BREEDING ECOLOGY OF HYACINTH MACAWS

by Celestino Prudencio da Silva, Charles A. Munn, Renato Cintra, Katherine Renton, Mariana Valqui, Carlos Yamashita.

An extract from their paper, the full title of which is: 'Density of nesting cavities and observations of breeding ecology of Hyacinth Macaws on extensively managed cattle ranches in the Brazilian Pantanal.'

The Hyacinth Macaw (Anodorhynchus hyacinthinus), the world's largest and most spectacular parrot, is endangered with extinction due largely to capture over the past twenty years for the insatiable international trade in live parrots (Ridgely 1981, Munn et al. 1987, 1989). Also contributing to the decline of this species, especially in the Amazonian portion of its range, has been meat and feather hunting and habitat destruction (Munn et al. 1987, 1989). Throughout the moist or dry forests and forest-savannah mosaics inhabited by this species, it subsists almost entirely on the endosperm from the hard nuts of only one or two local palm species (Munn et al. 1987, 1989, Roth 1989).

In most parts of its range, this macaw appears not to be suffering from shortages of palm nuts. Even in the southern part of its range in the alternately flooded then parched savannah-forest mosaic of Brazil's Pantanal, many extensive cattle ranches have been in place for over a hundred years, yet we report here that this land use so far seems not to have endangered the macaw's two species of food plants: the palms Acrocomia aculeata and Attalea phalerata.

The macaw's food supply seems intact in the Pantanal, hunters in the Pantanal do not shoot them for meat or feathers, and the birds have adapted very successfully to life in close proximity to ranch personnel, livestock, machinery, and buildings (Munn et al. 1987, 1989). Therefore the only challenges to the short term survival of this species in the Pantanal seems to be capture for the illegal bird trade and potential shortages of large tree cavities for nesting.

In the Pantanal, trees with large cavities sometimes are cut to eliminate potential roosts for vampire bats, which pose a threat to cattle. Also, many or most large trees in the never-flooded, high...
Hyacinth Macaws mating. The front view is quite charming.

The rear view is not so elegant.

ground forests at the borders of the Pantanal are destroyed when ranchers replace natural forest with artificial pastures. Over the past several decades ranchers progressively have cleared more high ground forest to plant pastures for their herds, which cannot graze safely in the lower, natural grasslands during the annual December-May flood season.

Conveniently for the Hyacinth Macaw, neither of its food palms suffers when ranchers clear the high ground forest for pasture. The *Acrocomia* palm is common in high ground forest, but when clearing this forest, ranchers leave standing most or all large *Acrocomia* and approximately 5% of the other, non-palm species of large trees. The other species of food palm of the macaw, *Attalea phalerata*, which is rare in high ground forest, but common in monospecific patches on the edge of lower, seasonally flooded terrain, is not affected by the deforestation of higher ground forest.

Possibly, however, the cutting of most large trees in larger and larger patches of high ground forest and selective cutting of trees with large cavities in the lowerlying, forested islands of trees or "capaois" might be eliminating many of the cavities large enough to provide nest sites for the Hyacinth Macaw in the Pantanal. Simultaneously, the cutting of trees on these capaois reduces the quality of these islands of forest as wet season refuges for many other terrestrial vertebrates in the Pantanal.

DISCUSSION

On the Estancia Caiman ranch the low density of large cavities suitable for Hyacinth Macaw nests resulted from two natural factors: 1) forest was naturally scarce and patchy in pantanal savannah; and 2) large tree species that develop cavities were rare within those forest patches. Trees large enough and also naturally prone to developing the roony cavities required by these huge parrots appeared to be uncommon to rare in the upland forests as well. Thus, these natural factors combined with the cutting of trees with large cavities to control vampire bats and clearing of upland forest for cattle pasture is leaving progressively fewer large trees with cavities in which the macaws can nest. The destruction of the rare, large tree cavities may soon reduce the reproductive rate of the population of Hyacinth Macaws on the ranch and on other ranches throughout the southern part of the range of the species. Such a shortage of nest sites would leave a senescent population of mated pairs with few cavities in which to nest. At the same time, the crucial food palms on the ranch appear to be producing adequate nut crops at present to support a substantial population of macaws.

Consequently, if ranchers who are clearing upland forest or lowland pantanal tree islands would leave standing all large *Sterculia*, *Enterolobium*, *Vitex*, *Acrocomia*, and *Attalea* and could eliminate all capture of macaws on their properties, the Hyacinth Macaw would survive in substantial numbers on their ranches for many decades. If ranchers where then to go one step further and erect artificial nest boxes, use protective fencing around existing small trees of these four species, and to plant additional trees of these species, then Hyacinth Macaw populations not only would survive well but probably even would increase substantially on these ranches.

In 1984 the weights obtained by R. Cintra of the larger, surviving nestling in the wild nest at the estimated ages of 10, 19, and 30 days compared well with the
weights of two known-aged, parent-fed nestlings from a captive nest (Low 1991; 125 g vs. 122 and 130 g, 350 g vs. 320 and 358 g, and 513 vs. 570 and 598 g, respectively). The last measurement, however, suggests that the growth rate of the wild nestlings may have been falling behind that of the captive-bred nestlings, and the flocks are being supplemented with juveniles. If the growth rate of the captive-bred nestlings, especially the second growth rate one can predict when a nestling, is falling off of a normal, healthy growth curve, then one could intervene with additional food, which would slow nestling growth. This possibility should be examined more carefully.

Finally, the effective methods to augment populations of macaw would be to protect nest trees and food palms and to mount extra nest cavities to increase the percentage of nesting pairs in the adult population. The use of a break-away or removable radio collar on parent birds or fledglings would permit study of the ranging behavior and habitat use of the species, which would help us to determine if food shortage or difficulties with foraging occur during the breeding season. Yamashita (in review) believes that the Glaucous Macaw Anodorhynchus glaucus, an extinct sibling species of the Hyacinth Macaw formerly found in the lower Uruguay and Parana Rivers near the Uruguay-Paraguay-Argentina border, disappeared early in this century because domestic cattle ate and trampled all young specimens of the bird's unique, local food palm, Buita yaiti.

Alarmingl.Brandt and Machado (1990) recently reported that scarcity of the food palms of the Indigo Macaw (A. leuca) of northeastern Brazil (the only other sibling species of the Hyacinth Macaw) forced all of the 60 remaining wild birds to fly great distances daily to forage over 140 square km of dry thorn scrub. That extremely endangered species (Yamahita 1987) even resorted to the dangerous option of feeding on corn cobs in that impoverished, overpopulated portion of Brazil (Brandt and Machado 1990).

The extinction of the one and the virtual extinction of the other conspecific of the Hyacinth Macaw apparently due in part to the lack of food makes it critical to understand the biology of the key palms whose nuts are virtually the species's only food (but see Roth 1989, who reports seeing the species eat snails on one occasion, and Schubart et al. 1985, who report the species occasionally eating lizards and the fruits of a species of myrtaceae). The growth, fruiting, and regeneration of the key palms should be studied throughout the different seasons in natural and logged upland forest, in new and old upland pastures with and without the overstorey remaining large trees, and in natural and modified pantanal grasslands and woodlands.

Extinct megaflora (Leme 1911, Almeida 1945, both referenced in RADAMBRASIL 1982) probably swallowed the fruits of both Acrocomia and Alteolepis palms of the Pantanal, digested off the sweet, sticky mesocarp, and passed intact through their systems or regurgitated intact the hard, inner nuts, which later germinated and grew in the grasslands of the Pantanal (Janzien and Machado 1981). These same huge grazing and browsing animals probably helped maintain the Pantanal in its open and semi-open condition much as introduced cows and horses do today, and elephants did in the forests and savannahs of Africa (M. Fay pers. comm.). Large herbivores and the palms that evolved fruits to exploit these herbivores as seed dispersers thus probably are an ancient evolutionary tradition in the Pantanal. With careful management of cattle, horses, and palms in pantanal habitats, once again it should be possible for large herbivores, this time domestic, to thrive sustainably in the Pantanal while not just allowing but also generating ecological space for healthy populations of Hyacinth Macaws.

Not only should Hyacinth Macaws be able to thrive on properly-managed cattle ranches, but they now also may be able to generate substantial incomes for the ranches as tourist attractions. With the explosive worldwide growth in nature-based tourism or "ecotourism" over the past ten years (Boo 1989, Lindberg 1991) Hyacinth Macaws themselves already are generating substantial ecotourism income on leading Pantanal ranches. For example, after only four seasons of operating a 22-bed ecotourism hotel at Estancia Caiman, the ranch's annual tourism income now approximately matches that of the decades-old cattle operation (R. Kabin and R. Jaccard, pers. comm.). The logo of the ecotourism hotel at the ranch is the head of a Hyacinth Macaw staring rakishly out of a golden porthole. Increasingly, ranchers still fortunate enough to boast healthy populations of Hyacinth Macaws now proudly view their birds as external badges of conservation sophistication, ecological enlightenment, and ecotourism potential. With the new wave of ecological awareness that has swept much of middle-and upper-class Brazil since 1987, and in 1990 the enormous success in Brazil of the nightly, 80-minute TV drama entitled "Pantanal" (which regularly cut away to actual clips of Pantanal wildlife, including wild Hyacinth Macaws), the future survival of the macaw on the ranches of the Pantanal seems more and more likely. The measures outlined here and increased efforts to eliminate illegal trade in live macaws should guarantee the survival of this species in the Pantanal well into the middle of the next century.

The future of the Hyacinth Macaw in the wettest parts of the northeastern Amazon and the drier forests of southeastern Brazil may not be as guaranteed, however, for unlike the Pantanal, where most people currently have enough animal protein and assistance as well as room and board. We also appreciate the hospitality extended to us by the general manager of the ranch and hotel, Robert Jaccard, and by the manager of the hotel, Silvia Gervasi. Marco Scolari, the director of scientific interpretation, and the scientific guides of the hotel, P. Amaral, E. Amil, A. Dutra, B. Pimentel, and S. Salazar all contributed time and effort to the research, for which we are grateful.

ACKNOWLEDGEMENTS

We thank Roberto Kabin, the owner of Estancia Caiman ranch and its nature tourism hotel, Pousada Caiman, for inviting us to map macaw nests on his property and for helping us enormously with logistical assistance as well as room and board. We also appreciate the hospitality extended to us by the general manager of the ranch and hotel, Robert Jaccard, and by the manager of the hotel, Silvia Gervasio. Marco Scolari, the director of scientific interpretation, and the scientific guides of the hotel, P. Amaral, E. Amil, A. Dutra, B. Pimentel, and S. Salazar all contributed time and effort to the research, for which we are grateful.

Wildlife Conservation International (WCI), a division of New York Zoological Society, generously financed most aspects of the 1990 research season. Additionally, through WCI, the World Parrot Trust of the United Kingdom, supported the 1991 field work. RC would like to thank IBDF (now IBAMA) for supporting his work while he worked out of the IBDF Pantanal Research Station. RC also thanks J.V. Dorileo for permission to conduct research on his ranch, and to O. Falcão, T.C. de Arruda, and E. Carvalho for excellent assistance in the field. Finally, we are grateful to M. Helsaple and N. Williams of Superflow Corporation Video Productions for video documentation of this research.
THE CO-OPERATIVE BREEDING PROGRAMME FOR SCARLET MACAWS

by David Woolcock (Curator, Paradise Park and Studbook Holder for the Scarlet Macaw), and Dr. Peter Bennett (Research Fellow at the Zoological Society of London).

Introduction
In a previous article in Psittascene (Vol 2, No.1, January 1990) we discussed some of the biological principles that necessitate a co-operative approach to breeding rare parrots in captivity. We emphasised that co-ordinated breeding programmes based on co-operation between aviculturists can help to reduce problems such as loss of genetic diversity, inbreeding, hybridisation, and other factors that threaten the survival of small captive populations of rare parrots.

Aviculturists can no longer rely on the importation of wild caught birds to bolster captive populations. There is no doubt that indiscriminate collection of wild caught birds to supply the demand for captive specimens has led to the near extinction of a number of species. The emphasis must now be on managing captive parrot stocks to ensure that they are self sustaining. Furthermore, for extremely rare species that have declined to very low numbers in the wild, the aim of these breeding programmes should be to supply a surplus of birds for reintroduction to the wild if this is necessary and feasible. Every effort must be made to ensure that holders of parrots become producers of captive bred specimens rather than consumers of wild birds.

For many species of rare parrots there are already enough wild caught birds in captivity to develop viable self sustaining populations. However, in very few cases are these important birds being recruited into co-ordinated breeding programmes based on co-operation between holders. For some of these species breeding success is low and there is a need to share information on successful husbandry practices. In this article we describe how the co-operative breeding programme for Scarlet Macaws in the British Isles was established and how it is being managed.

The Scarlet Macaw Regional Studbook

The first step in any coordinated breeding programme that is based on population management is to locate and gather vital information on individual birds. In 1987 a survey was sent to zoos in the United Kingdom requesting information on individual Scarlet Macaws in their collections. The information was then collated and entered onto a computer programme that aids management of studbooks (the "Omaha" studbook programme). In any studbook the following minimal information must be recorded for each individual:

- Studbook Number
- Means of identification
- Sex
- Date of birth
- Capture location
- Studbook number of sire
- Studbook number of dam
- Date of death
- Location of birth
- Date of arrival

The information recorded is:
- Unique and lifetime number assigned by studbook keeper
- Name, breeder number, ring number, microchip number etc.
- approximate if wild born
- if wild born and known
- 'wild' if wild born

and local identity number, name and details of any subsequent location including their identity number or name for individual.
The Scarlet Macaw: Distribution and Status in the Wild

Despite being one of the best known of all the parrots very few people seem to appreciate the status of the Scarlet Macaw in the wild. Destruction of the forests, hunting, trapping and collection of nestlings for the pet market have all led to its rarity, especially in Central America: "this species has suffered catastrophic declines in Middle America, and its survival in several countries is seriously threatened" (Ridgely 1981). The pattern of local extinctions has accelerated over recent years and no species can be expected to survive such an onslaught indefinitely.

With its situation in the wild and its relatively large captive population the Scarlet Macaw was chosen as an ideal species to introduce the concept of cooperative management within "psittaculture". After all, if it could not be done with the Scarlet Macaw then the chances of establishing co-ordinated programmes for other, even rarer, parrots were grim!

Other information may be included when relevant such as subspecies, whether surgically sexed or karyotyped etc. Regional Studbooks should be published annually and circulated to all holders that have submitted information about the animals in their care. The Scarlet Macaw Regional Studbook has been published twice. The 2nd edition has information current to 31st December 1989. The 3rd edition is in preparation.

Private keepers were subsequently contacted and asked to submit data to the studbook. When first approached some had grave reservations about divulging details of their stock. Most had the very real fear of potential thieves in mind. This has been overcome by keeping the holders' details anonymous and assigning code numbers to their data. Strict confidentiality is observed. It must be said however that some individuals were not so concerned about losing their birds as receiving a tax demand for undeclared earnings - this of course is completely absurd! Nevertheless some people still refuse to participate in the programme, including one or two eminent aviculturists who lay claim to concern about 'Conservation' but fail to take this clear opportunity to do something practical to help conserve this species. We will have to hope for a change of heart.

Population Status in the British Isles

The Scarlet Macaw Regional Studbook contains information on 219 birds in zoos and private collections in the British Isles. There are more birds known to be in private hands and we encourage holders to register birds in the studbook.
Of the 219 birds 119 are potential founders – birds which are wild caught or of unknown descent. Of these potential founders only 42 have produced descendants. When the performance of each reproductively active founder is analysed it becomes obvious that their individual genetic representation is far from equal. The main task has been to establish new pairs where before singletons existed and to encourage the unproductive birds to breed, particularly those of wild origin. In several instances this has been achieved, but there is still an enormous amount of work to be done. Although there is currently a severe shortage of females a number of birds remain unsexed. Once their gender is established we should be able to move forward more quickly. Many more people are permanently marking their birds with microchips, tattoos or closed rings and this is greatly helping the accuracy and efficiency of tracking the birds between locations.

Factors in our favour:
1) Scarlet Macaws are long lived birds.
2) There are a large number of potential founders.

However, we cannot be complacent. Unless we recruit more founders into the breeding population genetic problems associated with the populations of certain species that have been established in captivity for a long time through many generations will occur. Take the White-Eared Pheasant for example, where high levels of inbreeding, low numbers and unequal representation of founders are all leading to losses of genetic diversity.

Analysis of the studbook shows that certain pairs have left a disproportionate number of descendants. While this breeding success is laudable, there is a need to get more pairs breeding in order to increase the numbers of founders (and thus the gene pool) and to equalise founder representation. It is probable that many parrot species have been established in captivity through a small number of highly successful pairs whose descendants now dominate the populations. In these cases, unless good studbook records have been kept, the opportunity to minimise inbreeding and loss of genetic diversity are lost.

In the case of the Scarlet Macaw we have the potential to ensure through good record keeping and sound population management, a genetically diverse and demographically stable population over the long term. However, this requires co-operation and commitment on the part of all aviculturists holding this species.

N.B. – Number of Scarlet Macaws registered by ISIS (i.e. data from 381 zoos internationally) at 31st December 1990 was 161,139.87 – only 33% of these birds were captive bred. Of course, no central figures for the large numbers that must be in private hands exist – so who knows the real situation?

No. 3 IN OUR SERIES

"If I could keep only one pair of parrots ..."

by John Stoodley
Broadhalfpenny Down Conservation Sanctuary, Portsmouth, U.K.

When invited to contribute a few words to this journal covering a single parrot in my sanctuary I would retain above all others, I thought it an impossible task.

When invited to contribute a few words to this journal covering a single parrot in my sanctuary I would retain above all others, I thought it an impossible task.

In a non-commercial facility the keeper becomes much attached to the birds in his care, to choose just one and turn away all others would be hard to do. I considered there were other ways of approaching the question, for example many years ago I decided that if the sanctuary was to be of any worth to aviculture there must be stricter discipline in my overall direction.

With this in mind the sanctuary was restructured to contain just three groups of parrots, all from the new world; Macaws, Pionus and Amazonas. There was so much to discover, so much to learn, little was known at that time of dietary requirements, or of breeding patterns, but over the years progress has advanced, today many more parrots are being bred in aviculture.

I have been privileged in having had some influence in advancing parrot husbandry, therefore my decision to concentrate all my efforts on so narrow a field, to study in depth both in the field and in aviculture to learn their needs especially dietary requirements, to work closely with foremost Veterinary Surgeons on psittacine health care, has been the right decision for me. Perhaps the question of which single species to work with could be looked at from the angle, which of all the parrots at the sanctuary most needed help?

Macaws are breeding well in many other collections, their future secure, Pionus are less threatened in their natural habitat than are many Amazon parrots, therefore the parrot with the greatest need must come from the Genus Amazona. At the sanctuary we breed twenty six species and subspecies of amazon parrots, some common to aviculture others less well known, all have unique personalities, and whilst not ascribing human attributes to parrots I have worked with them long enough to appreciate and value the merits of each individual bird.

Those that are less well known including Amazona leucocephala ventralis, dafresniana, rhodocorytha, xanthops, barbadensis, f. guatemalae and vinacea I would find hard to abandon as there is still much work to be done to secure them in aviculture. From this short list I would choose to work with ventralis, common name Salles Amazon.

This small amazon, indigenous to the Island of Hispaniola, is under pressure in its habitat as are many island parrots.

Since it cannot be collected, aviculture must do what it can with those available to us. Its aggressive nature presents a stumbling block, it has taken me more than a decade to breed to fourth generation stock that are tolerant of their fellows.

I have enjoyed the challenge and it would give me enormous pleasure to one day write Amazona ventralis is secure in aviculture.
In two previous issues of *PsittasScene* we have reported Dr. Gomez-Garza's concern for the endangered Maroon-fronted parrot, and mentioned my brief visit to Mexico to see this bird in the Sierra Madre. We now have this very interesting report from Dr. Gomez-Garza, illustrated by some of my photographs. Other organisations such as KBP are taking an interest in this parrot, and we have had some helpful comments from Mr. Ernesto C. Enderlin-Hoflich, a Mexican graduate doing research into parrot ecology. I understand that Dirk Lanning, who reported around 3000 of these birds in 1977, is taking part in the new survey on September 1st this year. Together with the arrival of the new 'Centre for the Conservation of Mexico's Psittacines' - mentioned in our 'International News Round-up' - it seems that things are looking brighter for *terrisi*.

Michael Reynolds.

My observations of the Maroon-fronted Parrot *Rhynchopsitta terrisi* began in 1982, and from that time onward, I have witnessed the continuous pressure that man is putting on the vegetation and the wilderness of the Sierra Madre Oriental.

It is increasingly difficult to find large trees in these areas and, unfortunately, the young trees are also being cut in order to make "palapas", small rustic houses.

I know of two places where this bird reproduces: "The Highrise" which was studied during the 1970s by Lanning and Lawson, and "Los Cueva" (the caves). Both locations are distinctive in having at their base extensive forests of mixed conifers that are inhabited by these birds all year around. The Highrise is the largest breeding area; it has about 25 nests per year. The wide variety of species of trees at the base of this cliff area means that one can see the parrots there in search of food all year around.

Unfortunately, there are approximately 200 persons who live very near this same forest, and they depend upon it for their existence. All the firewood they need to cook their food and build their dwellings comes from this area. They also use this area as pasture for their goats and cows, although it is ill-adapted as pasture land. In this forest it is not unusual to find the remains of *R. pachyrhyncha*. It is increasingly difficult to find the seeds of the *Agave macroacantha*, not just the nectar.

Unfortunately, during 1989, a road was built at the base of the cliff in order to give the woodsmen better access to the trees that make up the mixed forest at the base of the cliffs. The parrots did not nest there that year. The road goes through a zone that can be very dangerous and, after the rainy season, there was so much damage done that it was rendered useless. Nonetheless, in 1990, the cliff at "Las Cueva" was used again by two pairs.

"Las Cueva" is very near a town which has a significant population. The changes wrought in the habitat are much worse in this zone. The presence of mixed forests at the base of the cliffs where these birds make their nests is proof that it is very important to save these zones. The overgrazing by goats and cows in these locales prevents the regeneration of the trees and could have a profound effect on their annual nesting as the parrots need to have food available near their nests. Some birds use the holes in the most distant cliffs all along the Sierra in order to sleep, and they sometimes rest in the holes during the day throughout the year, perhaps to escape the heat or the cold (the temperature is more stable in the holes) due to the extreme climate of the Sierra throughout the year. The simple fact that they go into the holes of a cliff does not mean that locale is a nesting area, as is commonly thought. The nesting places have certain special characteristics that the parrots know and that obviously not all the cliffs have. One of these characteristics is precisely the presence of a great diversity of kinds of conifers at their base. Furthermore, the two locales that I know to be areas of nesting have been used over the years without interruption (except "Las Cueva" in 1989, as I have said previously), at least since the beginning of the 1960s, according to what the oldest residents of these places say.

I have observed an additional fact with respect to the parrots' food—the parrots also eat the seeds of the *Agave macroacantha*, not just the nectar.

I have had the opportunity to watch the birds in their natural habitat throughout the years and I have never seen a bird with a scarlet forehead. On May 2, 1991, I saw a typical adult specimen of *R. terrisi* with just one red feather of a very intense color at the end of the superciliary line on the right side, but I could never believe that it was an individual that was a hybrid of *R. terrisi* and *R. pachyrhyncha*. In my opinion, the presumed *R. pachyrhyncha* seen during the winter in San Antonio de las Alazanas were no doubt confused with *R. terrisi*.

Beyond a doubt, the numbers of *R. terrisi* have decreased significantly during recent years. The great flocks of several hundred individuals reported during the 1970s are a thing of the past. The changes that man has made in the Sierra Madre Oriental by cutting down thousands of trees each year is decreasing significantly the number of *R. terrisi*. Over the recent years we have had in Nuevo Leon and Coahuila several seasons of drought. Surely the capacity of growth of the pine trees in the Sierra has something to do with the abundance or scarcity of the rains. Probably the lack of rains is due in

By Dr. M.A. Gomez-Garza

My observations of the Maroon-fronted Parrot *Rhynchopsitta terrisi* began in 1982, and from that time onward, I have witnessed the continuous pressure that man is putting on the vegetation and the wilderness of the Sierra Madre Oriental.

It is increasingly difficult to find large trees in these areas and, unfortunately, the young trees are also being cut in order to make "palapas", small rustic houses.

I know of two places where this bird reproduces: "The Highrise" which was studied during the 1970s by Lanning and Lawson, and "Los Cueva" (the caves). Both locations are distinctive in having at their base extensive forests of mixed conifers that are inhabited by these birds all year around. The Highrise is the largest breeding area; it has about 25 nests per year. The wide variety of species of trees at the base of this cliff area means that one can see the parrots there in search of food all year around.

Unfortunately, there are approximately 200 persons who live very near this same forest, and they depend upon it for their existence. All the firewood they need to cook their food and build their dwellings comes from this area. They also use this area as pasture for their goats and cows, although it is ill-adapted as pasture land. In this forest it is not unusual to find the remains of *R. pachyrhyncha*. It is increasingly difficult to find the seeds of the *Agave macroacantha*, not just the nectar.

Unfortunately, during 1989, a road was built at the base of the cliff in order to give the woodsmen better access to the trees that make up the mixed forest at the base of the cliffs. The parrots did not nest there that year. The road goes through a zone that can be very dangerous and, after the rainy season, there was so much damage done that it was rendered useless. Nonetheless, in 1990, the cliff at "Las Cueva" was used again by two pairs.

"Las Cueva" is very near a town which has a significant population. The changes wrought in the habitat are much worse in this zone. The presence of mixed forests at the base of the cliffs where these birds make their nests is proof that it is very important to save these zones. The overgrazing by goats and cows in these locales prevents the regeneration of the trees and could have a profound effect on their annual nesting as the parrots need to have food available near their nests. Some birds use the holes in the most distant cliffs all along the Sierra in order to sleep, and they sometimes rest in the holes during the day throughout the year, perhaps to escape the heat or the cold (the temperature is more stable in the holes) due to the extreme climate of the Sierra throughout the year. The simple fact that they go into the holes of a cliff does not mean that locale is a nesting area, as is commonly thought. The nesting places have certain special characteristics that the parrots know and that obviously not all the cliffs have. One of these characteristics is precisely the presence of a great diversity of kinds of conifers at their base. Furthermore, the two locales that I know to be areas of nesting have been used over the years without interruption (except "Las Cueva" in 1989, as I have said previously), at least since the beginning of the 1960s, according to what the oldest residents of these places say.

I have observed an additional fact with respect to the parrots' food—the parrots also eat the seeds of the *Agave macroacantha*, not just the nectar.

I have had the opportunity to watch the birds in their natural habitat throughout the years and I have never seen a bird with a scarlet forehead. On May 2, 1991, I saw a typical adult specimen of *R. terrisi* with just one red feather of a very intense color at the end of the superciliary line on the right side, but I could never believe that it was an individual that was a hybrid of *R. terrisi* and *R. pachyrhyncha*. In my opinion, the presumed *R. pachyrhyncha* seen during the winter in San Antonio de las Alazanas were no doubt confused with *R. terrisi*.

Beyond a doubt, the numbers of *R. terrisi* have decreased significantly during recent years. The great flocks of several hundred individuals reported during the 1970s are a thing of the past. The changes that man has made in the Sierra Madre Oriental by cutting down thousands of trees each year is decreasing significantly the number of *R. terrisi*. Over the recent years we have had in Nuevo Leon and Coahuila several seasons of drought. Surely the capacity of growth of the pine trees in the Sierra has something to do with the abundance or scarcity of the rains. Probably the lack of rains is due in
part also to the effect man's activities have had on the Sierra. Although there are almost always clouds and rain in September (when the R. terrisi are born), during the rest of the year it does not rain, the weather is very dry and, as a result, forest fires spread rapidly.

A count to determine approximately the current numbers of birds was carried out on April 21, 1991 in the Sierra Madre Oriental in Nuevo Leon and Coahuila. The six zones that are most frequented by these birds were chosen, and notes were taken from sunrise to sunset that day at all the locales simultaneously. The places were “El Jonuco,” “The Highrise,” and “Cerro del Potosi” in Nuevo Leon; “El Canon de San Lorenzo,” “San Antonio de las Alazanas,” and “Las Vigas” in Coahuila. We counted only a few less than 300 birds in the six places. It is possible, of course, that the number is greater, but also at least one flock of 28 individuals was probably seen and counted twice (in “The Highrise,” and, 20 minutes afterward, in “San Antonio de las Alazanas”). At any rate, there is good reason to be worried.

Another count is planned for September 1, 1991. These counts should be done carefully as these birds are very noisy by nature and very conspicuous, and it is easy to overestimate their real numbers. It is truly urgent to protect their nesting and feeding areas. It is also urgent to start a program of forestation in the most damaged zones like the “Cerro del Potosi” and the area around “Las Cuevas”. Furthermore, it is very important to start a program of ecological education focused on the local population.

Miguel A. Gomez Garza

A PARROT WITHOUT A NAME
by Don Stap

A rare treat—a parrot book which one can sit down and read like a novel—except that it is true. It would be more accurate to describe it as a book on Neotropical avifauna for, despite its name, other species feature equally in this fascinating story of the ornithologists John P. O’Neill and Theodore Parker. Members may recall that John O’Neill featured in the February 1991 issue of PsittaScene, as the first in a series of well-known people invited to write a few lines on “If I could keep only one pair of parrots...”

The jacket notes describe him as having “…identified more new species of birds than any other ornithologist alive, revolutionizing what we know about Neotropical avifauna” and Parker as “the world’s leading authority on Neotropical bird behaviour... celebrated for his phenomenal ability to identify birdsong.”

The Amazon basin and, in particular, Peruvian rainforest, is where both men are in their element. The author, Don Stap, accompanied them on two expeditions and gives a vivid account of life in the field with these eminent authorities, who are friendly rivals as far as discovering “new” species are concerned.

However, while O’Neill will collect birds and prepare the skins, Parker, unlike most university museum ornithologists, will take a living bird only under exceptional circumstances.

Collecting birds in the Amazon might sound like an idyllic pastime—but Don Stap describes just a few of the hazards to be overcome—such as getting there, to start with. And once away from civilisation one cannot be too fussy about what is served up for dinner, a Mealy Amazon, for example. “I eat it hungrily with my Instant mashed potatoes”, records the author, for “Fresh meat has become a rarity and Marta has made the parrot meat flavoursome and tender.” (No good being aghast—amazons and macaws have been on the menu in the Amazon as long as man has been there...)

But life in the rainforest has its compensations, such as “the cool water and the flocks of parakeets that fly over with the last rays of sunlight glancing off their greenness as they tilt swiftly and dive into the trees on the opposite bank.” Yes, I have been there too, and it is such memories which one treasures—the discomforts are forgotten.

Don Stap had the good fortune to be present when the first...
This volume completes Franz Robiller's three-part work covering all the parrots of the world. It covers avicultural and ornithological aspects. It is published in German - and, no, don't turn to the next item if you don't read German! A number of features of this book make it worthwhile a place on the bookshelf of any student of neotropical parrots. If there can be a definitive title on any species (impossible because knowledge is increasing at an enormous rate) then this must be it for the neotropical species, for it presents much of what was known up to about 1988.

I am not easily impressed by parrot books, which I tend to peruse with an over-critical eye, but this one left me with the greatest admiration for the author, the photographers and whoever drew the maps. Everything about it is of the highest standard.

The text: it launches straight into the species, starting with the Hyacinthine Macaw and following the usual taxonomic arrangement. Each species commences with about 14 lines summarising basic information such as sexual dimorphism, number of eggs laid, incubation period and length of time young spend in nest - much of which can be interpreted even by those who do not read German. Then follows for each species information under these headings: Description, Sub-species, Range, Habitat, Behaviour in the wild, Status, General information, Care and Breeding. The literature has been researched with astounding thoroughness to supply this information. Indeed, there are more than 800 entries in the list of references. A number of South American parrots are so little known, that no-one has yet been able to supply the most basic information; otherwise, the information presented for each species is very well balanced.

The photographs: the publisher, Ulmer, is known for its generous use of colour - but this book surpasses all others with which I am familiar, in this respect. Excluding the maps, there are about 340 photographs, all in colour, all of excellent quality. About one third depict habitats, including in some cases, nest trees of the species. And habitat types, such as caatinga (a dry, scrubby landscape in Brazil) are well portrayed. There is a habitat picture for almost every species, a unique and useful feature of this book. The photographs of the parrots include some striking full-page portraits by H. Müller, a talented photographer, and there are a number of good sequences of chicks development taken at Vogelpark Walsrode by Klaus Trogisch.

The maps: these are most informative for the shaded parts depicting distribution do not cover immense areas but as far as possible are much more precise, that for the Severe Macaw, for example, following major rivers. The map for the Scarlet Macaw demonstrates so well how the species is gradually becoming extinct in Central America. Different sub-species are shaded in contrasting colours. There is a map for each species - and their preparation must have been extremely time-consuming.

Published in 1990 by Deutscher Landwirtschaftsverlag Berlin GmbH, Reinhardtstrasse 14, 1040 Berlin, and Verlag Eugen Ulmer, Stuttgart; 502 pages; page size 18cm x 26cm. It surely represents a landmark in the literature of neotropical parrots.

Rosemary Low
LETTERS TO THE EDITOR

Members write . . .

..."Keep up the good work with Psittascene. It just keeps getting better and better..."
Steve Milpacher, Okanagan Exotic Bird Sanctuary, Kelowna, Canada.

..."I think P. Prenton-Jones is very silly! We love our Membership Certificates, and are sick to death of a vague notion of the status of our birds in a survey of advertisers is good, though..." Ruth Aspinall, 38 Abingdon Road, London W8 6AS.

I wish to say that I'm not at all offended by the Membership Certificate. To give a large certificate or a small card is entirely at your discretion. However, the most important issue to me is that The World Parrot Trust be as successful as possible in the work it is attempting to do..." Jeff Bauguss

Dear Ms Low, 27th July, 1991
Enclosed you'll find our check for subscription renewal to Psittascene. We look forward to each issue as it gives a more international overview than many of the other publications we receive.

May I put a good word in for the parrot "keepers" of the World? My husband and I became keepers by accident when we brought an injured Blue & Yellow macaw into our lives. Prior to his arrival, we had a vague notion of the status of these parrots in the wild and no idea of the care they needed in captivity. Between books, magazines, friends and many calls to "bird" people in the States we had a crash course on parrots that enabled us to care for him. Now, several years later, we are still learning everything we can. "MAX" is thriving and shares our home with several more macaws and parrots.

It is our hope and goal to set up our birds in pairs in the future. But for now, just being their caretakers has educated us, raised our awareness about conservation and given us countless hours of pleasure.

I'm telling you all this because I occasionally read quotes from Aviculturists condemning the keeping of parrots as pets and it bothers me. We cannot all be Rosemary Low or Richard Schubot, but we can all contribute to the conservation and welfare of parrots. Our birds are a daily reminder to me of how precious parrots are and how carefully we must protect them, both in captivity and in the wild.

Yours truly.
Kathleen Gaynor-Smith

This society supports your organization totally, in the quest to stop the trapping of parrots in the wild. We have enclosed a copy of a letter that we have sent to Mr. John Mellon, hoping that it might help in some way.

James Box
President
The Victorian Finch & Cage Bird Society Inc.
Melbourne, Victoria.

Mr. John Mellon
IPC, Magazines Ltd.
Kings Reach Tower
Stamford Street
London. SE1 9LS.

Dear Sir,
Re: "Cage & Aviary Birds"
Our society is a member of The World Parrot Trust, and we have been following with great interest, the problems they have been having with the above publication.

We are greatly concerned with the parrots in the wild, here in Australia and overseas, and if the problems associated with the taking of birds from the wild and not related to the vast number of bird keepers in the world, it is going to be even a harder problem to correct.

Your publication is an excellent means for the The World Parrot Trust to get the message across to the bird keepers of the world, as this publication is available in many countries around the globe. We feel that your organization does not have the right to ask The World Parrot Trust to change any of their aims, or restrict them in publishing unpleasant pictures of wild caught birds in transit etc.

We ask you to instruct your bird publications to stop advertising parrots that are obviously wild trapped, the cost that you may miss out on will be replaced in the long term by breeders advertising aviary bred birds for sale. To remove the ban on accepting advertisements from The World Parrot Trust, and to give fair and accurate coverage of The World Parrot Trust's many initiatives to help preserve the parrots of the world, because if we all don't get together now and act on this very important matter we will not have any parrots left in the wild.

Furthermore, until the objectives are met, or some other satisfactory arrangements have been made with The World Parrot Trust, we have had no other alternative than to ask our members to stop promoting your publication, Cage & Aviary Birds.

Yours faithfully,
James Box
President VF & C.B.S. Inc.

Mr. J. Mellon
Chairman
IPC, Magazines Ltd
Kings Reach Tower
Stamford Street
London. SE1 9LS.

Dear Sir,
I have recently received a five page letter from Mr. B. Byles editor of Cage & Aviary Birds in response to a letter I sent you regarding bias/unfair reporting in your publications Cage & Aviary Birds and Birdkeeper magazine.

I regret that the five pages I have received from Mr. Byles has not convinced me of anything other than he and his editorial team are deeply ignorant of the urgent need to take action to conserve the world's precious wild tropical birds, that he is also using pathetic reasoning as to why the plundering of these species should continue and also that he will not even acknowledge that a problem exists.

Your company controls the only two magazines on sale in the UK dedicated to the keeping of cage and aviary birds, yet the readership/general public are not being given the benefit of balanced reporting. In short, it appears that the two publications are in the pocket of the pet trade.

I am deeply concerned that these publications just refuse to publish any alternative point of view regarding the crisis of the import of wild caught birds. I am also concerned that the money raised and donated to save the Echo Parrakeet in Mauritius by the World Parrot Trust was not acknowledged fairly and the readership was given to believe that the money was entirely donated by the Parrot Society. This is a very serious matter.

I hope that you will agree that when such expert organisations as the RSPB, International Council for Bird Preservation, RSPCA, EIA and the World Parrot Trust all campaign for the end of the mass importation of wild birds then they do so for good reason. Could it possibly be that these major organisations are right and Mr. Byles is wrong?

I truly hope that both Cage & Aviary Birds and Birdkeeper will show a more educated and compassionate view to the problems of the world's precious birds and that all parties involved in the hobby of loving birds will come together and share the title conservationists.

Yours faithfully,
Paul W. Brindley
Editor's Note: Mr Mellon, Chairman of IPC, has heard a lot of good sense from World Parrot Trust members. If you haven't yet written, please do so.
by Rosemary Low

Sponsored by Loriinae Europa, the First International Lory Society Conference took place on June 7-9. The venue was Vogelpark Walsrode in Germany. The meeting was attended by over 100 people from Germany, UK, Holland, Belgium and Italy with one representative each from such distant countries as USA, Australia and New Zealand.

The speakers came from six countries and covered a varied range of topics. Unfortunately neither Trevor Buckell nor Andrew Blythe were able to be present due to family bereavements, and Andrew Blythe’s paper on the status of lories in the UK was read by George Anderdon. Steffen Patzwahl, Curator, Vogelpark Walsrode, described the collection at Walsrode where 37 of the 51 lory species kept over the years have bred. Dr. Hans Classen from Germany spoke on feeding. He emphasised that lactose is a dangerous sugar to give to lories. He stated that the Lori-Nektar produced by his company, Biotropic, was tested for six years before use and that birds fed on it show higher fertility and are not prone to obesity. Rosemary Low spoke on breeding and hand-feeding of lories and presented a second paper on Macaws and Amazons. Jan R. van Oosten from the USA spoke on deforestation and other conservation issues, and censuses and studbooks for lories. Simon Joshua described chromosome studies of lories and how they can be used for taxonomy. His work shows, for example, that Goldie’s Lorikeet should not be classified as a Trichoglossus (but until the chromosomes of most lory species have been examined it is not possible to state in which genus it belongs). Alison Ruggles’ subject was “What nobody told me about keeping lories” and Hans Dieter Phillipen spoke on computers and censuses.

In conjunction with Düsseldorf University Theo Pagel had examined the tongues of chicks and adults of several lory species under an electron microscope; he described his findings, also the displays of several species. On hatching, the tongue of chicks is covered with a keratinized layer which is shed at about 22-35 days after hatching (depending on species), to set free the papillae. Tony Silva (Curator, Loro Parque) discussed endangered neotropical parrots, including Spix’s Macaw, of which he stated the total known in captivity is now 32. He commented that the Brazilian Government should be given the credit for the fact that they have now accepted declared Spix’s Macaws in overseas collections as being legally held - the first time that any Government has taken this step for illegally exported birds.

Conservation was the subject of Thomas Arndt from Germany (editor of the excellent magazine Popagien). Regarding re-introduction, he said that this could succeed with species such as the Black-winged Lory (Eos cyanogenia) which occurs on only one island, Biak, but with such species as Massena’s (Trichoglossus haematodus massena) which are found on several islands, the genes of captive birds might be different, due to breeding from two birds from different locations, thus creating difficulties. (With the aid of DNA “finger-printing” this could be detected. - Ed.)

Dr G. Kaal from the Netherlands discussed fungal diseases, and Bernd Gerischer spoke on the problems of keeping Lories in East Captive-breeding was suggested by Roland Seitre as one method of preserving the endangered Tahiti Blue Lory. This pair was bred in captivity in 1982. Photo: R. H. Grantham.
The subject was the lories of Polynesia. Roland Seitre from France; his
work to be carried out on lories on the island of Biak, Indonesia. He mentioned that he
had been successful in breeding the<br>Emerald Lorikeet (Neopsittacus pollicicuda), probably a first captive
breeding.

The speaker at the banquet was<br>Roland Seitre from France; his subject was the lories of Polynesia. He summarised their status as
follows: Kuhl's Lory (Vini kuhlii) has suffered a severe population decline over the past decade and, partly
due to hunting for plumage, is now really threatened. Stephen's Lory (Vini stephendi), found only on the
unpopulated Henderson Island, is not at risk at present. The Tahiti Blue Lory (Vini peruviana) has
suffered a great reduction in its range and is slowly disappearing from all the Society Islands.

In the Tuamotus it is known to be present only on Rangiroa; the other lories of that group have not
been surveyed. The Ultramarine (Vini ultramarina) is the most threatened, with a good population
(about 500 pairs) only on Uahuka. Roland Seitre pointed out that deforestation is not a severe
threat to Vini that deforestation is not a severe
trend. A limited number of copies of the Proceedings of this meeting will be
available from Lars Lovent LOW, Jettevej 25, 8220 Braband, Denmark.

**SWISS AUTHORITIES UNDERMINE SPECIES CONSERVATION**

By Thomas Arndt, Editor, "Papageien"

The St. Vincent's Amazon (Amazona vinicolor) with its population of 450
to 600 birds is one of the most endangered species of parrot. But this amazon species has been more
fortunate than most others. It was recognised in time that it was on the verge of extinction and it had people
like Paul Butler, who took up its cause and fought for its protection. It must have been like a blow in the
face to the inhabitants of St. Vincent to learn that no less that 6
St. Vincent's Amazons were legally imported into Switzerland in January of this year. The birds were
declared as captive-bred and came from Barbados. The aviculturist and breeder W.T. Miller lives there and
has kept 16 or more illegal St. Vincent Amazons for years. A Mr.
Edwards has become part-owner of the valuable amazons. The exact
details are not known. However the 6 amazons came from this stock. George would say that last someone is breeding the
endangered St. Vincent. But it is not so easy to get them.

The birds owned by Miller and Edwards have been monitored for years by the representatives of the
international conservation agencies and they are well-known. "Captive-bred" birds have occurred before.
It's known that there is just one breeding pair, but they have not bred recently. All the other birds are
not capable of breeding. All the experts are agreed that not all of the 6 birds, if any, can be captive bred.
It is curious that the export documentation was partly completed in German, although one
would not expect the authorities in Barbados, where the local language
is English, to be capable of this. The documents are also identical to the
blank documentation found during a search under warrant of the home of the German importer Ludwig Höhr,
one of the major participants in the illegal trade in parrots.

It is possible to believe that Dr. Althaus and his superior Dr. Peter
Dollinger, the responsible officials in the Federal Swiss office for
Veterinary Affairs, did not realise that neither Edwards nor Miller
could scarcely have bred the six
amazons. But this is unfortunately not the case. Even in the Swiss
Federal Office they knew of a sensitive issue the St. Vincent's Amazon presents. To cover himself in
granting the import permit, Dr. Althaus twice asked the CITES
Secretariat in Lausanne, on 23rd October, whether the birds should be allowed into Switzerland. He received the answer by telex on 27th October. As one would expect he was advised to refuse the import
permit.

Every other official would have followed the recommendation of the CITES Secretariat, but Dr.
Althaus. He admittedly learned from the telex that the adult birds owned by Miller could be illegal, but that
did not bother him unduly, since the birds in question were supposed to be
"captive-bred offspring of the birds in the collection in Barbados and therefore legal.
Anyone who can use such logic in the issue of import permits for
highly endangered birds must have been surprised by the angry
reaction of the CITES Secretariat, the conservation agencies and the St. Vincent government to Swiss
importing practice. The St. Vincent government has already made an
official protest to the Swiss
government and demanded the return of the amazons. There is also talk within the EC of boycotting the import and export of captive-bred
endangered species to and from Switzerland. It will then be finally realised just how much political
damage has been done and the great
disservice to our aviculturist friends in Switzerland.

I have always envied the Swiss aviculturists for the liberal
importing practice of their authorities, but it must not go so far
as to officially support and legalise the extinction of highly endangered parrots. I await with dread the day when<br>Paul Butler and Dollinger receive the first import applications for St. Vincent Amazons or Kakapos bred in Jakarta or Singapore. Hopefully the two gentlemen would
have read Paul Butler's report or seen how the school children in Dominica collect money to buy land for
their amazons. Then it may be clear to them, whatever their
motives, just what they have achieved.

The insight may come sooner. We shall soon know. They have been presented already with an
application for the importation of a further 8 St. Vincent amazons from Barbados. They will of course be
"captive-bred".

**ST VINCENT PARROT BREED AT PARADISE PARK**

This is one St. Vincent parrot whose legality cannot be challenged. He was hatched in an incubator on 19th
July 1991, and his parents are a male
sent by the St. Vincent Government to Paradise Park in 1974, and a female similarly sent to Jersey
Wildlife Preservation Trust and now on loan to Paradise Park.

This picture was taken at 55 days.

**EEP FOR GUAROUBA**

The Queen of Bavaria's or Golden Conure (Aratinga guarouba)
guiana) is now the subject of an EEP (European Programme for the
breeding of Endangered Species). Its aims are the same as those
described for the Hacatinehine Macaw (see August 1990 issue of
PittatScene), ie, to convince private
owners and zoos to give details of their birds to a central studbook
keeper, to exchange birds to make up true pairs, etc.

All holders of this species are asked to cooperate, in order to
safeguard its future in aviculture. As in the case of the Hacatinehine, there are now a number of the
species in Europe but the majority of them are not breeding. Co-operation between breeders is needed, with those who are successful describing their
methods.

The EEP (Europäisches Erhaltungszuchtprogramm)

St. Vincent Parrot Chick at 35 days. Paradise Park, Cornwall, UK.
THE LORINAE AWARD

At the Walsrode meeting Jan van Oosten and Rosemary Low were presented with an award for "promoting the interest and maintenance of and the reproduction of the Loriniae in captivity". The award each received was an exquisite life-sized mounted carving of an Ultramarine Lory (Vini ultramarina). It was specially commissioned, and carved and painted by the English artist Raymond Turley. It is a work of art to be treasured - and one which delighted both recipients.

DOMINICA

Dr Peter Evans returned to the UK from Dominica earlier this year, having completed further survey work and monitoring parrot numbers in the centre of their distribution. He reported to the Editor: "Both species are showing encouraging signs of recovery - particularly the Red-necked which has returned to several areas they have vacated after the hurricanes of 1979-90. The Imperial is occurring in numbers in the centre of their distribution. He reported to the National Audubon Society to make a lecture tour on the parrots of Dominica and their conservation."

MEXICO

The Centre for the Conservation of Mexico’s Psittacines (Asociacion para la Rehabilitacion y Conservacion de Psitacidos) held its first “Parrot Festival” in Mexico City in April. Its aim was to draw attention to the Centre and the endangered and declining status of most of Mexico’s parrots. It resulted in international television coverage. The Centre's T-shirt has been sold and was such a success it is being reprinted. For more information on the work of this organization (which is in need of donations to further its work), contact Dr J. Ehrenberg, Apto Postal 4174, Itzimna, Merida 97101, Yucatan, Mexico.

GLAUCOUS MACAWS ON DEALER’S LIST

During the past decade rumours of the existence of the supposedly extinct Glaucoius Macaw (Anodorhynchus glaucus) have been growing increasingly more convincing. Specimens were last collected in the 1860s, in southern Brazil and Paraguay - and there have been no official sightings since. This means nothing, however. The Glaucoius Macaw is almost identical in size and appearance to Lear’s Macaw (Alectoris) - and the exact origin of that species was not discovered until 1978, proving that a large macaw could exist "undiscovered" in the wild, in an era when it seemed few ornithological surprises remained.

But the vastness of South America undoubtedly holds many more ornithological secrets. Also, soon the whereabouts of the Glaucoius Macaw may be secret no more. An interesting, if not totally accurate, article appeared in the June 2nd edition of The Mail on Sunday. The author, Jo Revill, suggested that this species was "supposedly driven to extinction by man's greed." There is not one shred of evidence to support this statement. In historical times it has been represented in captivity by only a handful of specimens, the last in 1905 - or just possibly in Buenos Aires Zoo in 1935. No habitat disturbance occurred within its range until several decades after it was first believed to be extinct.

What is interesting is not this arguable statement but the story of Carlos Lazaro Fraga, an Argentinean arms dealer. As a sideline, he trafficks in rare and endangered parrots - and boasted to British investigators regarding the ease of bringing such birds into Europe. The Mail on Sunday reported: "Fraga’s activities can now be exposed only after two years of intensive investigative work by a small team of British wildlife enthusiasts who are determined to stamp out the black market in wild birds. (They)... first heard of Fraga when they found one of his price lists by infiltrating a network of Amsterdam bird dealers."

The report continues that conservationists fear that Fraga has found the last existing colony of the Glaucoius - in Paraguay - and that this could lead to it being "wiped out within two years".

If the population is small, this prediction could, unfortunately, come true. The situation is likely to attract attention as the result of the curator of a well-known zoo in the USA (described as "America’s leading parrot expert") making the unfortunate statement that if the species does exist, "it would carry a price tag of $100,000 on its head."

Once again the price of a rare parrot has been grossly exaggerated - but unfortunately, such claims could act as an incentive to trappers and dealers to hunt for the Glaucoius.

There is one aspect of this story which I find puzzling. Two pairs of Glaucoius appeared on Fraga’s price list for $950 each, $1,900 per pair. On the same list were Caninde or Blue-throated Macaws (Ara glaucogularis) at $3,200 per pair. Why were the Glaucoius offered at a comparatively low price?

Fraga told The Mail on Sunday investigator that the Glaucoius were quickly sold and that he could illegally send birds into Europe via Moscow, thence into Rotterdam. However, it seems that these four Glaucoius entered Europe via Lisbon. Their present whereabouts was not reported. - ROSEMARY LOW

AERLINES LIKELY TO SETTLE WILD-CAUGHT PARROTS ISSUE

At the last count 23 airlines including Lufthansa and British Airways had decided to stop the transportation of wild-caught birds. British West Indian Airways is the latest to join the ban, but we hear that Air Mauritius is still moving birds from Guyana to Europe via Africa. More news likely in the next issue.
Our picture shows Martin Ballam, bird of prey specialist at Paradise Park, Hayle, Cornwall, UK, with 'Zara' a female Golden Eagle. Martin is 19, Zara is 29. During the past three summers Martin has put on spectacular flying demonstrations at the park for hundreds of thousands of visitors, featuring Golden, Tawny, Bateleur and Bald Eagles.

Martin’s shows have become the most popular events at the park, even beating the parrot and otter talks. This is because he has developed his own very funny material, and makes his audiences laugh while they learn about birds of prey. In the middle of the mayhem, however, he stops to explain about the World Parrot Trust and its aims, and the urgent need to help the parrots survive. He asks for donations to be put in the collecting boxes at the exit gate, and threatens to set Zara on them if they don’t pay up generously.

How he gets away with it is a mystery – anyone else would be lynched. The facts speak for themselves, as Martin and his birds of prey have now raised the amazing total of THIRTY THOUSAND POUNDS! No other individual or organisation has come anywhere near raising so much for the trust’s work. Our sincere thanks are due to Martin, and his colleagues David, Adam and others who have helped over the past three years.

Message from Martin and Zara: We hope you PsittacScene readers aren’t just sitting there twiddling your thumbs. You should be reaching for your cheque books to send a big fat cheque to the World Parrot Trust, with several notes on the end. If the two of us bird of prey types can raise thirty grand, two thousand of you parrot people should at least be able to match it. We are completely serious, so please do it right away, while you’re in the mood. Thank you very much from us all.

---

CITES APPENDIX I PARROTS
In the last issue of PsittacScene a member suggested we print this list.

- Amazona arausiaca (Red-necked Amazon)
- Amazona barbadensis (Yellow-shouldered Amazon)
- Amazona brasilienis (Red-tailed Amazon)
- Amazona dufresniana rhodocorytha (Red-crowned Amazon)
- Amazona guildingii (St. Vincent Amazon)
- Amazona imperialis (Imperial Amazon)
- Amazona leucocephala (Cuban Amazon sp.)
- Amazona pretrei (Red-spectacled Amazon)
- Amazona tucumanana (Tucuman Amazon)
- Amazona versicolor (St. Lucia Amazon)
- Amazona vinacea (Vinaceous Amazon)
- Amazona viridis (Puerto Rican Amazon)
- Anodorhynchus leari (Lear’s Macaw)
- Ara glaucogularis (Blue-throated Macaw)
- Ara ambigua (Buffon’s Macaw)
- Ara rubrogenys (Red-fronted Macaw)
- Ara macao (Scarlet Macaw)
- Ara maracana (Illiger’s Macaw)
- Ara militaris (Military Macaw)
- Aratinga gularis (Golden Conure)
- Cacatua moluccensis (Moluccan Cockatoo)
- Cyanopsitta spixii (Spix’s Macaw)
- Cyanoramphus auriceps forbesi (Forbes’ Parakeet)
- Cyanoramphus novaehollandiae (Red-fronted Parakeet)
- Geopsittacus occidentalis (Night Parrot)
- Neophema chrysopterygia (Golden-shouldered Parakeet & Hooded Parakeet)
- Ognorhynchus icterotis (Yellow-eared Conure)
- Cyclopsitta diephthalma coxeni (Coxen’s Fig Parrot)
- Pezoporus wallicus (Ground Parrot)
- Pionopsitta pileata (Pileated Parrot)
- Probosciger aterrimus (Palm Cockatoo)
- Psophotus rupicola (Golden-breasted Parakeet & Hooded Parakeet)
- Psophotus pulcherrimus (Paradise Parrot)
- Psittacula echo (Echo Parakeet)
- Psittacus erithacus princeps (Fernando Fo Grey)
- Pyrrhura cruentata (Blue-throated Conure)
- Rhyynchopsittus spp. (Thick-billed Parrot & Maroon-fronted Parrot)
- Strigops habroptilus (Kakapo)
SECOND CONSERVATION BUS UNDER WAY

Following the considerable success of the JACQUOT bus which the trust prepared and sent to St. Lucia, much of the funds for a second bus are now available. This bus will be the SISEROU EXPRESS, bound for Dominica. The trust is now urgently seeking two buses similar to the St. Lucia one: this was a Bristol LHS, only 24ft in length. If any member knows of such a bus, please phone David Woolcock on 0736 753 365. Donations to complete the purchase and conversion cost would be very welcome. All of us at the trust regard these buses as the most cost effective of our projects so far, achieving tremendous environmental education benefits.

Preventing the exhibits in the 'conservation' bus. Owing due thanks to Alison Reynolds, Nick Reynolds and David Woolcock, all of Paradise Park and The World Parrot Trust. Nobody worked harder and longer than they did to make the bus a success.

Parrot Studbook Keepers

Once again we publish a list of Studbook Keepers. All readers holding these species would do well to register their birds with the relevant studbook keeper. The development of these vital studbooks is being seriously damaged by the non-participation of leading aviculturists. If they are as conservation-minded as they pretend, they will register their birds right away.

BLUE-EYED COCKATOO *R*
Palm Cockatoo *R*
Dr. Roger Wilkinson, North of England Zoological Society, Chester Zoo, Caugholl Road, Upton-by-Chester, CH2 1HL

GREEN-CHEEKED AMAZON *R*
Lilacine Amazon
Mark Pigott, North of England Zoological Society, Chester Zoo, Caugholl Road, Upton-by-Chester, CH2 1HL

MOLUCCAN COCKATOO *R*
Bob Colley, Penzance Wildlife Park, Cirencester, Glos., GL7 2HL

GOFFIN'S COCKATOO *R*
Scarlet Macaw *R*
Buffon's Macaw *R*
Red Fronted Macaw *R*
David Woolcock, Paradise Park, Hayle, Cornwall TR27 4HT

THICK BILLED PARROT *R*
David Jegg, Jersey Wildlife Preservation Trust, Les Augres Manor, Trinity, Jersey, Channel Islands

HYACINTH MACAW *R*
Colin Butch, Parrot Magnet Zoological & Botanical Gardens, Tothill Road, Paignton, Devon

GOLDEN CONURE *I*
Alan Luereman, San Diego Zoo, PO Box 551, San Diego, California, 92112-0551 USA

GOLDEN CONURE *R*
Red-vented Cockatoo *R*
Blue-streaked Lorikeet *R*
B/o The Parrot Society, 108b, Fenlake Road, Bedford, Bedford MK42 7LD

*R* = UK REGIONAL STUDBOOK
*I* = INTERNATIONAL STUDBOOK

Parrot Incubation Procedures/Jordan

When members place an order and clearly state that they are WPT members, a 5% donation will be made to the Trust. We encourage all of our members to take advantage of this new arrangement which will directly benefit our conservation goals.

You can write for a free 32 page catalogue to Silvio Mattacchione & Co.: 1793 Rosebank Road, N. Pickering, Ontario L1V 1P5 Canada. Phone: 416-831-1373, Fax: 416-831-3734.
AIMS OF THE WORLD PARROT TRUST

The objective of the trust is to promote the survival of all parrot species and the welfare of individual birds.

1. By educating the general public worldwide about the threat to parrot survival, and seeking their interest, concern and support.
2. By action to protect and preserve the natural habitats of parrots worldwide.
3. By gathering and disseminating information on the status of parrot populations in the wild and in captivity.
4. By advocating effective controls on the international trade in wild-caught parrots, and its replacement by captive-bred birds.
5. By encouraging co-operation in the breeding of parrots by aviculturists and zoological institutions, and better liaison between the captive breeding community and conservation bodies, with the aim of creating self-sustaining populations of endangered species.
6. By promoting high standards in the keeping of parrots as pets.
7. By encouraging research projects, i.e.: the veterinary care of parrots, and the preservation of genetic diversity.
8. By any other means that may be appropriate.

WORLD PARROT TRUST
A Brief Progress Report

This charity was launched in October 1988 to work for the survival and welfare of the world’s 320 species of parrot, of which 100 species are endangered. It is the only international organisation devoted exclusively to the parrot family. In its first 18 months it has raised over £80,000, and supported the following important parrot-related projects around the world:

Australia: Red-tailed Black Cockatoo, Research to assist the survival of an endangered population of this spectacular Cockatoo in Victoria. A four year programme to which we contribute £8,000.

Brazil: Spix’s Macaw, Helping with the cost of an expedition to investigate the population status of this most endangered of all macaws. Only one remains in the wild. Our contribution: £2,000.

Brazil: Hyacinth Macaw, Field research into the breeding biology of this species, carried out by Dr. Charles Munn. A contribution of £6,000. Also a donation of £600 towards work carried out by a team of Danish biologists.

Caribbean: St. Lucia Parrot, Providing posters and badges for an educational campaign designed to reach every child on St. Lucia: £2,500. Followed by our largest contribution: £2,000.

Central America: Endangered Cockatoos, We made a small contribution towards a British expedition to study and report on the Moluccan Cockatoo and other species.

Mexico: Maroon-fronted Parrot, If any other means that may be appropriate.

Mauritius: Echo Parakeet, Undoubtedly the world’s rarest parrot. Only about 12 or 15 birds left in the wild. Captive breeding and other conservation measures being pursued by Carl Jones, known for his success with the Mauritius Kestrel and Pink Pigeon. The trust has provided general financial support, plus the cost of a four-wheel-drive vehicle (approx. £12,000, of which £2,500 was kindly donated by The Parrot Society). Total contributed to date: £20,000.

Australia: Red-tailed Black Cockatoo, Research to assist the survival of an endangered population of this spectacular Cockatoo in Victoria. A four year programme to which we contribute £8,000.

Brazil: Spix’s Macaw, Helping with the cost of an expedition to investigate the population status of this most endangered of all macaws. Only one remains in the wild. Our contribution: £2,000.

Brazil: Hyacinth Macaw, Field research into the breeding biology of this species, carried out by Dr. Charles Munn. A contribution of £6,000. Also a donation of £600 towards work carried out by a team of Danish biologists.

Caribbean: St. Lucia Parrot, Providing posters and badges for an educational campaign designed to reach every child on St. Lucia: £2,500. Followed by our largest contribution: £2,000.

Central America: Endangered Cockatoos, We made a small contribution towards a British expedition to study and report on the Moluccan Cockatoo and other species.

Mauritius: Echo Parakeet, Undoubtedly the world’s rarest parrot. Only about 12 or 15 birds left in the wild. Captive breeding and other conservation measures being pursued by Carl Jones, known for his success with the Mauritius Kestrel and Pink Pigeon. The trust has provided general financial support, plus the cost of a four-wheel-drive vehicle (approx. £12,000, of which £2,500 was kindly donated by The Parrot Society). Total contributed to date: £20,000.

Mexico: Maroon-fronted Parrot, If any other means that may be appropriate.

Mauritius: Echo Parakeet, Undoubtedly the world’s rarest parrot. Only about 12 or 15 birds left in the wild. Captive breeding and other conservation measures being pursued by Carl Jones, known for his success with the Mauritius Kestrel and Pink Pigeon. The trust has provided general financial support, plus the cost of a four-wheel-drive vehicle (approx. £12,000, of which £2,500 was kindly donated by The Parrot Society). Total contributed to date: £20,000.

Michael Reynolds

I WANT TO BE A PARROT CONSERVATIONIST

Helping the SURVIVAL of all parrot species, and the WELFARE of every individual parrot.

Name Mr/Mrs/Ms
Address
Postcode

SUBSCRIPTION RATES (please tick)

☐ Single £10  ☐ Family £17.00  ☐ Fellow £100
☐ Overseas £25 US (or equivalent)  ☐ Additional donation £

If you can afford to give more than the basic subscription rate your money will help us fight harder to save the parrots.

I enclose cheque/P.O. for £ payable to The World Parrot Trust.

To: The Manager
Bank
Address

POSTCODE ORDER

Pay to The World Parrot Trust, A/C No. 91144022 Midland Bank plc, Exmouth, Devon EX8 1HF.

Please send to The World Parrot Trust, NOT to your bank.

The World Parrot Trust, Glanmor House, Hayle, Cornwall TR27 4HY, U.K.

Psitta scens