Parrots in Lobeke inhabit forest clearings in which they feed on various plants and on natural soil rich in mineral salts.
New Tradition for the Catholic Church saves Palms and Parrots

By PAUL SALAMAN

Wax Palms (*Ceroxylon quindiuense*) - the world’s tallest palm and an endangered species - are massacred each Easter to provide palm fronds for the Palm Sunday processions and used to adorn churches throughout the Colombian Andes (See *PsittaScene* Feb 2002, No 50). Unfortunately, the Critically Endangered Yellow-eared Parrot (*Ognorhynchus icterotis*) is dependent on the wax palm for nesting and roosting, so the parrot’s survival is inextricably linked to the plight of the wax palm. So our euphoria at discovering a population of Yellow-eared Parrots in western Colombia last year was short-lived as our worst nightmares were realised when thousands of people waved wax palm fronds to church on a glorious Palm Sunday morning in 2001.

As there are less than a thousand wax palms scattered across the parrot’s range in the Western Andes, their survival and that of the palm appeared depressingly remote. The Fundación ProAves - Colombia team, that operates Project Ognorhynchus - knew we had to act quickly and effectively to avoid the impending catastrophe for both species. There and then, the ProAves team made a pact to do everything possible to avoid the sight of another wax palm frond in a parade.

But how to change the centuries old tradition of the Catholic Church celebrating Palm Sunday? Whilst the national laws were on our side, we had to change the fundamental mentality of the community and, critically, gain the support of the Catholic Church. So the ProAves team, led by Alex Cortés, Pablo Flórez, José Castaño, and Marcela Vargas, immediately implemented an Action Plan with the support of Fundación Loro Parque to change the attitude of the local people surrounding the Yellow-eared Parrot nesting and foraging areas.

After Palm Sunday 2001, the ProAves team made great leaps towards protecting the parrot and palm. We conducted a highly successful “World Birdwatch” day featured on regional TV, and established an intensive environmental awareness campaign, including founding an ecological group called ‘Friends of Nature’ that rapidly grew to over 100 students and a further 500 keen to join! Research successes were equally impressive, with the roosting and nesting sites uncovered revealing the total population at a staggering 277 individuals - two thirds of the global population! Clearly, much was at stake on Palm Sunday in protecting the Yellow-eared Parrots’ stronghold.

Yet, as we approached Palm Sunday in March 2002, one final daunting obstacle seemed impossible... the Catholic Church in the study area was reluctant to change the tradition of using wax palms, even though it is now illegal, to alternatives such as other flags, balloons, tree branches, and some other species of palm (similar to *Ceroxylon*). After months of fruitless discussions with the Church our campaign looked doomed to fail. So with just weeks to go, we kicked off a last ditch intensive campaign to get community support and convince the Church authorities of the importance of protecting and celebrating Colombia’s national tree - the wax palm.

With the support of Conservation International, we embarked on a national and regional publicity campaign which included radio broadcasts, TV presentations and adverts, and national and international newspaper articles. The campaign captivated national attention, and even spread internationally. But the fruits of working and acting locally proved critical, especially with the children of the ‘Friends of Nature’ group who undertook numerous community awareness tasks, from distributing palm and parrot posters to musical concerts and theatre productions.

Educating the local police to the issues and problems was successful as they actively monitored the situation and informed all that they would enforce a ban on cutting down wax palms. Also, the regional environmental agency CorAntioquia greatly supported our efforts by paying 15 men, who normally cut down and sold wax palms for Palm Sunday, to plant wax palm seedlings across the parrots’ foraging range for one week.

With days to go before Palm Sunday and with overwhelming community support for the campaign, the Catholic Church, particularly led by the Priest Mario Águedo, decided to actively support alternatives to cutting down wax palms for the procession. With the Church’s blessing, we provided over 2,500 balloons, 2,000 tree branches (from coffee plants, eucalyptus and pine trees), and some 500 wax palm fronds from abundant lowland species. However, the most popular alternative was 600 wax palm seedlings in soil bags given as gifts for people to plant at home afterwards.

On March 24 2002, double the number of people participated in the Palm Sunday procession, especially more children. Yet not a single cut wax palm frond could be found in the procession of 5,000 people! A triumph for the wax palm, for the Yellow-eared Parrot and for the Catholic Church, plus 600 new palm recruits in the town from the seedlings and many more planted in the countryside. Palm Sunday this year was a fine day to celebrate!

The campaign was a successful example of how environmental awareness and capacity building within the community can lead to real change and positive action for conservation by the community, even in the face of hundreds of years of tradition. Fundamental to this change were the children of the town and the Catholic Church. However, after the procession we sadly heard discontent from some elderly people who were not happy with the absence of the wax palm and were determined to return to old traditions next year. It is also a sombre thought that in other parts of the Colombian Andes, wax palms continue to be massacred for Palm Sunday processions. So whilst our concern for the palm is still very real, we’re now optimistic that a new tradition to celebrate the wax palm, not threaten it, is possible.

Thanks to the long-term support of Fundación Loro Parque in the Western Andes and to new supporters like World Parrot Trust member Susanne Shrader and the American Bird Conservancy to help us build a safer future for the Yellow-eared Parrot. Your contribution would also make a difference, so please help now.

For further information about the Yellow-eared Parrot or for details on how you can help support this project, contact Paul via Email: salaman@ognorhynchus.com or Web: www.ognorhynchus.com
Conservation Beyond the Cage

By KAREN A. MCGOVERN, Curator, Rare Species Conservatory Foundation

If you are like me, the words statistics and statistical analysis have about the same effect as a quality sleeping pill. No one throwing a party has ever been heard to say, “Oh-don’t forget to invite Bob—remember how much fun his statistical analysis was at the Smith’s barbecue last weekend?” Nonetheless, statistics are vital tools for arguing for or against just about anything imaginable. Every once in a while, a rare exception is made when the numbers call for attention.

One simply cannot save an individual species without protecting and preserving the habitat that supports it in the wild. That’s what makes Charlie’s statistic so timely and compelling. Sure, draw attention to the 50 parrots, but realize that entire, intact ecosystems are also at stake. For this reason, parrots are ideal “flagship species” for tropical conservation. I don’t have to mention the spell these charismatic, beautiful creatures have cast over humans throughout our history.

We have the statistics

Sol we have the information, we have the statistics to back up these claims, we know that parrots are disappearing in the wild - the question is this - what are we going to do about it? Aviculture is a multi-million dollar industry - globally a multi-billion dollar industry. I’m not just talking about the money aviculturists make buying and selling birds; I’m also talking about the feed and supply industries as well. Why isn’t parrot conservation one of the best-funded conservation initiatives? Why are conservation organizations constantly struggling to raise funds for programs that are obviously vital to preserving the resource upon which those multi-million-dollar industries depend?

Call me stupid, but I just don’t get it. The solution seems so simple to me - feed companies should donate a percentage of annual profits to promote parrot conservation. Every pet store that sells a bird, cage, bag of seed or parrot toy should include proceeds that directly benefit parrot conservation in the country of origin. Every aviculturist who sells a bird should attach a conservation surcharge to that sale, which is directed toward in situ conservation programs.

Funds from conservation surcharges could help programmes for critically endangered species such as the Imperial Amazon (Amazona imperialis).

Before the yelling starts about how much it “costs” to raise parrots, let’s keep in mind the cost to the environment that once supported birds in captivity and their ancestors. Thousands of acres of rainforests are being destroyed as I sit here typing and you sit there reading. If one or two major feed companies would place a one-dollar increase on every bag of seed, a 5-to-10% add-on to every toy or cage sold, for just one year, MILLIONS OF DOLLARS in revenue could be directed to conservation efforts, with a public relations kickback of incredible proportions that I think would be the envy of manufacturers everywhere.

I submit that the average consumer would gladly accept having an extra few dollars tacked onto their bill in direct support of conservation initiatives for the very animal they are taking home. This could spark a huge public awareness campaign that is, in my opinion, long overdue. I know first-hand how surprisingly inexpensive it can be to run effective conservation programs focusing on endangered parrots, yet how impossible it can be to raise those funds.

The bottom line is that I’m frustrated. I see U.S. zoological institutions with collective budgets that total in the billions allocating fractional percentages to conservation of any sort, I hear from feed and supply manufacturers that “it just doesn’t fit our profile” to allocate funds to conservation, I have had aviculturists with collections of thousands of parrots give me the cold shoulder, and (excuse me for repeating myself) I just don’t get it. It pains me to conclude that many people in the “bird business” have lost the connection between the rare birds they have in cages and their counterparts struggling to survive in the wild. Keeping rare and endangered birds in cages is not conservation. Repeat that for me, would you?

I agree that critically endangered species must be maintained in captivity as a simple hedge against extinction, but this is a salvage approach at best. Captive conservation programs must be part of a much larger picture that includes in situ habitat conservation programs. Face it, with only rare exceptions, birds in cages die in cages. The wonderful concept of parrot “reintroduction” is a crapshoot in the very best...
The one thing that sets Crater Mountain apart from many other protected areas around the world is that people are still living a more or less traditional lifestyle within the forests. But with looming outside influences their lifestyles are gradually changing, and the implications of these changes for the three large parrots, and the local ecology in general, are potentially profoundly devastating.

In terms of land area, the CMWMA spans over 2,700 km² which covers the tribal lands of the Gimi and the Pawaia speaking people. Together, these groups comprise more than 20 clans who are mainly subsistence hunter-gatherers, with the exception of some clans in the highlands who have recently ventured into coffee and peanuts as cash crops. This trend is becoming quite common in the highland communities of Papua New Guinea.

For the Pawaia clans, the last decade has brought them great changes in the way that they have lived in the forest. One significant change is the improvement of medical services available to the people, which has increased the average life expectancy. Consequently, over the last decade or so, their lifestyle has changed from being small, semi-nomadic units (mainly comprised only of immediate family members), to relatively bigger, more sedentary groups, which form more long-term communities.

In the past, Palm Cockatoos, Pesquet’s and Eclectus Parrots had been hunted by the local people for various uses. All three parrots were hunted for food, but the Pawaia also hunted parrots for bride price payments, and in some cases the feathers or the whole bird was exchanged for dogs or pigs, or sold for cash to the neighbouring highland tribes. In particular, the red and black feathers of the Pesquet’s Parrot are highly sought after by neighbouring tribes, who combine the feathers with Bird of Paradise plumes to make colourful head-dresses used in ceremonial events.

The introduction of coffee as a cash crop, the increased population and the shift to a more sedentary lifestyle has had major implications for the way land is used by both communities who live in CMWMA. In the Gimi communities, the monetary benefits gained from cash cropping has stimulated more and more forest to be cleared for coffee gardens. In some cases, the land-ownership system is also changing from being clan-based to being individual-based. For the Pawaia, increases in family size and the trend towards more sedentary communities has meant that bigger forest patches are being cleared for gardening and also that the hunting pressure on the local wildlife is increasing dramatically. All of these changes have already had a significant impact on the environment and the wildlife in CMWMA. But there are other, potentially far more devastating threats looming. In the late 1980s, logging activities emerged in the clan-lands just outside the southern boundary of CMWMA. Unfortunately, logging in Papua New Guinea often involves companies who use unscrupulous tactics starting with government ministers and officials, and ending with the local landowners. Local people are often paid logging royalties years ahead of the actual logging operations which makes it difficult to choose more sustainable, yet
Seven Trained Local Observers (TLOs) take a well earned break from fieldwork. Hearing these men speak about their desire to conserve their forests gives great hope for the future.

A first for the Parrot Project in the region was to include local women in the work. Here, Lucy Soho (standing) and Magreth Yapi prepare fruits for nutritional analyses.

With all the gentleness and care in the world, Sopè Tawali measures a mature Palm Cockatoo chick, while Jawai Swai looks on.

less lucrative uses for their traditional lands. Felled trees are often taken that are below the loggable size limits, above government imposed quotas and within areas set aside for conservation or cultural significance. Then, in 1997-1998, mining exploration began in the northern part of the CMWMA. These outside forces are potentially so devastating that they threaten to damage irreparably both the precious ecosystems, and traditional lifestyles of the people within CMWMA.

In the face of these challenges, the conservation of Palm Cockatoos, and Pesquet’s and Eclectus Parrots required a two-pronged approach. In the first case, a two year study was started in CMWMA in January 1999. The specific aim of this study was to look into the breeding and feeding biology that is so poorly understood for these species. Any other information about the parrots’ ecology that emerged was also of interest. By gathering this information, the study hopes to point out to conservation authorities some of the critical factors that affect the survival of the parrots in their natural environment.

The second and equally important aim of the study is to involve the local people so that they can appreciate alternative uses for their natural resources. By actively participating in the project the local people learn about the long-term benefits of conserving their natural resources. From these insights it’s hoped that the traditional owners will choose conservation over offers from the so-called large scale ‘resource developers’ which currently threaten the environment.

In 1999 four local assistants were trained to collect basic breeding and feeding data for the three focal parrot species. The assistants were young men who had had experienced working as trained local observers (TLOs) in previous research that had been conducted in the area. Their job was to help in conducting nest monitoring, and taking nest and growth data of the parrot chicks. Finding an adequate number of nests to study was a daunting task, which has only succeeded by relying on the traditional owner’s intimate knowledge of their land. A reward system was initiated which was designed to encourage the search and reporting of nest trees. As the study progressed the number of nests steadily increased with most new nests being located further and further away from the main base village of Haia. The furthest that we have travelled to check a nest was three full days walking distance! It soon became obvious that more local assistants were needed to visit the growing number of nests. But before additional TLOs could be employed they needed to be trained. Basic training involved monthly demonstrations about the use of the field equipment such as tape measures, callipers, scales, rulers, altimeter and compasses, which were the main equipment used in the study. Those TLOs already experienced in using this equipment also assisted in the workshops.

Monthly monitoring

So far, the number of TLOs has grown from four to 12 in September 1999 and by early 2000 the Parrot Project, as it came to be known, was employing about 23 TLOs. This small army of dedicated conservation workers were organised into four groups, each led by an experienced TLO. There were three teams each of whom were responsible for monitoring one of the three focal species in designated areas. The fourth group was a parrot food processing group who prepare fruits for nutritional analyses, and included five young women - the first time female traditional owners from the area had ever been employed in field research. Their task was to measure, dry and pack the parrot foods that were collected and brought back to the small base-camp village of Haia. Even at this stage with the more than 20 TLOs working for the parrot project, still more requests were received by both the male and female members of the Pawaia and the nearby Daribi tribal communities to become involved in the parrot conservation project. They could see the social and economic benefits of conservation and wanted to become part of it. Even though the project desperately needed these additional offers of help, the people had to be turned away due to limited funds.

One important aspect that has emerged from this work was the respect that the TLOs have gained from other community members. Being involved in the Parrot Project has increased their social status because they are seen as skilled and valuable members of the community. The project has also gained widespread support from the entire Pawaia community and not just the TLOs. The vast area needed by the study meant that many more clans were now involved. This meant that for the first time, the economic and social benefits of conservation work (e.g. sleep fees, nest finder’s fees etc.) were reaching many more people.

Although we have come a long way, as we come to the end of the first two years of the Parrot Project, the gaps that remain in our knowledge of the three large parrots have been revealed. One important finding from the research is that Pesquet’s Parrots and Palm Cockatoos have a low breeding frequency and density compared to Eclectus Parrots. These sorts of trends have obvious conservation implications, but the factors which cause them are still unclear. It is possible that they’re related in some way to the degree of dietary specialisation (Pesquet’s Parrots and Palm Cockatoos being highly specialised, compared to Eclectus Parrots which have much broader diets), but much more work is required before we can answer these sorts of questions.

Over the past two years, the Parrot Project has instilled in the traditional owners an appreciation and desire to conserve wildlife and habitats. The intense and ever increasing interest in conservation work from the clans now means that the people-power exists to make long-term conservation within CMWMA a very real and achievable goal, despite the threats from outside forces. But it will come at a cost. The local people want to use conservation work as a way of establishing a long-term and sustainable style of life on their traditional lands. Our dream over the next few years is to generate enough funding for the Parrot Project, and similar projects, so that offers of help from the local people never have to be turned away ever again.

Acknowledgements

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For further information or if you would like to send a donation please contact either WPT UK or Email steve.murphy@anu.edu.au.
Learning is a different sort of mechanism from inherited behaviour. Indeed, learning may be thought of as the process that results from experience.

In other words, animals tend to repeat behaviours, which result in desired outcomes. Of course, the consequences of performing the behaviour that ultimately predicts how it will be performed next time, if at all. This is called the law of effect, often stated as behaviour is a function of its consequences. It is the most fundamental of all the principles of behaviour. In other words, animals tend to repeat behaviours, which result in desired outcomes. Of course, the determination of what is desired belongs exclusively to each animal and may change from one circumstance to another.

Parrots too

For lack of knowledge about the fundamental principles of learning, many people are utterly baffled by their parrots' behaviour. The phenomenon that behaviour scientists work to explain is behaviour, and the relationship between each behaviour and the resulting consequences which highlights the functional relationship between behaviour and consequences.

1. When Peri steps onto Grace's hand then she returns him to his cage.

Predicted future behaviour (PFB): Peri, who would rather be on top of his cage than locked inside it, will step onto Grace's hand less often.

2. When Peri bites Grace's hand then she puts down the phone and turns her attention back to Peri.

PFB: Peri will bite Grace's hand more often when she is on the phone.

3. When Peri whistles and chatters softly in his cage in the bird-room then Grace stays busy in the kitchen.

PFB: Peri will whistle and chatter softly less often when Grace is out of sight.

4. When Peri uses his voice loudly then Grace comes into his room to tell him to quiet down.

PFB: Peri will use his voice loudly more often to get Grace to come into his room.

In this light, Peri is not inscrutable after all. Although some people might label Peri dominant for refusing to step up, hormonal for biting, or obsessive for preservative screaming, our analyses suggest that Peri would be more accurately labeled an intelligent learner (with an unwilling tutor in Grace). Our predictions of Peri's future behaviour based on the sound application of the law of effect are not only reasonable but useful, as well: Each analysis reveals a clear direction for teaching strategies to help both Grace and Peri interact in ways more facilitative of successful companion behaviour. These are very simple examples which nonetheless represent some of the most common problem behaviours reported by companion parrot caretakers. More complex interactions can be broken down in much the same way.

There are many other important principles of behaviour to improve your understanding and ability to predict and influence parrot behaviour. Some of the principles clarify the function of individuality among learners, timing, consistency and intensity of the outcome in relation to behaviour; others clarify the function of dependency between behaviour and outcomes; and, still others have to do with the consequences of behaviour but the events that set the occasion for the behaviour to occur in the first place, known as antecedents. It is essential to have this knowledge close at hand when working with parrots, or any other living creature. In my opinion, the fundamental principles of behaviour should be part of every grade school science curriculum.

Teaching strategies

For companion parrot caretakers, aviculturists, and conservationists alike, one of the most important benefits of learning about learning is what this information teaches us about teaching. Understanding the fundamental principles of learning provides us with a core of invaluable strategies with which to teach parrots to live successfully among humans.

There are many well-validated teaching strategies that have resulted from the science of behaviour; however, in my opinion, the most significant contribution is the evidence that everything that needs to be learned can be taught without the use of physical force or coercion. To become proficient at teaching with exclusively non-forceful methods, one only needs to learn how. Strategies such as positive reinforcement, shaping, chaining, differential reinforcement of alternative behaviours, time-out from positive reinforcement and extinction will provide you with the very best tools the technology of teaching has to offer. Learning to use these tools effectively will take time, effort and an unwavering commitment to verifiable data as there are many more ways to misuse these tools than to use them correctly. However, the return on these skills once mastered will be well worth the investment.

Let's look back at our simple when-then examples of Grace and Periwinkle's interactions to see how we might use some of these tools to teach different behaviours by strategically changing the outcomes.

1. Positive reinforcement: When Peri steps onto Grace's hand then she talks to him and rubs his head feathers before returning Peri to his cage.

PFB: Peri will step onto Grace's hand more often for praise and rubs.

2. Time Out from Positive Reinforcement: When Peri bites Grace's hand while she's on the phone then Grace gently but immediately puts him down on a nearby perch.
PFB: Peri will bite Grace less often when she is on the phone to stay closer to Grace.

3 Differential Reinforcement of Alternative Behaviour: When Peri whistles and chatters softly then Grace comes in his room.

PFB: Peri will whistle and chatter softly more often to get Grace to come to his room.

4 Extinction: When Peri uses his voice loudly then Grace stays busy in the kitchen.

PFB: Peri will use his voice loudly less often to get Grace in his view.

Another important benefit of learning about learning and teaching is that you will improve your ability to assess the veracity of others' teaching strategies and advice. The informed person will quickly discriminate between force and facilitation and will know how to implement non-forceful alternatives to produce the desired results. Even among some people whose pearls of wisdom regarding behaviour are many, the pearls are often left unstrung for lack of a unifying set of principles from which to analyse, predict and influence the behaviour of parrots. This often results in a spray of fixes rather than the systematic behaviour intervention plans you will be prepared to implement.

**Resources**

There is a voluminous literature available to help you learn how to apply the principles of behavior and related teaching strategies to the benefit of you and your birds. Nowadays, with the limitless information dissemination power of the Internet, people no longer need to feel that they are strangers in a strange land when it comes to parrot behaviour or that there is a dearth of information available to help them. The key to accessing this literature is to know what you are looking for. If you look for information on the scientific analysis of parrot behaviour, you are not likely to find too many resources at this time, although there are some good ones out there, for example, Steve Martin's articles, many of which can be found at www.naturalencounters.com and the comprehensive information at Bobbi Brinker's web site at www.parrottalk.com .

A century is a relatively long time to generate jargon related to the science of behaviour which sometimes makes it confusing to know what to look for when searching for resources. For example, the terms teaching, training, and conditioning have historically had different shades of meaning and have too often been used to imply a ranking of the presumed ability of the learner. That is, teachers teach children but trainers train or condition animals. As the learning ability of non-human animals continues to astound the rankers, such discriminations become less and less meaningful. I myself use the word teaching to describe my work with all learners whether they're feathered, furred, scaled or bare-skinned.

As you search for resources to learn about behaviour, look for key words such as behaviourism, behaviour analysis, applied behaviour analysis, learning theory, learning and behaviour, operant conditioning, positive reinforcement teaching and clicker or bridge training - just to name a few. What you are looking for is the basic information about the science of learning and behaviour as explained by those writers who themselves are the best teachers. This information will come to you in many forms and related to many different species of animals. I am absolutely confident that you will immediately recognize the relevance to parrot behaviour even when the explicit topic is the behaviour of children (Smith and Iwata 1997), carp (Chase 2001), or horses (Ferguson and Rosales-Ruiz 2001).

**Valuable resources**

A wealth of valuable resources can be found at the Cambridge Centre for Behavioural Studies web site at www.behavior.org. Listed below are references to several excellent books and one magazine that have proven to be very helpful in improving my skills with parrots:


**Conclusion**

The purpose of this article is not to explain the principles of behaviour; rather it is to let you know about the help at hand. Scientific knowledge exists that is clearly relevant to your interest in parrots. The common concerns that

1. there is little scientific information to help you regarding parrot behaviour, and
2. parrots are inscrutable creatures that behave in unpredictable ways, are both inaccurate. It is also a grave inaccuracy held by too many people, that parrots require force or coercion to learn.

We often focus on the great diversity among our planet's animals. There are many amazing behaviours unique to birds in general and parrots specifically. The more we learn about those behaviours the better we will be able to predict and meet their needs. Such species typical behaviour includes subtle but communicative feather movements, body postures and eye responses. At the same time, there are many important similarities common to the members of the animal kingdom. The natural science of behaviour has demonstrated the applicability of a fundamental set of learning principles common to us all.

From conservation recovery efforts to keeping parrots as pets, learning plays a key part of absolutely every single interaction we have with our birds.

Gaining expertise in this area in order to analyse behaviour in terms of the fundamental learning principles and design and implement effective, non-forceful behaviour intervention plans will greatly improve your understanding of parrot behaviour and your ability to protect and provide for these most treasured creatures.

**Acknowledgement**

The author wishes to thank Ray Dorge for his lively and thought provoking debate which contributed to this article.

**References**


Everything that needs to be learned by these young Blue and Gold Macaws can be taught without the use of force or coercion. Photo: Rosemary Low

The natural behaviour of showing the bright underside of both wings as a form of communication is cued and displayed during the show. Photo: David Woolcock
The Cerrado of Piaui

It tastes delicious! We are all eating an exclusive dessert which is made from mixed nuts, milk and wild honey. I am eating the main food of the Hyacinth Macaw (Anodorhynchus hyacinthinus), the nuts of the palms of the genera Syagrus and Attalea. It is quite warm and a little bit cloudy. Guira Cuckoos (Caculus guira) are gathered gregariously in a tree in front of the little house we are sitting. A single Peach-fronted Parakeet (Aratinga aurea) perches on the top of a vertical branch without leaves. It is afternoon in the Cerrado near the little village Sao Goncalo do Gurugeira. After the tasty dessert we are leaving the picturesque camp. Lourirval Lima, a former trapper, is leading Gil Serique, the guide, and me on the sandy ground of a unique environment, the Cerrado (pronounced cehado), a thorny, very special, partially dry forest in the north-east of Brazil in the state Piaui.

We are traversing a dry river and I am impressed by the unusual red sand. On the left hand side a Red-legged Seriema (Cariama cristata) suddenly runs away from us. This interesting predator inhabits Cerrado and open grasslands and I observed it most of the time in pairs. They feed on small rodents, birds, reptiles, seeds and fruits. I will never forget the day when I observed them displaying from a hide behind a shrub.

Suddenly we are entering a tunnel, a very special tunnel made from palm leaves, which will lead us to a place which is so unique and impressive words cannot describe it. When I first saw through the little hole in the hide I could not speak because it was such an emotional moment. In front of me, perhaps only 5 metres away, were about 40 Hyacinth Macaws feeding on palm nuts. I could hear them cracking the hard nuts. The sun was shining on the marvellous blue plumage of the playful birds. Some of them took up to three nuts and flew with them to a tree growing nearby. They ate one nut and had other nuts in both feet. The birds always tasted several nuts before they decided to eat one. Most they threw away after they tasted them. In fresh nuts they even found the liquid which was drunk by the birds with enthusiasm.

During the following days I could identify some individuals. There was, for example, one bird with an upper beak which was not straight. The younger birds had many more black feathers in their plumage. One day I was very pleased to see two birds playing together on the ground. One was laying on its back while the other was playing with its feet. From the hide where I spent so many hours (which went by like five minutes) I could also observe Tinamous.

After several days we moved from the Hyacinth camp to the second camp near the red cliffs where these macaws usually nest. I enjoyed the drive through the Cerrado in an old lorry very much. We drove through an environment which is still not well studied but after the Amazon rainforest it is the second largest biome in South America and occupies almost 25% of Brazil. It is assumed that up to 1,000 species of trees, 3,000 species of herbs and shrubs and about 500 species of climbers are found there. Many endemic species are found in this forest which has a very special character. The vegetation is low and often deformed. I was particularly impressed with the swamps between dry areas. Once, in the middle of thorny vegetation, I saw a nice round small cactus on sandy ground. In the Cerrado you do not find epiphytic plants but on the walls of the cliffs I saw a Bromelia.

The Cerrado is found on Brazil’s high plateau and the rainy season is from October to April. Cerrado leads into Caatinga, a much dryer biotope, or into palm swamps and partially green lowland forest. Often there are little rivers flowing through Cerrado. Most trees have a strong bark to protect them from fire as from time to time, as a normal occurrence, fire burns down parts of the forest. The leaves die but not the tree, which will survive and new leaves will grow out of the bark. For example, the tree Miconia ferrugina is one of the plants with a strong bark. The palms of the genus Syagrus and Attalea only have leaves at the top of the trunk. The nuts grow in these crowns and fall when ripe, therefore the Hyacinth Macaws gather their food on the ground. The area of Cerrado-forest was mainly flat; on the horizon were some unusual red mountains, which were formed when the sea covered this place. These mountains therefore contain many cavities.

Large Buriti palms (Mauritia flexuosa) indicated swamps, which regularly crossed the Cerrado. In these palms I could observe Blue and Gold Macaws (Ara ararauna) and flocks of Red-bellied Macaws (Ara manilata). Both parrots nest in these swamps.

The Cerrado and the Varzea-forest

By LARS LEPPERHOFF, Switzerland

Brazil has many attractions for people who are interested in parrots. From large macaws to tiny Forpus-species there is a wonderful variety of parrots. It is a huge country with different types of climates and vegetation. In recent years many species have suffered from habitat destruction and illegal trading. This is still a problem but there are also many interesting and good efforts to preserve nature. During my journey in 2001 I saw some very effective projects and met interesting and dedicated people.

A Journey through Brazil

Hyacinth Macaws eating palm nuts of the genera Syagrus and Attalea on the ground about 5 metres away from the hide.
The Cerrado is a very interesting and fascinating environment, which as yet has not attracted much interest from tourists. On long walks in this unique forest with Lourival Lima, I discovered that cattle grazed over the whole area and the intensive cultivation of soybeans is a problem. Cattle are not harmful if the animals are not overpopulated. When I visited they did not have goats, which are more of a problem for the plants. The Cerrado-land belongs to Lourival and many other farmers. If tourists come to the region to observe Hyacinth Macaws and other wildlife, it will make sense for the inhabitants to preserve the Cerrado. The Hyacinth camp of Piauí was founded by Dr. Charles Munn who worked closely together with Lourival Lima. I was so pleased to have Gil Serique who works for Biobrasil on our tour as he translated everything from Portuguese into English. He works for Biobrasil. He has a good knowledge of nature and it was a pleasure to have him as a guide.

When you visit the Hyacinth camp with Biobrasil, their main aim is not making money. The goal is to preserve nature with the Hyacinthe Macaws in Piauí. It only works together with the local people who can make a living from tourism.

In the Varzea-forest

The plane is breaking through very thick clouds. It is raining. Suddenly the tropical rainforest appears like the sea. A brown river is flowing like a snake through the green. The small plane is landing in Tefe, a typical Brazilian jungle city. Soon after landing I travelled in a small boat up the large Amazon river, called Rio Solimoes, between the Rio Japura and the Rio Solimoes there is the Mamiraua reserve. The Mamiraua Lodge is a non-profit organisation like the Hyacinth camp of Biobrasil. The lodge is made from pretty houses floating on large trunks of the Assacá-trees, on the whitish-brown water of the river. Pink River Dolphins (Inia geoffrensis) were jumping out of the white water. White water rivers are rich in nutrients and sediments. Their sources are in the Andes. In black water rivers you do not find so many species but you can see clearly through the water and you are not harmed by mosquitoes. The Mamiraua sustainable development reserve was founded as a result of the research of Dr. José Marcio Ayres on the Red Uakari Monkey (Cacajao calvus rubicundus), an endemic species. Like the Hyacinth camp, it is a sustainable development reserve where the communities actively participate in its management.

The trees of the Cerrado in Piauí have tough bark, which is resilient against fire.
The purpose is not to earn as much money as possible, but to show tourists the unique Varzea forest with the possibility for local people to make a modest living. A whole reserve will be preserved in the long term. And it is important to preserve such a special environment, which is also the home of many parrot species. Scarlet Macaws (Ara macao) were observed flying over the river and on one occasion I could see a pair in the top of a large tree. They are endangered because people are still taking the youngsters out of the nests, for pets and because of the colourful feathers, an understandable passion in which we all participate in a way.

I was very pleased to observe the Festive Amazon (Amazona festiva). Whole flocks were living around the lodge and I could observe them on every boat excursion on the river tributaries. After a rainy hour I saw them with wet wings sitting on Cecropia trees. They were calling quite loudly. In a local village named Alencar I saw tame Festive Amazons living in houses and on trees outside the houses. According to Olafita, the cook of Mamiraua lodge - a great parrot lover - the breeding time of these Amazons is June when the water level reaches the highest at about 12 metres. At this time the trees and shrubs have fruits and seeds. Only rarely do Blue and Gold Macaws and Red-bellied Macaws fly over the Varzea forest because Mauritia palms do not grow in flooded forest. Often I could observe flocks of Severe Macaws (Ara severa). Short-tailed Parrots (Gradydiscalus brachyurus) are easily distinguished from Amazons by their calls. It is also possible to see Red- lored Amazons (Amazona autumnalis), Mealy Amazons (Amazona farinosa), Barraband Parrots (Pionopsitta barrabandi), Maximilian’s Parrots (Pionus maximilliani) and Dusky-headed Conures (Aratinga weddelli). I was very impressed with the scenery and the plant life in this flooded forest. On canoe trips it was like being in a fairy tale, once we left the forest and came out into a lake with huge Victoria regia leaves and flowers. There were water hyacinths (Eichhornia crassipes) growing at the other end of the lake. In a partially open lake I could hear the Horned Screamer (Anhima cornuta) and suddenly it was flying out of the water-grass. In the tops of the rainforest there were three Muscovy Ducks (Cairina moschata) walking on the thick branches - a picture rarely seen. When they saw us watching them they flew into the flooded forest.

Three Brazilian Zoos

I visited three zoos in Brazil: Rio de Janeiro, Brasilia and Sao Paulo. I was pleased with the way they showed animals. They all have very good parrot collections. At Rio Zoo you have the opportunity to admire Golden Conures (Guaruba guarouba), Hawk headed Parrots (Deropytus accipitrinus fuscifrons), the Red-browed Amazon (Amazona rhodocorytha) and the Red-tailed Amazon (Amazona brasiliensis). A very large flight had been built for the Macaws. In Brasilia Zoo I was amazed to see pairs of Hyacinth Macaws in large planted flights with green grass. Sometimes the birds walked in the grass and their feathers were shining in the tropical sun. All the aviaries were spacious and the birds in very good condition.

The Zoo of Sao Paulo is the largest in South America. The part which is open to the public shows parrots from all continents. The aviary for macaws was most remarkable. I was very impressed with the scenery and the plant life in this flooded forest. On canoe trips it was like being in a fairy tale, once we left the forest and came out into a lake with huge Victoria regia leaves and flowers. There were water hyacinths (Eichhornia crassipes) growing at the other end of the lake. In a partially open lake I could hear the Horned Screamer (Anhima cornuta) and suddenly it was flying out of the water-grass. In the tops of the rainforest there were three Muscovy Ducks (Cairina moschata) walking on the thick branches - a picture rarely seen. When they saw us watching them they flew into the flooded forest.

How to get there

Contact details: through Biobrasil Tel +55 71 374 7601, Fax +55 71 374 13 54, Email biobras@provider.com.br. The Mamiraua lodge can be contacted through Tel/fax +55 92 343 41 60, Email fernanda@pop-tfe.rnp.br. I flew from
The World Parrot Trust announces its first Expedition. Travel with Rosemary Low and Dr. Charles Munn to see the Parrots of the Bolivian Highlands and the Clay Licks of Manu, Peru, in August 2002.

Assembling in the highland town of Santa Cruz, Bolivia, this small group of no more than 14 travellers will be led by Rosemary Low and a local guide on a ten day exploration of Bolivia and Peru in pursuit of some of the world’s rarest and most beautiful macaws, parrots, and an incredible diversity of plant and animal life. After two days visiting the rare and spectacular Red-fronted Macaws in the Bolivian highlands, the group will travel to Cusco, Peru and begin an unforgettable journey through the mountains, cloud forests, and lowland Amazon forests enjoying world-famous wildlife spectacles and staying in comfortable lodges along the way. Highlights will include opportunities to observe and photograph Cock-of-the-Rock breeding displays, macaws, parrots, and tapirs at clay licks, a good chance of seeing Military Macaws at the base of the Andes, and time to watch giant otters swimming about oxbow lakes. Returning through Cusco, we’ll also have the chance to spend a day exploring and shopping in this ancient Inca city or to visit the archaeological site at Machu Picchu. Rosemary will lead the group through the entire expedition, Charlie will be joining the group for a minimum of three days. This promotion is likely to fill fast - so book soon!!

ITINERARY:

Aug 21 Arrival to Santa Cruz, Bolivia and travel towards the eastern side of Santa Cruz along the old road to Cochabamba. Throughout the morning and part of the afternoon we will be stopping frequently to observe the rich bird life along the route, such as Mountain Caracara, Andean Condor, Red-crested Cotinga, Blue-themed Toucanet, Mitred Conure, Scaly-naped Parrot, Blue-crowned Parakeet, and many other species. Overnight Tambo Lodge (lunch, dinner = L,D)

Aug 22 Full day to explore the area and watch for Red-fronted Macaws and other bird life. Overnight Tambo Lodge (B,L,D)

Aug 23 Morning of Red-fronts, early afternoon trip to Santa Cruz, overnight in Santa Cruz (B,L)

Aug 24 Transfer to airport, Fly to Cusco, Peru, Transfer to hotel. Afternoon City tour and nearby archeological sites. Evening Lecture “Agriculture in the Andes”. Hotel Andes de America (B,L,D)

Aug 25-29 CUSCO - MANU An exciting and rewarding journey overland across the high Andes Mountains from Cusco into the Cloud Forest, then continuing by riverboat into the wildlife intensive Amazon Lowlands. Your lodging on this trip includes stays in the very best Amazon lodges in the Cloud Forest, in the forested foothills, and Manu Wildlife Center, considered the ultimate Amazon nature destination. Your return to Cusco is by chartered flight from Boca Manu (B,L,D)

Aug 30 MANU - CUSCO Transfer to hotel, overnight Andes de America (B)

Aug 31 Day of leisure. Afternoon lecture “Music of the Andes”. Overnight Andes de America (B)

Sep 01 Transfer to airport for flight to Lima. Arrival and transfer to hotel, afternoon city tour, archaeological museum, farewell dinner at La Rosa Nautica, transfer to airport for flight to Miami (B)

PRICE PER PERSON Based on double accommodations:

- 5 TO 9 participants: $ 2,970
- 10 TO 14 participants: $ 2,485
- Single supplement: $ 533

Travellers will need to arrange their own transport to Santa Cruz, Bolivia and return from Lima. We recommend contacting Eliana for booking your particular air travel requirements.

A four-day extension trip from Cusco which includes a visit to the sacred valley and two days at the world-renowned archaeological site at Machu Picchu is available - please contact Tropical Nature Travel for additional details.

TERMS AND CONDITIONS: Tropical Nature Travel Price includes all accommodation, meals as indicated, applicable hotel/restaurant taxes, all ground transportation, and air transportation from Manu to Cusco, airport departure taxes, entrance fees. English-speaking expert guides are provided on all excursions. Not included are gratuities, or items of a personal nature. The price is subject to change until full payment has been made.

DEPOSIT: A Deposit of $250 per person upon acceptance of the quote. Final payment is due 45 days before departure (JULY 5) - should be sent to: ELIZABETH Sanders, PO Box 1065, Alachua, FL 32616 USA

CANCELLATIONS: Refunds may be given up to 30 days before departure, less a $50 per person booking fee. Refunds will not be given for cancellations made 29 days before the departure. For MORE INFORMATION, please contact ELIANA at: TOLL FREE USA and Canada: 877 827 8350, Phone/Fax: ++(803) 933 0058, Email: eliana@tropicalnaturetravel.com
WPT Inaugurates the Action Grants Program Supporting Four Parrot Conservation Projects

We are pleased to announce that we’ve recently completed the first round of our Action Grants program. You may recall from an earlier PS (Vol 12 No 2 May 2000), that this program is one that targets projects on the conservation of the world’s globally-threatened parrots - that is projects that are outlined in the Parrot Action Plan. We received many qualified proposals, our Scientific Committee gave these a thorough review, and we selected the four strongest proposals for full funding at approximately $5,000 each. We are happy with the results of this program to date and hope that we will be able to expedite the process and expand the number of projects funded in the future. Our Scientific Committee has been enormously helpful for their assistance in a thorough review of all proposals, a special thanks therefore to Dr’s. Andrew Greenwood, Tony Juniper, Roger Wilkinson, Charles Munn, and Jamie Gilardi. Here are some details on the selected projects:

Ecology and Conservation of the Military Macaw (Ara militaris)
Katherine Renton, Ph.D., Instituto de Biologia, Universidad Nacional Autónoma de México. The coast of Jalisco, Mexico.

Project Summary
Little is known on the ecology of the Military Macaw, and the species now occurs in discontinuous, localized populations throughout its range. Internationally, the Military Macaw is listed in Appendix I of CITES, and with IUCN criteria as vulnerable in the Parrot Action Plan. In Mexico, the Military Macaw is listed as endangered in the Wildlife Protection Act, and has been highlighted as a priority species for conservation action in the national Parrot Conservation Plan. Both the IUCN Parrot Action Plan and the Mexican Parrot Conservation Plan, highlight the need for ecological information on the status and requirements of existing populations in the wild. Military Macaw populations in Jalisco are one of the few reported to nest in tree cavities, making them highly vulnerable to nest poaching. Tropical dry forest along the Pacific coast is also one of the most threatend forest types in Mexico. The project aims to obtain information on the distribution and abundance of Military Macaws along the coast of Jalisco, in order to identify important sites for conservation. In addition, the reproductive ecology and productivity of Military Macaws will be determined through nest studies, and their resource requirements evaluated through observations of diet and habitat use. In conjunction with the field research, the project proposes to implement environmental education and outreach activities with local schools and communities, highlighting the conservation status of the Military Macaw, and other threatened parrots in the region, and promoting the eco-tourism potential of the species. Information obtained through the study will be applied in the implementation of conservation actions as part of the Mexican government’s Recovery Plan for Priority Species.

Conservation of the Ultramarine Lorikeet (Vini ultramarina)
Philippe Raust, Ph.D., Société d’Ornithologie de Polynésie ‘MANU’, Mark Ziembicki, Dept. of Environmental Biology, University of Adelaide, South Australia. Marquesas Islands, French Polynesia, South Australia.

Project Summary
All three lorikeet species of the Vini genus that inhabit islands in French Polynesia are threatened with extinction, and as all are found on small islands, nowhere are populations large. Whilst the lorikeets seem able to tolerate habitat change, nest predation by rats (particularly Rattus rattus) seems the main threat having decimated populations on many islands. This project will focus on Vini ultramarina in the Marquesas Islands, the most threatened species and listed by IUCN as Endangered and in CITES Appendix I. Having thought to be extinct on two islands in its former range isolated birds have recently been re-discovered on both islands, however, only one relatively healthy population (ca.1,000 birds) exists on Ua Huka, an island currently believed to be rat-free. The first stage of this study will be to determine the presence, distribution and density of rats on each of the Marquesas Islands within the lorikeets’ range. The current population status and distribution of Vuli ultramarina will be determined by conducting systematic surveys on all relevant islands. Habitat use and location of nesting sites will be determined from these surveys and additional searches. Nesting sites will be identified, mapped and monitored to assess nesting success. Baiting of rats will be initiated around active breeding trees and in areas of particularly high rat density. Placement of protective guards and trimming of branches of active nest trees will prevent rats from climbing to nests. These methods have been successfully employed for the recovery of other species in the region (eg. the critically endangered Tahiti flycatcher, .) . Cover the current rat-free status of Ua Huka a high priority will be rat baiting around the harbour landing. These mitigation measures should help increase lorikeet numbers and also be of benefit to other critically endangered species on the islands (eg. Pomarea whitneyi on Fatu Iva). The success of these measures will be assessed by post-breeding season surveys and monitoring of nesting success.

This immediate conservation effort will be complemented by a larger scale program which will include a rat eradication programme on Fatu Iva where R. rattus have only recently been introduced. Additionally, an education program to raise local awareness of the rat problem will be initiated given the health, agricultural and environmental problems posed by rats. Should this program be successful it could be extended to other islands where scarce populations of Vini still exist, particularly the endangered Vini kuhlii on Rimatara.

Conservation Program for the Thick-billed Parrot (Rhynchopsitta pachyrhyncha)
Claudia Macias, Ernesto Enkerlin-Hoeflich, Ph.D., ITESM, Centro de Calidad Ambiental, Monterrey, Mexico, Northern Mexico.

Project Summary
Populations of the Thick-billed Parrot (TBP) have declined markedly in Mexico mainly due to large scale felling of the pine forests of the Sierra Madre Occidental. The species has also been under stress from extensive trapping for the pet and avicultural trades. TBP is not limited to virgin forest and can exist in selectively logged areas where suitable dead standing trees for nesting are available and trapping does not occur. While the parrots still persist in suitable numbers in the best remaining forested areas, all such areas will surely be cleared of their large trees in the near future unless conservation efforts continue and prove successful. We propose to continue the study of breeding biology and habitat requirements for the species through monitoring nestling effort and nesting success in known breeding areas and documenting chick mortality causes, diet components, movements and site fidelity of three breeding pairs that have been translocated in the past two years within the current breeding range (using radiotelemetry), as well as screening wild birds for diseases. These measures will allow us to determine population trends, evaluate potential strategies for reducing chick mortality rate, identify key areas for conservation, as well as evaluate the feasibility of future efforts for reintroducing the species into Arizona, U.S. As part of our long term conservation program for the species, we have accomplished the protection of the most important breeding area through the Tunuaca Forest Reserve and similarly we will continue negotiating the acquisition of other areas, as well as working with local communities in conservation and ecosystem sustainable management practices.

Military Macaws. Photo: Keith Ewart

Thick-billed Parrot. Photo: Keith Ewart

PsittaScene May 2002, No. 51
**Current status of the Puerto Rican Parrot**

By LIZ HOFFMASTER

The Puerto Rican Amazon (Amazona vittata) is the only parrot endemic to the island of Puerto Rico and also one of the most highly endangered parrot species in the world. The remaining wild population consists of only about 40-50 individuals. These parrots are lucky, however, compared to most other endangered parrots, because there has been an intensive ongoing conservation effort since the 1960s. After surveys showed a tremendous decline in numbers due mostly to habitat loss, wild population management was initiated and an in-situ captive programme was established in order to provide an emergency back-up population, as well as a source of parrots for re-introduction to the wild.

Today those efforts continue, with a collaborative project involving the Puerto Rico Department of Natural and Environmental Resources (DNER), the US Fish and Wildlife (USFWS), and the US Forest Service (USFS). The Puerto Rico DNER runs one aviary for captive breeding in the Rio Abajo forest of northwestern Puerto Rico. The aviary currently houses nearly 80 Puerto Rican parrots and has a staff of 5 full-time employees. The USFWS runs another aviary in the Caribbean National Forest where the wild parrots are found. They are also in charge of wild nest monitoring and manipulation during the breeding season, and population surveys throughout the year. Their aviary has nearly 60 Puerto Rican parrots and aviary and field crew number 11. The USFS is in charge of maintaining the wild habitat, repairing observation platforms and artificial nests, and predator removal.

Management of the wild population is accomplished by providing artificial PVC-pipe nests that allow for easy cleaning and access to chicks for analysis, monitoring the nests daily for signs of predators (which include rats, pearly-eyed thrashers, boa and bees), periodically weighing chicks, banding and fitting radio transmitters to chicks, double-clutching wild pairs to increase production, and radio telemetry of wild chicks and released captive-bred birds.

Captive population management involves a great deal of work as well. Young birds that are not scheduled to be released into the wild spend their first 4-5 years in a... to behaviours like egg smashing or killing chicks), both aviaries also maintain outstanding pairs of Hispaniolan Amazons (Amazona ventralis), a closely related species from the island of Hispaniola, to use as foster pairs. They assist by incubating eggs and/or rearing Puerto Rican chicks every year. Many eggs are also incubated in a Grumbach incubator pending placement in a nest. Double clutching is usually used in the aviaries as an effective way to maximize production, the second clutch being raised by the natural parents if at all possible. Hand-raising is avoided at all costs, as hand-raised individuals are not suitable for release, and statistically do not make suitable parents either. A typical year produces 20-25 chicks between both aviaries. In 2002, the aviaries have a total of 34 breeding pairs set up. The breeding season usually lasts from December until July.

The ultimate goal of the project is to increase the wild population by improving reproductive success in the wild, and release captive-bred birds. Two successful releases in the Caribbean National Forest have been held, one in June of 2000, and another in May of 2001. The releases are soft, meaning that the parrots are given time in a large cage in the release area to acclimatize to the surroundings. Release involves removal of one section of the cage so the birds can leave on their own terms, and food is still provided until the parrots no longer frequent the cage area daily. Birds are selected for release based first on genetics (the most genetically important parrots are kept in the aviary for breeding), then on age (only birds between 1 and 4 years are released), then on behaviour and a physical examination. Each parrot is evaluated several times before release and chosen for release based on their proficiency at skills such as flying, perching, eating wild fruits, etc. All released birds are monitored with radio transmitter collars to mark movements and mortality. Ten parrots were released in 2000, and 16 in 2001. Survivability has been difficult to monitor, but is estimated at around 50%. The released parrots have integrated with the wild parrots, another positive sign.

In 2002, another release is planned in the Caribbean National Forest. Future plans include the creation of a second wild population in the Rio Abajo State Forest, which will involve the release of a large group of parrots, 30-40, instead of the smaller groups released in the Caribbean National Forest. As there is not an existing wild population, a larger number of released birds will increase their chances of survival and ability to proliferate in the forest as a new population.

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**Orange-bellied Parrot Recovery Program (Neophema chrysogaster)**

Mark Holdsworth, Nature Conservation, Department of Primary Industries, Water and Environment, Hobart, Tasmania. South Australian Winter Survey Coordination and Supplementary Feeding Experiments.

**Project Summary**

With a wild population of less than 200 individuals Orange-bellied Parrot Neophema chrysogaster (OBP) is Australia’s most threatened parrot species. Since 1984, the conservation efforts to ensure the long-term survival of this species has been guided by three, 5 year Recovery Plans and overseen by a Recovery Team. The OBP is one of only two obligate migratory parrots, breeding entirely within the Southwest Wilderness World Heritage Area of Tasmania and wintering in coastal areas of Victoria and South Australia. This complex life cycle has necessitated a broad approach to conservation efforts. This project is aimed at extending the activities of the South Australian Working Group within the Mount Gambier region which holds important OBP breeding habitats. The project will consolidate the broad winter surveys (May, July and September) undertaken by a team of dedicated volunteers and the regular counts of OBPs at Piccaninnie Ponds, a key roosting site within the region. It is believed that the decimation of native vegetation within South Australia since European settlement has reduced OBP habitat to very small areas and the food resources available are insufficient to hold birds in any one area for long periods. This almost certainly lays individuals open to increased predator pressure and reduction of condition (resulting in higher rates of mortality). Piccaninnie Ponds has been identified as a key site to experiment with supplementary food as a tool to encourage the OBPs to remain longer during the winter period. An Extension Officer will be employed to coordinate the volunteer observers within the region and to establish an experimental feed table and supplementary food crops at suitable sites adjacent to Piccaninnie Ponds. The project will result in an enhanced knowledge of arrival of OBPs in South Australia, their length of stay, flock numbers and increased observability of colour banded individuals.

**Proposed Actions**

1. Employ an Extension Officer for 8 weeks
2. Expansion of the volunteer observer network
3. A coordinated habitat-wide survey with results to the Recovery Team
4. Monitoring and reporting of Piccaninnie Ponds observations
5. Construction of a feed table adjacent to Piccaninnie Ponds
6. Develop a supplementary feed crop and study its use by OBPs during the winter migration

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*The Puerto Rican Amazon is a critically endangered species. Photo: Brian Ramos.*
Promoting the Lesser Vasa Parrot

Becoming scarce and seldom breeding in captivity, a new programme has started in Europe to promote and co-ordinate the keeping and breeding of the Lesser Vasa Parrot (Coracopsis nigra). Dutch breeder of this species Anton Schreuders and German-based enthusiast Jörg Asmus realised the need to act. A studybook will be kept for this unique parrot from Madagascar. All keepers of Lesser Vasa Parrots are asked to contact Jörg Asmus at Alt-Daber 26, Wittstock D-16909, Germany, tel 0049 179 668 6031, fax 0049 180 5281 3008 2660. Email papageien@smartvia.de.

WPT day at Italian school

WPT member Lori Samarelli is a music teacher at the Liceo Artistico Conversano School in Bari, Italy. On 2nd May she organised a WPT day which her class has been involved in organising and other classes were to participate. Cristiana Semmi sent them some posters and video to help with their presentations. We thank Lori for her promotion and education of the plight of the parrots and hope that they all thoroughly enjoyed their day.

Bird fancier of Suginami ward pleads guilty to charges of smuggling endangered parrots

THE ASAHI SHIMBUN (Asahi Newspaper) 9th Jan 2002 evening edition. This article was provided and translated by a companion bird rescue group, TSUBASA, in Japan.

Aichi Prefectural Police has arrested bird fancier, Hitoshi Shimura, 47, ironmonger, of Suginami ward in Tokyo, for trading Rare and Endangered species on the CITES I list, violating the Conservation of Species Treaty. The Police reported Shimura has admitted the suspicion.

Shimura, with other bird fanciers, has published books on parrots and is well known among bird fanciers.

According to the investigation, Shimura gave two Scarlet Macaws on Oct. 7, 2001, and sold two Illiger's Macaw for 180,000 yen (about US$1,370) on Aug., 1999, to a Farmer's Cooperative staff of Aichi Prefecture. Shimura answered the Police, "I wanted to make some money. I also wanted to satisfy one's wanting these birds."

Don writes: "Clutches this season have averaged 2.8 eggs, compared with 1.6 eggs per clutch in the three previous breeding events. It seems that mating (fruiting of the rimu) on Whenua Hou is rare and perhaps occurs at 20 year intervals. We can thus expect breeding at this level to happen very infrequently, making rebuilding of numbers a slow process. I know of no other bird that has such an incredibly slow natural reproductive rate.

Toka, the. bumber rimu crop has now ripened. Whenua Hou is at the southern limit of the rimu range, four mastings in this region since 1980 have reportedly occurred before or during ripening. If this happens again, our supplementary feeding is intended to prevent chick starvation.

A number of new management techniques have been used this season. Fertile clutches have been fostered to females with infertile clutches, enabling more females to lay second clutches. Eggs have been fostered between nests to better synchronise hatching, thus avoiding excessive age / size differences within a brood. Eggs and nestlings have been moved between nests to facilitate nest modification, and to more evenly distribute young between females. Seven nests have been moved into nest-boxes to enhance chick survival and overcome access difficulties.

This year's unprecedented breeding event has revealed some interesting insights into Kakapo behaviour. Clearly, the massive rimu crop is responsible for triggering and sustaining the current breeding.

The Kakapo nestlings appear to be receiving a diet comprised entirely of rimu fruit. This consists of a tiny nut and fleshy aril, which together weigh only one tenth of a gram. Chicks aged between four and six weeks receive up to 120g per feed. They might be fed four or more times per night.

After foraging for 113 minutes on the night of April 5, Flossie fed her two six week old nestlings exactly 90g each, or a total of 1,800 rimu fruits. On average she must have consumed about 16 fruits per minute or one every four seconds over a period of nearly two hours. Don comments: "This is even more remarkable when one takes into account the fact that Kakapo are flightless, and that the food is gathered at night and very likely from high in the canopy on a stormy night!"

Flossie made four foraging trips that night, records Don, averaging 113 minutes each, a pattern she will follow throughout the almost three months nesting period. Like all female Kakapo, she is a devoted, very hard-working solo mother. By the end of the breeding cycle, which lasts about eight months, she will have lost about 40% of her pre-breeding body weight.

She will not attempt to nest again until the next 'mast' fruiting event - which might be some years away.

Kakapo nestlings fledge (move permanently away from the nest) when 10 to 11 weeks old. Then, in late May to early June, they weigh between 1.5kg and 2kg. Breeding this year has generally been earlier so some chicks will fledge in late April or early May.

IF ALL THE CHICKS SURVIVE, THE WORLD POPULATION OF THE KAKAPO WILL HAVE INCREASED FROM 62 TO 86 BIRDS IN ONE YEAR!

WPT stand in Italy

A big Thank you to Diego Garbin, WPT member, for organising, setting up and manning a WPT stand on 6-7th Oct 01 in Adria, Italy.
WPT Switzerland is seven years old

WPT Switzerland has existed since 1995. Since then it has become more and more known in the Swiss avicultural world. It already has its place and acceptance in the Swiss avicultural Society EXOTIS. In every issue of the Swiss avicultural magazine "Gefiederter Freund" there is news about WPT and the different projects. Also in every issue they encourage people to become members. To sum up WPT shows its presence in the magazine very obviously and no other German language avicultural magazine gives so much space to a charity organisation. Franziska Vogel of WPT Switzerland translates "PsittaScene" so that members get their translations in German. This is very important and much appreciated work.

In 2001 EXOTIS was 50 years old. Therefore we organised a national bird exhibition in Switzerland.

Today, after some years, people are more sympathetic towards the protection of parrots in the wild. Also, the importation of wild-caught parrots into Switzerland is very low which means just a few parrots every year. Most people buy domestic parrots or parrots that have been imported in the past.

WPT E-mail List

* Asking and answering questions about parrots, parrot care, and parrot conservation.
* Updating members on the latest news from the field, faster and with greater depth than in PsittaScene.
* Providing information on upcoming meetings and events that might be of interest to members.

Signing up is easy. Just send a message to wptmembers@worldparrottrust.org along with your name and member number (that's on your mailing label) and we'll send you a welcome letter with the details on how the whole thing works. Please give it a whirl, and we'll look forward to seeing you there!

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**St. Vincent Parrot census 2002 completed**

Forest officers have again undertaken a census of their national bird, the St. Vincent Parrot (*Amazona guildingii*). In March of 2002, Forest Officers headed up into the steep valleys of this Caribbean Island and conducted morning and evening watches to quantify the current status of these rare and spectacular birds. In support of this effort which was first conducted in the early 1980’s, the Canadian and UK branches of the World Parrot Trust teamed up to send a care package of six pairs of new binoculars, backpacks, compasses, waterproof notebooks, and other field equipment to help the census effort reach a successful conclusion. The numbers are being crunched as this PS goes to press, and we hope to have a full update on the results for the next issue.

**The Parrot Society of Los Angeles hosts a successful joint fundraiser with the WPT**

In February, the PSLA threw an evening reception to raise money for their educational work and for the Trust. It was a well-attended event hosted by Leslie Ross at her home in Pacific Palisades. Guests spent the evening enjoying an array of food and drinks and visited with special guests Charles Munn III of Tropical Nature Inc (and WPT Trustee), and Jamie Gilardi, WPT Director. With contributions of $250 per person and several others making donations who were unable to attend, the evening generated over $4,000. We’re especially thankful to Marie and Mark Stafford, Carmen and Armando Leon, Leslie Ross, and several other PSLA members who helped make the evening a great success.

**Canadian parrot symposium (East)**

The 13th Annual Canadian Parrot Symposium will take place from November 8 to 10 at the usual venue, the Toronto Airport Hilton. Speakers will include Joanna Burger, author of *The Parrot who owns Me*, Sandee Molendna and Sam Foster from the USA, Peter Them from Denmark and, from Canada, Stefana Dumanowsi and Susan Wheeler. Details on registration can be obtained from Jacqui Blackburn, tel 001 905 677 9900, or fax 905 677 5073, or by visiting the website: www.silvio-co.com/cps.

**What a view!**

With thanks to Igor Maskin, Jerusalem, Israel, for this great picture of his rescue Umbrella Cockatoo (*Cacatua alba*) Avgustin viewing our website. Avgustin used to be a screaming phobic bird but has recovered very well through patience and understanding from Igor, who has recently completed an online course: Living and Learning with Parrots: The Fundamental Principles of Behavior.

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Parrot Lovers Speak Out - Trade Ban Petition Now Tops 5,000

As of early May, we are pleased to announce that we now have over 5,000 signatures in support of our petition to ban the importation of wild-caught birds into the European Union. The signatures have now come in from over 66 countries, including importing countries, exporting countries, and countries from which all native parrots are extinct!

There have been several recent studies of impacts of trade on wild parrots all of which highlight the fact that trade is unsustainable and should be stopped if we are to prevent the extinction of many bird species. We’re hopeful that with a combination of the clear ground swell of support indicated by this petition and these recent studies, our campaign to see the end of the trade in wild-caught birds in the EU will continue to gain momentum and partners, and ultimately achieve success.

To all of you who have gone to the trouble of signing the petition, we are most grateful to you for your contribution of time and effort. We hope you’ll continue to assist by getting the word out to other like-minded friends of the parrots, so we see an ongoing acceleration of support for the petition and the ending of this destructive trade.

Thank you very much for your support on this critical issue.

Petition Signature Total so far: 6,541

A Special Thanks to ‘Letzebuerger Natur- a Vulleschutzliga, Mark & Diane Jenkins, Tomoko Imanishi and Proact’ for their support and promotion of this Trade Ban

UK Volunteer needed for Trade Ban Campaign

Do YOU want to help stop the importation of wild-caught birds?

WPT UK are in need of a co-ordinator to recruit and organise additional volunteers who have the time and willingness to contact as many magazines, newspapers, shows, television programmes etc., (not restricted to parrot orientated media) in helping to promote our Campaign.

We need to create as much widespread awareness as possible and get signatures from thousands more supporters throughout the UK and Europe.

If you are willing to volunteer your services for the co-ordinating role or are interested in being one of the volunteers in marketing this Campaign please contact Karen Whitley on 01736 751026 at the UK office or email uk@worldparrottrust.org

I SUPPORT THE PROPOSAL TO BAN THE IMPORTATION OF WILD-CAUGHT BIRDS INTO THE EUROPEAN UNION

First Name* ..........................................................
Last Name* ..........................................................
Street Address ..................................................
City .................................................................
State/County/Province ..................................
Zip/Postcode ..................................................
Country* ........................................................
Age ...............................................................
Email ............................................................

Principal Interest* ................................................
- Aviculturist
- Parrot Owner
- Environmentalist
- Animal Welfare Advocate
- Animal Rights Advocate
- Conservation Biologist
- Biologist / Scientific Researcher
- Behaviourist
- Birdwatcher / Birder
- Other (please specify) ........................................

Comments ................................................................

Please complete all sections marked with an * Please tear off and return to: WPT, Glanmor House, Hayle, Cornwall, TR27 4HB, UK.
If you would like additional copies of this or the actual Proposal to Ban the Importation of Wild-caught Birds into the European Union (PS Vol 13 No 3) then please do not hesitate to contact me on Tel: 01736 751028
To Achieve these Aims, we:

- The welfare of captive birds everywhere
- The survival of parrot species in the wild
- The educational public on high standards for the care and breeding of parrots
- Oppose the trade in wild-caught birds
- Educate the public on high standards for the care and breeding of parrots
- Encourage links between conservation and agriculture

**Member, Donation or Legacy**

If you become a member of our Registered Charity you will receive a new member package, four of these PsittaScene magazines and one free entry to Paradise Park in Cornwall, UK per year with your membership card. You can also join our members only group email list and gain access to many other members for parrot information and support.

Each renewal year you will receive the quarterly magazines and one free entry into Paradise Park (Winner of Good Britain Guide, Family Attraction of the Year, for 2 years).

100% of money donated to designated funds get spent directly on parrot conservation.
Kakapo chicks in the nest
(Strigops habroptilus)

Photo by DON MERTON

The most productive season since Kakapo have been intensively managed, 26 chicks had hatched by April. The female called Flossie had two. Seen here are two young she hatched in February 1998. Our report on page 16 describes how she feeds her chicks 900 rimu fruits at each feed - at least four times every night!