

Psitta



Scene

PROMOTING HIGH STANDARDS
IN PARROT CONSERVATION
AVICULTURE AND WELFARE

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Africa In Focus

by Rosemary Low

Slowly Africa is coming into focus. During the past 20 years (before which it was almost non-existent) parrot conservation has centred on South America, Indonesia and Australia. The pages of *PsittaScene* have been filled with reports of projects designed to help threatened macaws and cockatoos, amazons and even lorries. The word Africa was never mentioned. That continent was the great unknown where the status of parrots was concerned. In the early 1990s news started to leak out of Africa regarding the dwindling populations of some of its few parrot species. With disbelief on the part of some, we learned that two species of lovebird, both well known avicultural subjects, were threatened; that the nominate race of the Cape Parrot which (now confirmed) was perhaps a strong species, was in danger. But the news was not sharply focussed.

Then Professor Mike Perrin of the Department of Zoology, University of Natal, switched his attention from mammals to parrots. And that was the beginning of a focus on African parrots which is gradually becoming sharper. The clear picture will not emerge for several years. Last year Professor Perrin was invited by the *World Parrot Trust* to attend the World Parrot Summit, to report on what was known of the status of African parrots.

In this issue, participants in several conservation projects will describe their aims. All the projects are designed to provide more

information on parrot status and habits, in preparation for action to conserve them, where necessary.

During the past year Mike Perrin has worked to establish *World Parrot Trust Africa* which is a fledgling organisation at the present time. Dave and Vera Dennison, who produce the South African avicultural magazine *Avizandum*, will assist him in this task. Mike Perrin was the first to point out that the looming extinction of rhinos and dolphins has received more attention than the plight of parrots, even although, in his words, "Parrots are economically far more important, charismatic, and some species are threatened with almost immediate extinction."

Mike Perrin's answer was to set up the Research Centre for African Parrot Conservation at the University in Pietermaritzburg. Some of its projects are outlined in the articles which follow. In addition, there are plans to study Black-cheeked Lovebirds *Agapornis nigrigenis* in Zambia, Fischer's Lovebirds *Agapornis fischeri* in Tanzania, and the declining Madagascar (Grey-headed) Lovebirds *Agapornis cana*. The need exists to liaise with other organisations. This will have been facilitated by papers to be presented at the Pan-African Ornithological Congress in Ghana this October.

Legislation is being prepared in South Africa to prevent the exploitation of and illegal trade in African parrots - import and export. Mike Perrin believes that experienced aviculturists who can make a significant contribution through captive breeding should be provided with confiscated birds, such as Cape Parrots. In the case of the Grey Parrot, captive breeding provides sufficient birds to meet the

pet trade's demands; no more should be imported into South Africa from central, east and west Africa.

CAPE HABITAT VISITED

In June this year, at quite short notice, I found myself in South Africa with two friends, Val Moat and Stacey Gelis. This was more the result of chance than long-term planning. We enjoyed a holiday-cum-information-seeking trip whose highlight was observing Cape Parrots in the wild - albeit briefly. My own interest in this species dates back 20 years (see *PsittaScene* May 1995, vol 7, no 2, pages 10-12). To see it in its natural habitat is something which I had hoped for for several years. Without Mike Perrin's help it would have been impossible.

After meeting Mike near Pietermaritzburg, we were made welcome at the home of Sharynne

Hearne. Next morning we were introduced to Dr Colleen Downs, widow of the late Olaf Wirminghaus. She was to accompany us, with Mike and Sharynne, on our field trip. Colleen has carried on her husband's work with the enthusiasm which he had applied to it. He was totally absorbed in research into the habits of the Cape Parrot; indeed, his very last wish was to be taken to their habitat, to observe them for the last time. (See Report on the Cape Parrot Project, *PsittaScene* November 1994, vol 6, no 4, page 12.)

Olaf's work is also being continued by Craig Symes, who is majoring in zoology and botany and who was his assistant. We met Craig at Creighton, in southern Natal, the area on which his studies are centred. From the farmstead where we stayed, he pointed to the distant

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We publish this photograph as a tribute to Dr. Olaf Wirminghaus who died before his study of the Cape Parrot was completed.

“psittacine
(sit' à sîn) Belonging
or allied to the
parrots; parrot-like”

TONY SILVA - JAIL SENTENCE

Full details on page 13



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mountains. "That is where we are going", he told us.

When we reached the area, we left the vehicle and started to climb. It was not long before we could survey the area below us. The reason for the decline of the Cape Parrot was at once evident. Only small patches of forest remain in a vast sea of cultivation.

Because scientists have only recently determined that it is a species in its own right, it has yet to be given endangered status or nominated for Appendix 1 of CITES. But with such a small population, a limited area of distribution, illegal trapping, and killing by pecan nut farmers, it is clearly in this category.

As we climbed, Craig pointed out a nest tree. Such trees are usually dead yellow-woods that emerge from the canopy, with a partially decayed centre. The entrance is usually located about 15m above ground. Scarcity of nest sites is almost certainly one of the most important factors in limiting the Cape Parrot's population. Ascending higher, the terrain became more rocky and steep; then we reached a grassy incline that led to the highest point in that area. From here at a height of 1,760m, we looked down into the *Podocarpus* forest.

It was not a big area. Monocultures such as pine, encroached onto its very edge. Pine forests can be utilised by few bird species - and certainly not by Cape Parrots. This species of Cape, unlike the sub-species *suaelicus* from Zimbabwe and *fuscicollis* from West Africa, cannot exist without montane yellow-wood *Podocarpus* forests. The other Cape Parrots are primarily lowland dwellers.

YELLOW-WOOD FORESTS

I asked Colleen about the logging situation in the area which we were overlooking. She told me that no logging of these yellow-woods had occurred since the early 1950s. However, most of Natal is either grassland, or has been converted to monocultures and agricultural land. From where we stood there were farmsteads and crop-growing areas, plus a few pine forests, as far as the eye could see. There are a few small yellow-wood forests in southern Natal, also in the eastern Cape and through the Transkei to Karkloof. Probably they have survived only because the steep southfacing slopes are not cleared for agriculture, so Colleen told me. As Cape Parrots are almost totally dependent on the yellow woods as a food source, they cannot survive elsewhere.

I was shocked to realise how small was their surviving habitat, and how vulnerable they are. It is one thing



The small area of yellow-wood forest (foreground) is surrounded by agricultural land and pine plantations. Photo R. Low

to read about it but the full impact of the situation is felt only when you are actually there, hearing the melodic calls of the parrots and watching them flying in small groups above the canopy. Often they circled or flew a short distance to return to a favourite fruiting tree. Their most important food trees are those of *Podocarpus falcatus*; *P.latifolius* and *P.henkelli* are also used. Craig said that the protein content of these yellow-wood fruits is not high. While young are in the nest, they have been seen taking the seeds of the introduced acacia. They also eat larvae in wattle trees and *Protea* buds.

A glimpse of the distant birds through Craig's spotting scope elicited exclamations of admiration from me as I looked at their golden heads. Yes, golden! The head coloration of this Cape Parrot is totally different from that of the others; it also has a smaller beak, especially in the female. And the orange on the carpal edge of the wing extends further downwards. The orange on the female's forehead is less extensive. In appearance it is distinctive and its vocalisations also sounded different to me.

We were there in June (winter) - out of the breeding season. Nesting usually begins in September, in a dry season, and young fledge from December to March. According to Mike Perrin, they are heavily preyed upon by raptors, such as Goshawks.

That first afternoon we were watching a flock of about 20 birds. We were not aware of the number, of course, until they took to the wing and headed out of the forest, probably to a forest patch elsewhere. I asked Craig, who spends ten days of every month in the field studying this parrot, what was the largest number he had ever seen. He recalled with enthusiasm the memorable day when he saw

120 birds. Never before or since has he seen so many.

Next morning we arose at 5am and drove towards the mountain in the dark. It was just starting to get light, at 6.15am, when we parked the vehicle and started to climb. It was bitterly cold. Val Moat, who was carrying a very large video camera and tripod, decided not to climb to the top. Craig showed her a potentially good area for filming, where the parrots might come in to drink. While we shivered on the top of the mountain, overlooking a frost-covered landscape, with disappointingly few views of the parrots, Val and Craig, hit the jackpot. Near the drinking place, Val procured this parrot on film - perhaps the first time this has been achieved - and Craig captured his best still shots ever. We had to listen to their triumphant stories all the way home!

As soon as we arrived in Pietermaritzburg, we changed into presentable clothes at lightning speed, and hurried to the University. To a gathering of aviculturists and researchers, I presented a paper on threatened parrots and the work of the Trust, and another on breeding the Cape Parrot. Val Moat gave an excellent illustrated talk on breeding Rüppell's Parrots. I continue to be delighted by Val's video of the Cape Parrots of southern Natal and their evocative calls, echoing through the forest.

It was pleasing to hear from Mike that he had been able to use part of the film when he appeared on television to promote the conservation of this wonderful parrot.

The Ecology and Status of the Cape Parrot

by the late Olaf Wirminghaus

The nominate race of the Cape Parrot *Poicephalus r. robustus* is endemic to South Africa. It breeds only in Afromontane *Podocarpus* forests above 1,000m, while the subspecies *P.r. suahelicus*, which occurs north and east of the Transvaal Drakensberg Mountains, occurs primarily in lowland woodlands. Morphological and colour differences exist.

Cape Parrot populations are declining in South Africa, mainly due to illegal collecting for the avicultural trade (past and present), habitat degradation and loss of nest sites.

PROJECT AIMS

1. To determine the distribution, abundance and status of Cape parrots.
2. To determine the diet and the state of their food resources in the study areas, and to identify plant species which are relied upon during breeding.
3. If possible, to determine the nesting requirements and nesting success in their natural habitat.
4. To design a predictive model to help conservationists gauge parrot habitat suitability and carrying capacity in forests where introductions are being considered; and
5. To determine areas where Cape Parrots currently face greatest survival threats.

Field work at two study sites is ongoing, though the bulk of the data will be analysed towards the end of the project when a larger sample will have been collected. Initial findings have been very interesting, and the importance of yellow-woods, particularly *Podocarpus falcatus*, a forest canopy tree, for breeding, feeding and social interactions, are becoming evident.

BREEDING SUCCESS

Breeding success at the two study sites in 1995, based on counts of juveniles present was very good. Though no comparative data exists, good rains were received this past season, contrary to the near-drought conditions of the previous 10 years, and observed food availability was high. Another exciting find was the recent discovery of the importance of drinking sites for the parrots, particularly during the dry winter months when very little free water is available. Unlike their generally raucous behaviour, drinking is a covert activity carried out at sites well-sheltered with thick vegetation, and as a result has been overlooked.

This has important implications for their conservation, and may help explain their peculiar daily movement patterns.

Illegal capture of Cape Parrots in certain areas is still rife, particularly in the Eastern Cape Province, and negotiations with conservation authorities and private breeders to initiate a captive breeding programme are being made.

FIELD WORK

Much has been learned so far, particularly from Hlabeni Forest which is small, has many parrots and is very accessible. Most of the movement patterns and regular

birds mostly remain perched, call, preen, allopreen, rest or occasionally feed. Though visitation rates have not been calculated, observations suggest a high use of *Podocarpus* species for feeding and as perches. The kernels of most fruits are preferred and eaten, while the exocarp is discarded.

SEASONAL VARIATION AND PATCHINESS OF FRUITING

Leaf litter collections with the aid of litterfall traps (25 per forest) have been made monthly since the end of December 1993, to help determine the quality and quantity

birds are known at one time. So far numbers have been highest in winter and lowest in spring and early summer when birds are breeding. Direct counts are also effective for estimating numbers of other large canopy birds such as pigeons and hornbills. It should be noted that areas which have seemingly high numbers of parrots, based on casual observation, are proving to have small but highly active populations with very few breeding pairs.

Daily observations from cliff and hill lookouts also led to the direct discovery of three nests. All nests seen to date (except for one in a live blackwood), have been in natural holes in dead emergent and dead canopy trees. All were *Podocarpus*. Though more data is acquired from other forests, such dead trees are a scarce resource in the study areas, and thus have important conservation implications. If regeneration of young *Podocarpus* is prevented (e.g. trampling by cattle and cutting of poles) or older trees are selectively felled and removed, this may have serious consequences for parrot numbers.

Based on the likelihood that Cape Parrots are limited by the lack of suitable nest sites, a supplementary nest hollow scheme is being planned; 20 artificial nest hollows will be put up in one of the study forests, and monitored monthly.

MORPHOLOGICAL ANALYSIS

All the collections of Cape Parrot skins in museums in South Africa (Durban, East London, Transvaal), and those in the British Museum of Natural History (Tring) were examined, and measurements taken. All colours and a suite of 18 body measurements were recorded for each of the 113 specimens. Data was statistically analysed, and redundant characters identified. All three races showed significant morphological differences, and the nominate race differed further in plumage colour and having clearly separate habitat requirements.

CONSERVATION ACCOMPLISHMENTS

General findings with conservation implications include the importance of the yellow-woods to Cape Parrots. These trees are long-lived, and often the tallest trees in the



Cape Parrots fly from their perches into the scrub on a slope. They are on their way to a rock pool, fed by a small stream.
Photo: Craig Symes

flight paths of the parrots had been worked out by late last summer. Despite birds not being marked, it is possible to follow (with the aid of binoculars or a spotting scope) the movements of individuals or flocks on clear days, and at least three forests are known where birds commute from and to regularly. Certain individuals have characteristic yellow feathers in their plumage, allowing individual recognition. Such markings appear in approximately 10% of the population (from museum skin collections and field observations).

Observations each month have provided data on temporal and spatial activity patterns and feeding observations. This monthly data collection will continue for the duration of field work. Preliminary analysis has shown that the parrots are strictly diurnal though most active during the first and last few hours of daylight. Most feeding also takes place during this time. Between periods of activity the

of fruit in the forest canopy, and seems to be working well. This has been supplemented with visual assessments of the fruiting condition of marked individual yellow-wood trees (*Podocarpus* species only). This technique provides data on general fruiting patterns in the study forest. As more intra-forest movement data is collected, it is becoming clear that there are seasonal preferences for particular parts of the forests, and even certain trees in some instances. Litterfall is already too time-consuming a technique for more litter-traps to be deployed, and other methods need to be found. Visual phenological assessment of selected, individual canopy trees of a number of species per area of forests may be one option, and seems to work well for the *Podocarpus* species.

DENSITY ESTIMATES

Direct counts can be made from good vantage points when a number of parrots are in view at one time, or when the locations of a number of

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Brown-headed Parrot Study in southern Africa

by Stuart Taylor, MSc. BSc.

With stricter legislation, drastically reduced habitats, a reduction in parrot numbers in South and Central America, the attention of aviculturists has turned to the African continent. Like the Grey Parrot *Psittacus erithacus*, the Cape Parrot *Poicephalus robustus* and Ruppell's parrot *P. rueppellii*, the Brown-headed Parrot *Poicephalus cryptoxanthus* is increasingly vulnerable to habitat loss and fragmentation (Ledgers, pers. comm.) and also the wild bird or avicultural trade.

Although the Brown-headed Parrot is described as a common resident in South Africa and Mozambique, its general biology and ecology are virtually unknown (Maclean 1995). In Zululand and the Eastern Transvaal it is largely confined to conserved areas where it coexists with Green Pigeons *Treron calva*, Hornbills *Tokus* species and Louries *Tauraco* species. It is essential that before the Brown-headed Parrot enters the *Red Data Book* (Brooke 1984) information is gathered on its breeding habits, status (mobility), habitat preferences and dietary range in the wild so that the development of a viable conservation plan and/or a sustainable harvesting programme can be promulgated.

I propose to carry out a study as part of a doctorate degree to provide essential information on the ecology of Brown-headed Parrots. This can be used towards a conservation plan

for the species in northern KwaZulu-Natal.

OBJECTIVES

1. **To determine breeding biology in natural habitat.** This can only be established by finding and observing nests. Some breeding data is available (Forshaw 1989, Maclean 1995) though more information is needed on their demography, breeding success and recruitment.

2. **To determine the nesting requirements.** As the parrots cannot make their own holes they rely on existing ones; the question is raised whether parrot densities are limited by the number of available holes, as had been found with other hole-nesting species (Newton 1994). Therefore the numbers of breeding pairs in an area will be counted and compared to the numbers of available and suitable nest holes.

3. **To determine if Brown-headed Parrots are co-operative breeders.** It is not known if younger birds from previous seasons stay on, and help their parents raise new chicks (co-operative breeding), before dispersing and finding their own nest-holes and territories. Answering these questions will require capturing, taking blood samples from and colour-tagging birds so that individuals at nests can be identified. Social organisation is likely to be important and may be



Although the Brown-headed Parrot is described as common in South Africa, little is known about it in the wild.

vital to future reintroduction plans.

4. **To determine the diet.** Diet will be established in the wild by field observations and determination of the numbers of birds per territory or home-range as well as the positions of the territories or home-ranges.

The total duration of the project will be three years. Most of the field work will be carried out in northern KwaZulu-Natal.

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Ecology and Status of the Cape Parrot - continued from page 3

forest are the most frequently used as display perches. *Podocarpus falcatus* and to a lesser extent *P. latifolius* and *P.henkelli* are also a vital food source and almost exclusively utilised when in fruit. This is possibly due to the volume of fruit produced, and the length of time they remain in fruit. Furthermore, *Podocarpus falcatus* bears fruit from mid to late summer, and is thus an important (if not exclusive) food source during the breeding season and for newly fledged parrots. Dead specimens of *P. falcatus* remain standing for a

number of years, and natural cavities in these are the preferred nesting sites of Cape Parrots (8 of 9 known nests).

OBSERVATIONS

A discovery was made during routine monthly observations, in a part of Hlabeni Forest well frequented by parrots during the early mornings. As feeding observations were usually noted, nothing was suspected until parrots were noticed flying from their perches into the scrub on a slope a few metres away. Close inspection

revealed a rock pool fed by a small stream, and well shielded by vegetation. Subsequent observations have shown that the parrots drink regularly for a few minutes once every one or two days, and this is typically done without the birds calling. Avian predators such as Lanner Falcons and Black Sparrowhawks are common in the forest and risk from such an attack is very possible, as has been observed on two occasions. With the arrival of the dry winter, the usual water source dried up, and the parrots were forced to fly to another

source 900m further from the forest. This pool was also well shielded by vegetation, and also attracted parrots from neighbouring forests, the closest of which is 15km away. Although the availability of sheltered water points are difficult to determine, they may explain many of the inter-forest movements observed. Data obtained may also be tested for a predicted increase in the amount of movements by parrots during the dry months, when no rains are received and the water availability is reduced.

Rüppell's Parrot - some early results

by Dr. Richard Selman and Margaret Hunter, University of Natal, South Africa

Rüppell's Parrot, *Poicephalus rueppellii*, is a near endemic in Namibia, being found in the central and north-western highlands, but also in the far south-west of Angola. With an estimated population of only 9,000 wild birds in Namibia and such a limited distribution, there is growing concern about the conservation of this species.

In the past Rüppell's Parrot has been rare in aviculture. However it is considered to be a relatively difficult parrot species to breed and is therefore a challenge to breeders with some experience. A recent rise in the popularity of *Poicephalus* parrots has led to an increase in demand for Rüppell's which cannot be met by the small pool of breeders.

WILD CAUGHT BIRDS

The capture of wild birds is illegal in Namibia, only captive-bred birds can be sold. Nonetheless it is clear that wild-caught birds are getting onto the market, fuelling fears about dwindling numbers. Locals report the loss of parrots from some sites and declining flock sizes elsewhere, blaming the illegal capture of wild birds. This black market trade looks set to continue, since prices have risen considerably. A bird may fetch up to US\$800, though I have heard of wild-caught birds in a "sorry state" being sold in a hotel for as little as US\$30 equivalent and shipments of dozens and even hundreds of birds have been reported. The full scale of the problem is not known.

A further problem is that the biology of Rüppell's Parrot is virtually unknown. The current information is best reviewed by M.K. Rowan (*The doves, parrots, louries and cuckoos of southern Africa*. David Philip 1983). Conservation may best be effected by changes in the law, improved law enforcement, an increased awareness of the problem both in Namibia and abroad, or a programme of well-managed and policed sustainable collection. However without a knowledge of either the scale of the trade or the basic ecology of the species, no management plan can be produced.

NEW FIELD PROJECT

I have therefore started a field project to provide such information to the Namibian government,



Juvenile Rüppell's Parrot preening after feeding on the red pods of *Terminalia prunioides*. Photo: R. Selman

working within a research group set up by Professor Mike Perrin of the University of Natal, South Africa, to concentrate on the scientifically neglected African parrots. I am in liaison with the Ministry of Environment and Tourism, which is presently revising its laws on the conservation of wildlife. Progress has been made by spending the maximum possible time in the field with the birds, moving regularly between three study sites. Though without a permanent base we have the advantage of living with the birds and learning from behaviour seen even from our tent during meal times. In this way a great deal of information has already been gathered. I will summarise some of the most interesting results so far.

DIET

Seventeen species of plants have been identified in the diet. Rüppell's eat mostly fruit endocarps (especially *Acacia* and *Commiphora* species) but nectar is taken from mistletoe flowers *Tapinanthus* species. *Grewia* flowers are eaten and also foliage at certain times of the year. The dextrous use of their feet and beak allows them to tackle large pods such as those of the camel thorn *Acacia erioloba* and the apple ring or ana tree *Faidherbia albida*. They drink at rock pools and springs but artificial sources such as farm reservoirs and water troughs, even swimming pools, appear to be very important since much of their range is covered with pastoral farmland where rainfall is restricted to a short season. The use of brackish pools in the west of the

region may provide salt in the diet.

MATING

Mating was seen in January and February (summer - the "wet" season) and chicks were fledged by June. Aviculturists, however, have reported winter breeding, both in Namibia and abroad. This might be explained by the pattern of rainfall, with birds breeding in different months, following rainfall, but the factors controlling breeding have not yet been determined. Clutches of three to five eggs were laid in the wild where five was not exceptional, although I have heard it is rare in captivity. Predation, however, accounts for many losses of both eggs and chicks. Tree

snakes, monitor lizards, bushbabies and a slender mongoose have all been seen in active nest holes. Complete nesting failure has resulted in some cases. Goshawks have attacked flocks of parrots at water-holes, though despite watching many such attacks I have not yet seen a kill.

MEMBERS CAN HELP

Members can help in several ways. We aim to continue the project for up to three years but this is dependent on funding. At present the Foundation for Research and Development (South Africa), *World Parrot Trust Canada*, the Gay Langmuir Trust and Total (South Africa) (Pty) Ltd have all provided money but further funds are still required. Also I would like to hear from anyone who keeps or has information on Rüppell's Parrots - the prices and origins of your birds, the present availability of birds, their breeding histories, and any breeding data. Please send this information to: Dr R Selman, PO Box 1835, Otjiwarongo, Namibia.

Lastly, I urge anyone buying a Rüppell's Parrot to make sure that it is captive-bred. It should have a closed ring of the right size (illegal traders have been known to force closed rings onto the feet of adults). It is surely worth paying extra for a captive-bred bird in order to allow the continued survival of this species in the wild.



Rock Monitor Lizard *Varanus exanthematicus* in a tree cavity - They climb very high trees, using their sharp claws, and raid the nests of birds, including Rüppell's Parrot.

Breeding Rüppell's Parrot - not so hard

by Val Moat

In Richard Selman's interesting article on Rüppell's Parrots in this issue, he states that this species is hard to breed. Perhaps this is true of some wild-caught birds but it does not apply to the captive-bred pairs which my husband and I look after. This article describes the breeding results from two pairs which are kept in cages indoors.

PAIR NUMBER ONE.

Both birds have 1991 rings. When introduced, they seemed to adapt to each other very well and the male began to feed the female. The male spent some time in the nest-box and the female would visit him there from time to time. It was apparent when the female had laid, by the appearance and odour of her faeces. Subsequent inspections of the nest-box proved this to be true. The eggs were seen on September 28, October 1 and 5 1995. The nest-boxes are not inspected daily as Rüppell's are known to be destructive to eggs and young if disturbed. Written material suggested that mealworms are beneficial to breeding Rüppell's. When these were offered, the birds seemed afraid of them, so it was decided to give CeDe eggfood instead.

The first chick was heard on October 29. On November 1 two chicks were seen. They were covered in grey down; one was larger than the other. Three days later they looked well and the down had darkened. The third egg was infertile but was not removed. On November 16 the chicks weighed 66.5g and 58g. They were ringed with 7mm (internal diameter) rings (4.5mm width), ring size R. The youngest chick was the ideal age to ring; the oldest chick was more difficult.

FLYING AT 59 DAYS

They were reared without any problems. One was seen flying - rather clumsily - at 59 days. By January 3 both young had left the nest. They had begun to feed by using the foot to hold food. On January 20 they were removed from their parents and placed in a wire cage. A new nest-box was given to the parents as the old one was in need of repair.

In order to sex the young ones, feathers were pulled from the rump area. Within three weeks a distinctive patch of grey feathers

was noticed, so we concluded that both birds were males. Another indication of this was the large size of their heads and beaks. In 1996 the parents were provided with a new nestbox on January 21. On September 28 they were eating much cuttlefish bone and gnawing the mineral block. By October 4 three eggs had been laid.

PAIR NUMBER TWO.

Both birds have 1992 rings; they are very compatible with a playful nature. But the male is very quick to attack the hand that feeds him when there are chicks in the nest. Observation of the cage is by closed circuit television. Eggs were seen on December 11, 13 and 19. Chicks hatched on January 8 and 14; one egg was infertile. The chicks were ringed at 17 days with a 7mm ring. They weighed 116g (35 days) and 99g (29 days) on February 12 and 123g and 115g seven days later. On March 8 (at 58 and 52 days) the young ones were seen out of the



Captive-bred Rüppell's Parrots belonging to Ron and Val Moat.

Photo R. Moat



Parent-reared Rüppell's Parrot aged 40 days.

Photo: Ron Moat

nest - moving around clumsily but doing well. On April 3 the pair was mating. The young were feeding well on their own. The next day two eggs were seen in the nest so the young ones were moved to a cage; they were 12 weeks old. Clean nesting material was put in the nest-box. By April 8 there were four more eggs. The first chick was seen on April 27, the second on the 29th and the third on May 3. The fourth

egg was infertile. The first chick was ringed at 19 days old; this was difficult as 17 days is the best age. These young were successfully reared and appeared to be one female and two males. They were removed from the parents' cage on July 10.

By August 2 there were two eggs in the nest; a third was seen on August 7 and a fourth on August 10. The first chick was heard on August

29. Nest inspection on September 5 revealed two eggs and two chicks. One egg was cracked and contained a dead embryo and the other was infertile. The chicks were ringed on September 14 and 16 and are doing well at the time of writing. Thus in less than one year, two pairs have hatched and reared nine young. Who says Rüppell's are difficult to breed? I am sure the good results are attributable to the time and care which went into preparing their food. Pairs with young are fed three times daily and receive a mixture of vegetables, soaked seeds, eggfood and various fruits and nuts. Non-breeding birds also receive a varied diet, without the CeDe eggfood.

VARIED DIET

Daily they receive a mixture of fruits, vegetables, also sunflower kernels and peanuts obtained from health food stores for human consumption only. Fresh, dried or frozen hawthorn berries, sweet corn, frozen mixed vegetables plus a very wide variety of fresh fruits and vegetables, form the diet.

Research Project on southern African Parrots

by Luthando Maphasa

Parrots are by far the world's most charismatic birds. Due to their ability to mimic human being's speech, companionship and longevity, these birds have always been chosen by people as pets. Reynolds (1994) noted that over the past thirty years, the demand for parrots has resulted in millions of them being taken from the wild. This ongoing relationship between human beings and parrots has resulted in the birds' existence being threatened as many people see them as items of merchandise to be traded for profit. For others, they are valued companions while others breed them in captivity as a hobby. Biologists have estimated that about 1,000 of the world's 9,000 bird species are threatened with extinction (Low 1992).

POPULATION AND TRADE

It is clear that widespread habitat destruction and environmental degradation mainly caused by increasing human population growth in Third World countries are the main threat to parrots. Also, in recent years, international trade in exotic birds for pets and aviculture has grown greatly (Beissinger & Bucher 1992). Parrots tend to be vulnerable to the pet trade because of their bright colours, loud vocalisations and gregarious habits (Snyder et al. 1992). These characteristics make them vulnerable to shooting and trapping, whereas their attractiveness as pets is rivalled by few other wild animals (Snyder et al. 1992). Reynolds (1994) noted that a gigantic business has been built around the parrots that can be roughly estimated at an annual value of one billion American dollars.

Although nearly all parrot exporting countries are members of the Convention on International Trade in Endangered Flora and Fauna (CITES), and many exporting countries have adopted regular and legal trade practices, the domestic and international laws which are supposed to ensure that trapping for trade does not result in a species' decline have been largely ignored.

Parrot conservation is hindered by the fact that most species are found in the Third World where it is difficult to employ conservation measures that would be more

practical in regions with greater economic resources. Abrahamson (1983) noted that in Africa there is always a desire to protect wildlife, but this desire is tempered by the reality of poverty. Irby (1989) also noted that when wildlife products have high market value, poaching becomes an increasingly tempting activity. Even though there may be a strong desire to conserve parrots, the governments of many countries lack the financial and administrative means to do very much to protect these species (Snyder et al. 1992).

All the factors discussed above make parrot conservation a very serious environmental problem that needs to be addressed in the world today. There are many possible solutions that can be examined. These include habitat preservation, sustainable harvesting, captive breeding, education and a possible ban on the pet trade. There is also a need to learn about parrot biology so as to preserve species diversity.

GOALS OF THE PROJECT

To take measures to prevent the drastic decline of parrot populations in southern Africa caused by habitat loss or fragmentation and the illegal trade.

This will include:

- Identifying the status of parrots globally and in Africa (including Madagascar).
- Quantifying the economics of the avicultural trade in southern Africa.
- Review of the legislation currently in place and how it can be adjusted to improve the dire situation facing southern African parrots.
- Using new techniques of identification to assist in controlling trade to prevent inbreeding in captive colonies and preserve the species diversity in the wild.
- Looking at values and attitudes local people have toward parrots and their utilisation.
- Determine how indigenous people can utilise parrots in a sustainable way, for economic gain without biological over-exploitation.

SPECIFIC AIMS

To examine and quantify the status of parrots in Africa and Madagascar in the wild and in captivity. This will be done by collating existing data on African parrots. More information is needed on the

status of different parrot species both in the wild and in captive breeding facilities. Such information will be compared with an overall picture of the status of southern African parrots both in captivity and in the wild, and how they survive (and are exploited/protected) in relation to parrots in different parts of the world. It is also important to find out which species are being traded, and how the traded species are surviving in their natural habitats.

THE AVICULTURAL TRADE IN SOUTHERN AFRICA.

We will investigate which African parrot species are being imported or exported through South Africa. Revenues generated by trade in indigenous birds will be considered. Exact numbers from traders and buyers of indigenous and exotic birds and their sale values will be collected through a questionnaire survey. The TRAFFIC and CITES rules regulating the sale of both indigenous and exotic parrot species will need to be reviewed, and current wildlife trade legislation examined thoroughly. The role of captive breeding and its success will be examined by data collection that looks at the efficiency and economics of captive breeding in avicultural trade. Sustainable harvesting may be a good way of encouraging the conservation of southern African parrots.

Legislation differs from country to country. Many Third World countries simply lack the financial means and skilled personnel to enforce most of their legislation.

This has very serious implications for the parrot trade. As the Association of Parrot Conservation (APC) noted, even though nearly all the parrot exporting countries are members of CITES and many have adopted trade regulations, the domestic and international laws which are supposed to ensure that trade does not result in species decline have largely been ineffective. There is a great need to look at the whole system and how law enforcement can be improved to better deal with illegal trade of African parrots.

A strategy of how local people could be encouraged to help law enforcement and prevent the illegal trade of some parrot species need to be found urgently.

There remains a need for better methods of identification, like the use of DNA to compare the different species or individuals of parrots and assess their geographical variation in Africa so to prevent hybridisation in captivity. Tissue samples both from the wild and the captive-reared birds need to be found so as to identify the chances of inbreeding depression that captive breeding might pose. There is also the need for study books, and the exchange of individual birds between zoos and aviculturists. Inbreeding depression in locally-kept Australian parrots will be investigated since new blood has not been introduced for several decades, and its effect on parrot populations assessed. If captive breeding does result in loss of genetic heterozygosity, it is thus important that ways of avoiding this

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Trade in wild-caught Grey Parrots may soon be illegal in South Africa. Aviculturists should be able to meet the demand for young birds as pets.

Photo R. Low

Proposed Research on Black-cheeked Lovebird

by Professor Mike Perrin

The Black-cheeked Lovebird *Agapornis nigrigenis* is an endangered species and Africa's most localised parrot. It is a beautiful bird with a dark brown head contrasting with a bright red beak, a comical white eye ring and a green body. It inhabits mopane *Chlorospermum mopane* woodland, which is characteristic of low-lying valleys of southern central Africa. Mature mopane trees provide roosting and breeding holes for lovebirds, and actively suppress perennial grasses, which allows annuals to proliferate. These produce large quantities of seeds which make up an important component of the lovebird's diet.

The entire distribution of the Black-cheeked Lovebird is a disjointed belt of mopane woodland on alluvial soil. Although the total area of mopane in south west Zambia approximates 5500km², the actual core distribution of the species is only 2500km². Much of the mopane is now devoid of lovebirds, which are usually found near reliable water sources, which the lovebirds probably use daily.

A. nigrigenis used to occur more widely, in the Bovu and Sinde catchments and mopane woodlands east of Livingstone. It is thought that dry season desiccation caused by climatic change has had a lasting impact on its status and distribution, which has been exacerbated by serious trading of wild caught birds. The Black-cheeked Lovebird was commonly targeted by trappers earlier this century, since it provided financial income and reduced predation on sorghum and millet crops. In 1929 the Mulobezi Saw Mills railway shipped 16,000 birds which had been captured in a four week period, indicating the scale of

the former trade. Today trapping is undertaken for local consumption, mostly by non-specific snares set around water sources and grain heaps.

CO-ORDINATED CAPTIVE BREEDING

Since Black-cheeked Lovebirds are rare in aviculture, to prevent their disappearance a co-ordinated captive breeding policy is essential. This should develop a co-operative, mutually beneficial breeding scheme, and a stud book, at national and international levels.

The World Conservation Union (IUCN) recognised the threat to the viability of the wild population, and the possible extinction of the species in the wild. It has identified as a priority the need "to ascertain the present distribution and status of

the species; to identify and evaluate all threats limiting the population's recovery; and to prepare a conservation strategy". A study is required that will parallel and emulate the recent study of the status of Fischer's Lovebird in Tanzania.

AIMS OF PROJECT

Professor Mike Perrin of the *World Parrot Trust Africa* is presently raising funds to undertake this research. The specific aims of the project are to assess the present day distribution and abundance of the birds in relation to historical records and to determine demographic and population trends using repeatable census techniques. Habitat requirements (including diets and nest sites) will be identified and quantified while habitat preferences

will be modelled in relation to landscape elements and land-use patterns. Once spatial and temporal changes in density have been determined it will be necessary to study the mobility and movements of the birds and their use of space, be it home range or territory. Key factors such as nest holes, competition and predation limiting density and growth will be identified. Questions will be asked about the social organisation of the lovebirds, including: What is the optimal size of a colony? Does flocking reduce predation, permit the tracking of food resources, and increase reproductive success? It will be necessary to assess levels of inbreeding and hybridisation using molecular techniques and to determine what effect they have had on population viability. It is very important to examine the feasibility of indigenous people sustainably harvesting a captive population of birds for legal international trade.

ACTION PLAN

Similarly, procedures will be defined that will enable the local people to monitor the long term population dynamics of these small parrots, and the trade in Black-cheeked Lovebirds. The culmination of the research will be the generation of a conservation action plan that is ecologically sound and economically realistic.

If you are interested in the biology and conservation of African parrots, please contact Mike Perrin at the Research Centre for African Parrot Conservation, Private Bag XO1, Scottsville, 3209, Natal, South Africa.



The Black-cheeked Lovebird is Africa's most localised parrot.

Photo R. Low

Research Project on southern African Parrots - continued from page 7

be found (e.g. by exchange and controlled translocations).

It is essential that local communities are given the full responsibility for conserving nature in their local areas. Community-based management works best when there is a better understanding of the values and attitudes people attach to the resources in their areas. This will improve relationships with the conservation bodies. This will have

a direct effect on how such a resource is being exploited. There needs to be a survey that looks at what values people attach to the parrots and their habitats/viability, and their attitudes toward the parrot and parrot trade. This will help in educating people and the conservation agencies about the need to better utilise the resource. A questionnaire survey will be carried out targeting the people who are

most likely to be affected by the parrot trade, e.g. indigenous people in rural areas, parrot breeders and legal/illegal traders.

Finally, the study provides recommendations of how indigenous people and the qualified/experienced bird breeders can utilise parrots sustainably. The project will look at how local people can successfully utilise/breed parrots for the pet trade and

aviculturists, and will consider re-introduction methods that have been successful elsewhere.

The possibilities of eco-tourism and its success in preserving not only the parrots but also their habitats will be investigated and assessed. Also better ways for conservation bodies, local people and bodies like CITES and TRAFFIC to stop the illegal trade of parrots will be examined.

More Wild Echo Parakeets Found

Report from the Echo team

The 1996/97 Echo Parakeet *Psittacula eques* breeding season in Mauritius is shaping up to be most successful.

Field work started one month earlier this season (August rather than the usual September) to search suitable areas of the Black River Gorges National Park for Echos. Large areas of the Park had not been surveyed for breeding Echos before. So far we have located four previously unknown breeding groups which exceeded all expectations. We have also found two new breeding groups within the known breeding range. This brings the number of active wild breeding groups to 13, almost doubling the seven known last season. Further breeding groups may still be discovered as we have not yet searched all potential areas.

The Mauritian Wildlife Foundation (MWF) (recently renamed) has made the Echo their priority project for the season. The field team is led by Rachel Shorten and Mike Thorsen from New Zealand who both worked with the Echos last season and have both worked on the Kakapo *Strigops habroptilus* programme in New Zealand. The other team members are Graeme Buchanan from Scotland who also worked with Echos last season, Sam Williams from England who breeds parrots and is about to embark on a university degree, and Vicky Jones from England who worked for MWF with Pink Pigeons for the past year. Vicky is funded from money donated by the *World Parrot Trust USA* and this extra help has certainly proved necessary. Other MWF staff are on call to help out if needed. All our work is carried out in close collaboration with the Government (National Parks and Conservation Service).

FUTURE ACTION

The main focus of the project is to maximise Echo productivity. To achieve this the following actions will be undertaken:-

1. Locate all wild nests. All nests are then rigged with climbing gear, and if necessary, the entrances enlarged or access doors fitted to allow us access.

2. First clutches are removed from selected breeding groups with the purpose of initiating double clutching. The progeny from these harvested clutches will either be hand-reared or raised by Ringneck



Echo Parakeets in the wild: male on left, female on right.

Photo: T. Lovegrove

Parakeet foster parents at the Gerald Durrell Endemic Wildlife Sanctuary (GDEWS). Second clutches will be left with the parents to rear.

3. Each wild nest will be restricted to a maximum of two nestlings as wild Echo parents seem unable to rear more than two chicks. Any surplus will be redistributed to other wild nests or reared at GDEWS. Every effort will be made to ensure all wild nests fledge at least one chick even if we have to supplementary feed the chick in-situ.

4. All active nests are monitored daily. Nestlings are weighed, inspected for nest fly larvae and general health noted so we can intervene if there are any problems.

NESTS TREATED

5. Nest linings are changed every three days during the nestling phase. This lining consists of hardwood shavings treated with insecticide (to protect against parasites) and fungicide. Cavities are also weather proofed where necessary.

6. All active nests are intensively protected from predation by rats by a poison grid extending 100 metres from the nest tree, and saturating the area around the nest tree with snap-traps.

7. The first release of captive reared Echo fledglings is planned for December-January. This will be undertaken by Kathryn Murray from England who trialed the techniques using Ringneck Parakeets last season.

8. If possible we would like to manipulate wild nests so they fledge as many female chicks as possible

in an attempt to rectify the current sex imbalance of 2.4 males per female.

9. As many Echos as possible will be captured and ringed with unique colour combinations for future identification. As the same time blood samples for disease screening, genetic studies, and in the case of nestlings, sexing are also taken.

10. Jim Groombridge at the Institute of Zoology in London is undertaking a PhD thesis on the genetics of Echos, Pink Pigeons, and Mauritius Kestrels to look at population genetics and the effects

of population bottlenecks. This information will allow better genetic management of the wild population and may also give an indication of the roles of 'extra' males in the breeding groups.

11. Dr Andrew Greenwood of the International Zoo Veterinary Group, WPT's consultant vet and consultant to the Echo Parakeet project, will again be visiting the project in December.

THANKS TO WPT

A very large thanks to the WPT for their support both financially and advisory over the past seasons and hopefully into the future. The progress made over the last few seasons has been substantial, which has been due to the support of the WPT.

As of 20th October 1996 seven of the wild breeding groups have laid. Four of these clutches have been harvested, the eldest two eggs have just hatched at the GDEWS and the next two are pipping. We expect the first chicks in the wild in two weeks. Echos do not appear to have any fertility problems: so far all the eggs have been fertile.

Here's hoping the good season continues. Further updates will be sent as the season progresses.



A member of the Mauritius team climbs to inspect a nest cavity. Photo: A. Greenwood

Study of the Cuban Parakeet

by Rosemarie Gnam

The Cuban Parakeet was once abundant and widespread in Cuba and the Isla de la Juventud (formerly Isle of Pines) (Barbour 1943). In the nineteenth century, Gundlach (1893) reported the species from the Ciénaga de Zapata, Trinidad Mountains, hills of Bayamo, and mountains of Guantánamo. It disappeared from the Isla de la Juventud soon after the beginning of the twentieth century (Bangs and Zappey 1905). In 1951 it was believed that the parakeet population in the Ciénaga de Zapata was the only one west of Camagüey (Barbour 1943). It was then still common in the forests of the Guantánamo Basin and in the mountains near Trinidad and south of Camanayagua (Barbour 1943). Davis (1941) noted parakeet populations around Cienfuegos, Trinidad Mountains, and the southern Sancti Spiritus province (Guasimal). Currently, small isolated populations of the parakeet persist in several locations, with population centres in the Ciénaga de Zapata, Camagüey, Guantánamo, and Oriente province (Garrido and García Montaña 1975, García Montaña 1980, Wiley 1991). It is considered rare throughout its range (Garrido and García Montaña 1975) and has undergone an alarming decline in numbers (Wiley 1991).

Barbour (1943) stated the parakeet requires virgin forest. It inhabits the wilder, heavily forested mountains, but it also occurs in palm savannas (Bond 1965). Little is known of the species biology. Unlike the parrot, the parakeet seems to be a more social species, nesting and roosting in flocks in appropriate habitats. Also unlike the Cuban Parrot, the parakeet uses termitaria and holes in cave and cliff faces in addition to tree cavities as nest sites (Gálvez and Wiley, unpubl. data).

The Cuban Parakeet has been a popular cage bird, which has contributed to its decline (Todd 1916, Barbour 1943, García Montaña 1980). Gundlach (1893) had predicted that, at its rate of harvest for cage birds, the formerly abundant parakeet would soon disappear from the Isla de la Juventud. Apparently that prediction was soon fulfilled (Bangs and Zappey 1905). Nevertheless, the main cause of its decline has been large-scale destruction of forests (Barbour 1943, de las Pozas and González 1984, Wiley 1991).

Cuba has undergone extensive conversion of natural forests to cultivation and pastures. In 1812, 90% of Cuba was covered with natural forests (Instituto Cubano de Geodesia y Cartografía 1978). Less than 100 years later, 54% was still in natural forest. Habitat destruction has since been even more extensive, and only small remnants of the original forests now survive. By 1975, just 18% of the island was covered by forests (Instituto Cubano de Geodesia y Cartografía 1978).

CUBAN PARAKEET PROPOSAL

Without a conservation programme based on sound biological data, this species will likely undergo further



The Cuban Parakeet or Conure is rare in the wild and in aviculture.

Photo: R. Low

population declines, local extirpations of populations, and perhaps will become extinct within the next century. We propose to determine the present status and distribution of the Cuban Parakeet, and compare that information with what is known of populations within the historical period. This data, when analysed in view of data we will have collected on the species' ecology and effects of interaction with humans and their activities, will provide background for the development of biologically sound conservation recommendations. Such effective recommendations are the overall goal of this project.

OBJECTIVES

1. To determine the Cuban Parakeet's status and distribution in Cuba, particularly where the healthiest populations have been reported.

2. To characterise habitat of the parakeet, including breeding,

feeding and roosting habitats.

3. To determine the diet and foraging ecology of the parakeet.

4. To investigate the species' breeding biology.

5. To examine the ecology of the parakeet, with emphasis on competitive and predatory interactions.

6. To determine causes of the parakeet's decline, from which a strategy for its conservation can be developed.

PROCEDURES

Objective No. 1. Known former and current habitats of parakeets will be visited and population surveys conducted. Extensive population surveys will be

formed through natural decay or are usurped from primary cavity nesters in trees, life of cavities, competition.

Objective No. 3: Intensive studies of parakeet diet will be undertaken, using techniques of examining feeding birds, sampling crop contents of chicks, and relating these to phenological studies of the major food species in the area.

Objective No. 4: Breeding behaviour of the parakeet will be investigated using blinds located near active nests (Snyder et al. 1987). Full day observations at selected nests will be made to study parakeet activities.

Objective No. 5: Ecological studies of parakeets will emphasise inter- and intra-specific interactions around active parakeet nests, with particular interest in competition among parakeet pairs nesting in colonial situations, possible nest site competitors, and identification and effects of predators on parakeet populations.

Objective No. 6: Data gathered as in Objectives 1-5 will be used along with information gathered during interviews with local biologists and residents to determine causes of the parakeet's decline, from which a plan for its conservation will be developed.

PROPOSED SCHEDULE

First Year: Studies will be concentrated in palm savanna habitat of east-central Cuba, where good populations of parakeets occur with populations of Cuban Parrots. There, efforts to survey population size and distribution, as well as study aspects of the biology of both species, can be more economically performed with the limited personnel, vehicular support, and time available for the investigations. If opportunity arises, and the effort will not compromise on-going work, we will survey other populations for parakeets. Blinds and tree-top lookouts will be established in the major study area for investigations of parakeet behaviour and ecology.

Second and third years: Work on the status, distribution, and biology (emphasising breeding biology) will continue at the main study area in east-central Cuba. More effort will be made to locate and characterise additional populations of parakeets in central and eastern Cuba.

conducted at several sites where recent reports have suggested sizeable population of parakeets, including Monte Cabaniguan Natural Area (south-eastern coastal Cuba), Cubanacan Natural Area, Escambray Natural Area (Cienfuegos), and La Belén Natural Area (east-central Cuba). Population survey will be made using techniques developed for parrots in the Isla de la Juventud (Gálvez and Wiley, unpublished data). Surveys will be concentrated in early morning and evening hours at overnight roost sites. All sites used by parakeets will be referenced to 1:25000 maps.

Objective No. 2: Habitat will be evaluated for dominant tree and understory species, as well as physical characteristics. Nesting habitat within a 10m circular, nest-centred plot will be characterised to species, physical dimensions, and ecology of cavity use: e.g. cavities

The Complexities of Feather Picking by Sally Blanchard

During consultations and seminars, I am often asked to provide a solution for feather plucking problems in companion parrots. I can share helpful information but absolute solutions are usually difficult. Parrots rarely indulge in feather destructive behaviour for just one reason. There are probably as many complexities to feather picking as there are parrots who pick. To some degree, different species of parrots may have diverse causative factors that influence feather problems and certainly the age that picking starts has a great deal to do with its reasons. I believe it is absolutely essential that parrots who have started plucking be seen by a knowledgeable avian veterinarian as soon as possible. Even if the test results show a physical health problem, I encourage parrot owners to optimise their parrot's environment. This includes a discussion about proper diet, frequent showering, good lighting, cage size and the necessities of play and exercise. Improving their basic care is always an important step with any health problem whether it is physical or emotional.

PRESSURES

Parrots evolved in an environment vastly different than that which we can possibly provide for them. Many pressures, both physical and emotional, play a role in feather picking. Some theories about this topic are far too simplistic as most feather problems have a combination of influences. For example the rampant over-generalisation that plucking is caused simply by sexual frustration is absolute nonsense. While actual sexual frustration may play some role in feather picking that begins in mature birds, the vast majority of companion parrots who pluck exhibit aspects of this behaviour as young birds long before sexual factors exert an influence. Many of the parrots who develop behavioural picking patterns have been poorly socialised, have experienced few rules and little guidance, exhibit some phobic behaviours, and are overdependent on their human owners. While reaching sexual maturity may exacerbate problems that already exist in a companion parrot, it is rarely the primary cause of such problems. It is unusual for serious feather destructive

behaviour to occur in well-nurtured parrots who experience optimal care and have been raised with rules and guidance.

I believe that the initial cause of a great deal of picking, especially in hand fed domestic birds, is physical with behaviour playing a part in its continuation. Physical causes can include disease, traumatic injury, malnutrition, poor physical care, allergies, and/or a substandard environment. Allergies and severe stress may also result in feather picking episodes. Several clients of mine have parrots that started picking after earthquakes and severe storms. Interestingly enough, in many cases it did not appear to be the actual stress of the earthquake that caused the picking. The continual stress of aftershocks was the factor to many birds. Parrots have encapsulated nerve bundles in their leg joints that seem to act as vibration detectors. Consequently they are highly sensitive to vibration. I know of parrots who started plucking when their owners moved to downstairs apartments or next to a freeway. Parrots are also highly empathic, picking up their owner's energy in times of stress.

ALLERGIES

Allergies, including food allergies, household dust, and seasonal allergies to pollen or mould spores may be a cause of picking in some birds. Food allergies may also be a significant factor. I personally question the use of some food additives, particularly artificial food colouring in the manufacture of pelleted diets and won't feed them to my birds. Some birds may have negative physical reactions to components in other foods and dietary supplements. It is however, difficult to pinpoint the exact cause of food related allergies.

Any physical injury is likely to cause a bird to bother its feathers in the area of the trauma. This is actually a frequent cause for the onset of feather picking in many birds. However, the majority of birds who began local plucking of an injured area will rarely continue plucking unless other factors are involved. Although I generally do not think collars are helpful in stopping habitual plucking, they can be useful in keeping a bird from bothering an injury whilst it heals. The success of collars from a



Sally Blanchard is a leading parrot behaviourist in the USA.

Photo: R. Low

behavioural point of view depends a great deal on whether or not the parrot accepts wearing one. Some birds adjust quickly with little trauma while others suffer problems that may be more serious than the picking when forced to wear a collar.

One of the major causes of injury plucking in young birds is a fall in the cage which often ends up in a thrashing episode. Young parrots fall in or off their cages for a variety of reasons, most of which are preventable. Trimming the toenails too short before the balance skills are developed can be one contributory factor. Many young birds, particularly Greys, are clumsy and need special considerations until they develop their balance skills.

FIRST FLIGHTS

Parrots who would normally be fledging and taking their first flights should never be allowed on top of their cages or other high places if their wings are trimmed. It seems to be instinctive for birds at this stage to fly when startled or excited and a bird who cannot fly may end up seriously injured. If a young bird falls onto the tips of his long shafted wing or tail feathers, they can be jammed up into the follicles creating bruising. This type of injury can cause a bird to bother the feathers excessively, often resulting in their destruction. An all too

common injury occurs when a young Grey leaps from the cage or play-gym top and plummets to the ground like a lead balloon, landing off balance on its breastbone, splitting the skin.

In the wild, young parrots who are startled or become afraid either hide or fly away from the situation — usually with the guidance of their parents. In captivity, a bird may instinctively attempt to fly but, instead, will end up crashing into their cage, tangling their wings and tails in the cage bars and grate. For this reason, it is important that the cage bar spacing be appropriate for the size of the bird. If the bars are too wide, it is possible for a wing to become twisted between them causing more serious injury. Grates in the bottom of the cage are particularly dangerous at this time. I highly recommend removing them or padding the bottom of the cage to prevent injury to a young parrot.

Too severe a wing trim seems to also be a physical cause of feather picking. Of course, having clipped wings is a totally unnatural situation for any bird. This does not mean we should not trim our parrots' wings; it means we should take care in the way they are trimmed. I have particularly observed parrots who begin to bother their feathers when the flights have been trimmed too close to the follicles (up under the coverts) or when the secondaries

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The Complexities of Feather Picking - continued from page 11

close to the body have been cut.

TWO MAJOR PHYSICAL CAUSES

I believe, after talking to hundreds of owners who own plucking birds, that two of the major physical causes are still inadequate diet and not enough humidity and/or baths. Calcium and vitamin A deficiencies are still a serious health problem in parrots who are fed a primarily seed diet or too much human junk food. These two nutrients are essential for the proper growth and condition of tissue, skin, and feathers. Converting birds to a quality pelleted diet and/or feeding healthy human foods and with supplementation for a balanced diet can make a vast difference in skin and feather quality. With the knowledge we have now about proper avian nutrition there is absolutely no excuse for feeding a predominantly seed diet. It is nutritional abuse and anyone who tells you otherwise is ignorant of the facts. Pet stores that still wean babies to a seed-only diet or recommend seed as a total diet can only be motivated by greed and/or sloth since the profit margin on seed is greater than just about any other bird-related product. It is possible to convert any bird to a better diet with patience and the right information.

SEASONAL PICKERS

Year round daily misting with plain water plus a once a week drenching (not drowning) are essential for parrot's respiratory health and feather condition. In most areas of North America, we set our thermostats high in the winter and most heating systems dry the air considerably. When the air becomes so dry, we may get all sorts of symptoms including dry skin and nosebleeds. The same drying of the skin and mucous membranes occur with parrots causing them a host of health problems. Some parrots seem to be seasonal pickers, plucking only during the winter when the artificial heat dries them up like little raisins. A "real" bath with detergent may be necessary only if a bird's feathers become severely soiled or greasy for some reason. The soap is rinsed from the feathers. Owners and veterinarians should consider the possibility of a contaminant on the feathers before starting extensive drug therapies.

We all know birds should have good lighting, however, that can mean different things to different

people. Many of the homes I have been in do not have sufficient lighting for the birds. Even a bird who is next to a window probably does not have adequate light. Our eyes quickly adjust to the level of light in our houses and we may think it is good enough for the birds. Not only is it humid in the equatorial rainforest, the light is also intense. It is amazing what a difference proper lighting can make in the condition of our captive parrots.

Parrots do not just mimic vocalisations, they also emulate body language and behaviours. Young parrots clearly learn from the example of others and even older birds may take up habits they see exhibited in other birds. Consequently, there is no doubt in

overprotected and poorly socialised may not react well to any new situation, especially if it happens suddenly. If the change seriously threatens the bird's sense of security, phobic behaviour may result in feather mutilation. In young parrots, traumatic or aggressive handling can also be a factor in picking. It is important to protect any young bird from any threatening experience.

INSECURITY

Some people drive their parrots crazy. Teasing, aggressive behaviour, continual confrontation, or constant arguing from humans can cause insecurity in parrots that could lead to picking. Our major goal for our parrots should be to help them to be secure in our



Year round daily misting with plain water is essential for health and feather condition.

my mind that some parrots start picking their feathers after watching other parrots pick. As I stated before, finding a mate for a plucking parrot often results in that parrot plucking its mate or teaching its new mate to pluck.

In most cases feather picking is caused by a complex combination of physical and behavioural causes. The primary behavioural influence is attention paid to the bird when it is picking. A bird who starts plucking because of a simple insect bite may develop a habitual pattern if the owner pays attention to it every time it messes with its feathers. While picking birds certainly need nurturing and attention from their owners to feel secure, it is important not to give them that attention around their picking behaviour.

Gradual change by itself should not cause enough of a trauma to start a feather picking episode. However, parrots who have been

homes.

Basically, parrots do not automatically know how to adapt to their life in a living room. We need to teach them how to be good pets. If we don't guide their behaviour from the time they would naturally start exploring their environment, parrots raised for the pet trade can begin to show serious behavioural dysfunction. These problems are rarely apparent until the young birds start to reach their independence stages. One of the manifestations of this behavioural confusion can be feather picking. It appears that most plucking related to poor early socialisation will start by the time a parrot is two years old.

The majority of people who consult with me are under the erroneous presumption that their parrots must be unhappy if they pick. This is not necessarily true. I know of many contented parrots that play happily, love to be

cuddled, chatter loquaciously, and pick their feathers. The most important advice I can give the owners of plucking birds, whether it is from physical or behavioural causes (or both), is to totally ignore their bird when it picks. Give him lots of love and nurturing attention but ignore the picking. Parrots can be highly manipulative and if they receive attention for a behaviour, they will continue it for attention as long as we give them an investment in it.

As with all such problems, treating the symptoms is less effective than solving the underlying cause. The underlying cause of most behavioural problems in companion parrots is a confused bird in control of his own life doing a miserable job of it. With very confused or phobic birds who pluck, working to increase their sense of security is essential. Giving clear messages with verbal commands and defining periods of attention and cage time-outs will help develop a sense of independence in spoiled birds. Protecting a parrot from traumatic experiences is essential, however, overprotected parrots who have not been introduced to change in safe, secure ways are often feather pickers. Gradually setting rules, providing behavioural guidance, and teaching a bird to accept change and new adventures under close supervision is imperative to their well-being. Working with pickers will usually make a significant difference but may never completely prevent future episodic picking during times of confusion and stress. The *Pet Bird Report* has published several articles that will help you understand Nurturing Guidance and the socialisation process. (To order, please send a S.A.E. to PBR Reprints, 2236 Mariner Square Dr #35, Alameda, CA94501, USA).

Much has been written on the subject of feather plucking and picking in parrots - not all of it well informed. We do not usually publish articles which have been used elsewhere unless of exceptional interest. Sally Blanchard's paper, which appeared in the Proceedings of the 1996 IAS Convention, is in this category. It should be read by everyone who owns a parrot. Her interpretation of the problem is outstanding.



INTERNATIONAL NEWS ROUND-UP



FRANCE

The National Veterinary School of Alfort, situated in Charenton-Paris, was the venue for a double meeting on October 5. There were two programmes, one for veterinary students and the other for aviculturists. This was the second European meeting of the French avicultural society C.D.E. Our director, Michael Reynolds, who opened the latter meeting, spoke to both groups on the work of the *World Parrot Trust*. He mentioned that it has 2,500 members in 52 countries worldwide. He then described the various projects which the Trust has undertaken and those which are still being funded. He touched on the opening of nine branches worldwide in the seven years of the Trust's existence. The Trust's video on the Macaws of Tambopata was then shown to an appreciative audience. He went on to answer questions on a wide range of topics.

It was a truly international programme. The other speakers at the avicultural meeting included Elsie Peres-Dulon from Cuba, director of Havana Zoo, who spoke on the zoo's work with birds. Christophe Bec, curator of Parc de Beauval and Dr. Jean-Marc Lerno, curator of Mulhouse Zoo, were the only French speakers. The former spoke on breeding Toucans and Hornbills and the latter on Touracos. The afternoon concluded with John Stoodley speaking on Amazons, Rosemary Low on Lories and Stephano Rattalino from Italy on breeding parrots.

Simultaneous translation was carried out for the most part by Dr. Didier Lepertois, who also organised the meeting. He performed both tasks with skill and efficiency. Our thanks go to him for making the seminar possible and for the invitation. Promoting the Trust overseas is always a valuable exercise.



Dr. Didier Lepertois Photo R. Low

TONY SILVA - sentenced to 82 months in Jail

Tony Silva, an internationally prominent Chicago area writer and lecturer on the plight of endangered parrots in the wild, was sentenced today by a federal court in Chicago to 82 months of imprisonment for leading an international parrot smuggling conspiracy and for a related income tax violation. Silva's sentence includes the longest prison term ever handed out for bird smuggling, and one of the longest for any federal wildlife crime.

On January 30th Silva, 36, pleaded guilty to a far-reaching conspiracy involving his mother and others located outside the U.S. to smuggle or attempt to smuggle into the country various highly protected species of birds trapped in the wild in South America, most significantly a substantial number of very rare Hyacinth Macaws. Silva also pleaded guilty to filing a false income tax return in connection with his sale of birds.

Silva's mother, a co-defendant, Gila Daoud, 63, was sentenced to 27 months in prison for assisting Silva in the tax violation, as well as her involvement in the smuggling conspiracy.

In arriving at her sentence U.S. District Court Judge Elaine Bucklo found that the value of the smuggled wildlife was over \$1.3 million and that the value of the smuggled Hyacinth Macaws alone was over \$1 million. The judge also found that Silva was the organiser and leader of the smuggling conspiracy.

"It is disgraceful that a person of Mr. Silva's stature in the avicultural community has engaged in activity that proved directly fatal to many Hyacinth Macaws and other highly endangered species, and otherwise contributed to the illicit process that threatens these exquisite creatures with extinction", said James B. Burns, the United States Attorney for the Northern District of Illinois. "We hope that others who might consider committing such crimes understand that we will not allow them to profit personally at the expense of such precious resources".

"The defendants were involved in nothing less than plundering the national treasures of other countries", said Lois J. Schiffer, the

Assistant Attorney General in charge of the Department's Environment and Natural Resources Division. "These crimes threaten the ability of the international community to protect endangered species and ensure global biodiversity. We are committed to prosecuting these cases to both protect these species, and help ensure that our trade complies with our treaty obligations".

The Hyacinth Macaw, found primarily in Brazil, has a wild population most recently reported to number between 2,000 and 5,000. The Hyacinth Macaws' precarious status in the wild has accorded it the highest level of protection under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), an international wildlife treaty to which the United States and approximately 131 other nations are parties.

Silva and Daoud were charged as part of Operation Renegade, a U.S. Fish and Wildlife Service probe of the illegal international trade in parrots. The Internal Revenue Service assisted in the investigation of the defendants. Operation Renegade focused on the smuggling of protected species of birds into the United States from South America, Mexico/Central America, Africa, Australia and New Zealand. Using undercover criminal investigators and confidential informants, FWS' Branch of Special Operations was able to penetrate several complex and well-organised smuggling operations in which large numbers of protected birds, or their eggs, were brought into the country. So far, the operation has resulted in convictions of 37 individuals, over half of whom have been sentenced to prison terms, making it among the most successful wildlife law enforcement initiatives ever undertaken.

The prosecution was led by the United States Attorney's Office in Chicago and assisted by the Wildlife and Marine Resources Section of the Environment and Natural Resources Division of the Justice Department.



Tony Silva

ITALY

In February 1996, Customs officers and members of the Forest Corps seized 19 parrots from a Russian ship docked at Genoa port during a routine search for drugs; the vessel was in transit from South America, bound for Russia. The birds included one Great Green Macaw *Ara ambigua* and two Scarlet Macaws *A. macao* (both Appendix 1). Six Blue and Yellow Macaws *Ara ararauna* and ten Red and Green Macaws *A. chloroptera* (both Appendix II); they are being housed at a private zoo.

COMPETITION RESULTS

In the last issue of *PsittaScene* we offered two copies of Rosemary Low's *Endangered Parrots* as prizes. Members had to answer the following questions: Which of the following had the smallest wild population when the Trust started to support the conservation project? Answer: Echo Parakeet. The survival of which macaw is being aided by the Trust's scheme to grow and transplant its food source? Answer: Lear's Macaw. And which parrot was the subject of the Trust's first special fund? Answer: Hyacinthine Macaw.

Congratulations to the winners who were Claus Højfeldt of Denmark and Ms. A. Morrison of Australia.

ACTION PLAN

PROGRESS WITH THE PARROT ACTION PLAN

Members of WPT will recall that the Trust was responsible for arranging the 'World Parrot Summit' in the UK last year, with the aim of reviving the vitally important PARROT ACTION PLAN. A previous attempt to prepare such a plan had foundered as a result of disagreements between some of the key scientists involved.

We thought that this was unhelpful to the interests of parrot survival, and with the help of British Airways Assisting Conservation we were able to bring together the world's leading experts on parrot conservation. This resulted in an agreement to work together to complete a new Parrot Action Plan. The *World Parrot Trust* was given the responsibility to coordinate the task, and this has been quite a challenge. We now have joint 'central compilers', one based in the UK and one in the US. Funding has been a problem: WPT has pledged \$5000 towards the cost, and \$4000 has been provided by IPF, the Institut für Papageien Forschung. We also have just received \$1500 from our Benelux branch, and would like to take this opportunity of thanking both them and the IPF for their support.

These funds will be used to pay for the work of our UK based compiler, Dr. Phil McGowan, who will be primarily responsible for the 'Old World' parrot species. Phil has been responsible for three Action Plans for Galliformes, completed in the past year and published by IUCN. This experience will be invaluable in preparing the Parrot Action Plan, and we believe that his lack of

involvement in 'parrot politics' will be an advantage in reaching sound scientific conclusions about parrot conservation.

Acting a compiler of information for the New World parrots (Latin American and the Caribbean) is James D. Gilardi, with support from Dr. Alejandro Grajal of Wildlife Conservation Society. They have requested input from a wide range of Neotropical parrot experts, who have been invited to provide information by 20th December 1996. Following that closing date, the Action Plan will be consolidated ready for a planned meeting in New York in April 1997.

This meeting will be attended by Phil McGowan, who will make available the Old World parrot information, including invaluable input from Dr. Stephen Garnett on Australasian parrots, and from Professor Mike Perrin on African parrots.

The resulting information will be put out for review by August 1997, and the final Parrot Action Plan will be published by IUCN before December 1997.

Not only will the Action Plan be an invaluable resource for conservationists, students and governments, it will also be a catalyst for the provision of funds for parrot conservation and research projects. It is for this reason, above all, that it deserves the full support of everyone concerned with the parrots of the world. Funds are still required to ensure the efficient completion of this essential action plan. *Michael Reynolds*

THE ASSOCIATION OF AVIAN VETERINARIANS

The AAV is currently accepting proposals for its Conservation Award. The AAV donates 1% of its yearly net profits to one conservation project each year. The amount given is usually about \$3500. To qualify for this award, a project must involve direct field studies in the developing world, preferably involving avifauna. The recipient study should be directly related to

- 1) critical habitat land acquisition or protection,
- 2) critical habitat land management,
- 3) development of management plans for critical habitat, or
- 4) field studies of avifauna with priority being given to supporting veterinary input (by graduate veterinarians or veterinary students, preferably AAV members) working in conjunction with wildlife biologists.

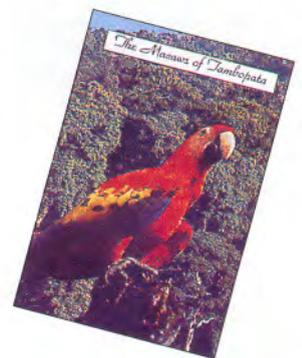
Please submit proposals to the Conservation Committee of the Association of Avian Veterinarians, c/o AAV Central Office, P.O. Box 811720, Boca Raton, Florida, 33481, USA

MACAWS OF TAMBOPATA

We now have a wonderful video, showing wild macaws flying in the rainforests of Peru and featuring Dr. Charles Munn II. It runs for 15 minutes and costs £25.00 (US\$40) including postage. Order PAL (for UK) and SECAM (for France) from WPT UK or NTSC from World Parrot Trust USA or The Canadian World Parrot Trust. Profits from the sale of the video will go to the Hyacinth Fund.



SCARLET MACAW - Limited Edition Print



Malcolm Ellis has painted this superb watercolour of the Scarlet Macaw. Size 28.2ins (70.50cm) x 9.4ins (48.50cm).

The original is available for £2000 (US\$3000). There are just **ONE HUNDRED** limited edition prints available to members for the sum of £75 plus £5 post and packing (US\$115 plus \$10 post & packing).

Send cheques, Visa or Access details to: Vicki Woolcock, Sales, *World Parrot Trust*, Glanmor House, Hayle, TR27 4HY, UK. Phone (00 44) 1736 753365 or Fax no (00 44) 1736 756438

YOU CAN HELP US...



Charles A. Munn III PhD.
 Founder Trustee WPT-USA.
 Senior research biologist.
 Wildlife Conservation Society.



Andrew Greenwood MRCVS
 Founder Trustee of
 WPT-UK and WPT-USA.
 Zoo and wildlife veterinary
 consultant.



Audrey Reynolds
 Director, Paradise Park.
 Founder Trustee of
 The World Parrot Trust UK.



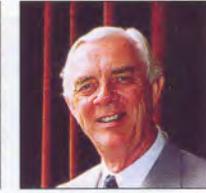
Rosemary Low
 Author of 'Endangered
 Parrots' and 20 more parrot
 books. Editor of
 PsittaScene.



Wm. Richard Porter MD
 Director of the International
 Aviculturists Society.
 Founder Trustee of WPT-
 USA.



David Woolcock
 Curator, Paradise Park.
 Founder Trustee of The
 World Parrot Trust UK.



Michael Reynolds
 Founder of The World
 Parrot Trust, Hon. Director
 of WPT-UK, Trustee of
 WPT-USA.

...SAVE THE PARROTS!



Lear's Macaw



Echo Parakeet



Red-tailed Black Cockatoo



St. Vincent Parrot



Red-vented Cockatoo



Red-tailed Amazon



Hyacinth Macaw

Join us.

Become a member of the World Parrot Trust, receive our *PsittaScene* newsletter, know that you are actively contributing towards our aims.

Help fund our Projects.

We are currently supporting parrot conservation, education and welfare projects in Africa, Australia, Bolivia, Brazil, the Caribbean, Equador, Mauritius, New Zealand, Paraguay, Peru and the Philippines. Your generosity towards the parrots could help us expand current schemes and start new ones.



Aims of the Trust.

The survival of parrot species in the wild, and the welfare of captive birds.

These aims are pursued by:-

- Educating the public on the threats to parrots.
- Opposing trade in wild-caught parrots.
- Preserving and restoring parrot habitat.
- Studying the status of parrot populations.
- Encouraging the production of aviary-bred birds.
- Creating links between aviculture and conservation.
- Promoting high standards in the keeping of parrots.
- Supporting research into veterinary care of parrots.

YES, I WANT TO HELP SAVE THE PARROTS OF THE WORLD

SUBSCRIPTION RATES (please tick)

- UK and Europe (Single) £15
- UK and Europe (Family) £20
- Fellow (Life Member) £250/US\$400
Corporate (Annual)
- All Overseas Airmail £17/US\$25
(or equivalent currency payment by
Access/Visa/Mastercard preferred)
- Plus donation of £/US\$.....

Name

Address

.....

..... Zip/Postcode

Please charge my Access/Visa Acc./No.

Exp. date Amount £/US\$

Signature

OR: I enclose cheque payable to the WPT

I heard about the World Parrot Trust from

PLEASE SEND COMPLETED FORM TO
 'WORLD PARROT TRUST' AT:-
 UNITED KINGDOM
 Glanmor House, Hayle, Cornwall TR27 4HY
 USA
 Cynthia Webb, PO Box 341141, Memphis
 TN 38184

BENELUX
 Pierre Claassens, Deutersestraat 13,
 5223 gv, Den Bosch, Netherlands

CANADA
 Mike Pearson, PO Box 29, Mount Hope,
 Ontario LOR 1W0

DENMARK (SCANDINAVIA)
 M Iversen, Alsikemarken 48, 2860 Soborg.

FRANCE
 J & G Prin, 55 Rue de la Fassiere, 45140, Ingre.

GERMANY
 G & D Harries, Vodestr. 39, 44625 Herne.

ITALY
 Freddie Virili, via Matarus w.10, 33045 Nimis, Udine.

AUSTRALIA
 Peter Sipek, 1 Rossell Pl., Glenfield, NSW 2167.

AFRICA
 Mike Perrin, Private Bag XO1, Scottsville, Natal, South Africa.

SWITZERLAND
 Lars Lepperhoff, Sagemattstrasse 31, 3097 Liebefeld.



PARROTS IN THE WILD



CAPE PARROTS FROM SOUTH AFRICA *Poicephalus robustus robustus*

Photograph by Craig Symes, taken during his research into the biology of this species. This may be the first close-up photograph of Cape Parrots in South Africa to be published. It shows two males on Natal Bottlebrush *Greyia sutherlandii*. The Cape Parrot is the most southerly found parrot species in Africa. Today numbers are low with an estimated population of fewer than 1500 birds in the wild. Now classified as endangered in the *Red Data Book*, remaining populations confined to the fragmented Afromontane *Podocarpus* forests above 1000m, are threatened by exploitation of their habitat and illegal trade. They are wary birds and it is not easy to approach them closely. Note the golden tinge to the head which distinguishes them from the other two forms of the Cape Parrot. See the reports on this species on pages 2, 3 and 4.