

ST VINCENT PARROT PROGRAMME

Report to World Parrot Trust By A.G. Greenwood, MA VetMB MIBiol MRCVS

INTRODUCTION

Between 20-26 May 1994 I visited St Vincent on behalf of the World Parrot Trust (WPT), funded by a grant from the U.K. Foreign and Commonwealth Office. The aims of the visit were fourfold:-

1. To determine the sex and health status of the St Vincent parrots held in the government captive breeding project
2. To assess the progress and avicultural management of the project
3. To determine the best way in which further available funds should be spent to support and improve the project
4. To assess the need for continuing external financial support

A previous visit by D. Jeggo and A. Allchurch of Jersey Wildlife Preservation Trust (JWPT) (St Vincent Report 1990) had taken a similar course, but few of their recommendations have been taken up, largely from a lack of external financial support. This report will amplify and update some of the information in Jeggo and Allchurch.

My visit included general discussions and visits to the forest reserves, and a complete veterinary and avicultural review of the in situ captive breeding programme.

BACKGROUND

My visit had been approved by Hon. Allan J Cruickshank, the Minister of Agriculture, and Mr Carlton Samuel, the Permanent Secretary.

Much of the background information was obtained through discussions with the Forest Department and examination of

their records. The Forest Department is a division of the Ministry of Agriculture, and has about 35 staff. Brian Johnson is head of the Forest Department (as at the time of Jeggo and Allchurch's visit in 1990) but the then Forest Officer in charge of the Parrot project, Lennox Quammie, was replaced in 1992 by Fitzroy Springer, who underwent training in the UK, at JWPT and the WPT headquarters at Paradise Park.

Wild population and habitat

When last surveyed in 1984, the total forest area of St Vincent was 13000 hectares, and no more than 500 hectares are believed to have been lost since then: Not all of this is suitable parrot habitat or within protected reserves, but in general it appears that the rate of forest encroachment and destruction is quite low. The role of the Forest Department is entirely one of conservation management of the existing forest, which is recognised as providing the island's sole source of water and, through hydroelectric schemes, the majority of its power. A deliberate policy of not building roads into forest areas has clearly helped and there is no commercial forestry on government lands.

Biennial surveys of the wild parrot population are carried out by Fitzroy Springer, with 6 helpers. The census system used is designed to detect trends in the population rather than give an absolute number. Although a population of 4-500 has regularly been quoted for the St Vincent parrot, the basis for this absolute

number even in the many published reports of survey efforts seems obscure. Nevertheless, when the 1992 census suggested an increase to about 800 birds it was believed to have been inaccurate, until the same total began to be revealed in the 1994 census (now almost completed). The increase may well be due to the inclusion of new forest areas in the count as well as a definite upward trend in well-surveyed areas.

Captive programme

St Vincent Amazons have been held at the Nichols' Wildlife Complex in the Botanical Gardens near Kingstown since 1987. Since 1990, when there were 19 birds, the number held there has increased to 34 (plus 2 chicks in the nest). There are also a pair of Vervet Monkeys (*Cercopithecus aethiops*), a breeding group of about 10 agoutis (probably *Dasyprocta antillensis*), two Orange-winged Amazons (*A. amazonica*) and one Mealy Amazon (*A. farinosa*). The fourth cage in this "local fauna" area is now occupied by a young St Vincent parrot.

The structure of the complex is as described in 1990, except there is an additional "quarantine aviary" used for sick or incoming birds, and two of the three public display aviaries have been opened into one large flight aviary by the removal of wire panels. There are 14 birds in this large flight, and 6 others in the adjoining aviary. Five birds are in the quarantine aviary and four pairs are in the four breeding flights.

Aviary staff at the Botanic Gardens consists of 3 keepers working overlapping shifts (0700-1600h and 1000-1800h), and a nightwatchman, under the management of Fitzroy Springer.

There are some 45 other birds in registered private ownership throughout St Vincent and the Grenadines, which are inspected every 6 months by Fitzroy Springer. I saw five of these birds on the nearby resort of Young Island, owned by Mr V Brown.

There is some confusion in the records about parentage. The main record registered a bird SVG 081 as captive bred in 1988 from 109M x 108F. However, no bird 081 could be located among the group and there was no record of re-ringing (although it was recorded as a female by Jeggo and Allchurch in 1990). The keepers' records and

their recollection is that the 1988 bird is 085 Female, which is now in Aviary 4 and that its parents were the Aviary 3 pair, 087M x 111F. Furthermore, the records of ring numbers for 1992 birds have been mislaid.

AVICULTURE REVIEW

Captive breeding success

The distribution of birds in the four breeding aviaries is as follows (all birds carry an open US-type steel ring, marked SVG and a three figure number):-

- Aviary 1. 112 Male and 108 Female
2. 103 Male and 104 Female
3. 087 Male and 111 Female
4. 079 Male and 085 Female

Annual production of surviving chicks has been as follows:-

- 1988 1 (in a group aviary)
1989 0
1990 3 - Aviary 1
1 - Aviary 3
1991 4 - Aviary 1
1 - Aviary 3 (Died at 6 mths)
1992 3 - Aviary 1
1993 2 - Aviary 1
Total 15

At present (May 1994) Aviary 1 has 2 chicks in the nest and Aviary 3 has hatched 1 chick (DNS) and has another clutch of eggs, at least one of which is fertile.

Aviaries 2 and 4 have produced infertile eggs since 1991 and 1993 respectively, including this year.

Sex, weight and identification

The St Vincent parrots split into 14 males and 13 females (14,13), with an additional 2,4 known sex birds and one unsexed aged specimen. The males further subdivided into 4 immature and 10 mature birds, and the females into 2 immature and 11 mature birds. Care is needed with such interpretations, especially with males, but known age birds correlated with these subjective findings, reinforcing the likely age of sexual maturity at around 5 years.

Of the birds in the breeding aviaries, only 103 (Aviary 2) and 079 (Aviary 4) were sexed to confirm they were males, because of constant infertility in these pairs. This was valuable, as 079 was found to be very fat (1100g) and will be replaced by another suitable male from the group.

With the exception of this bird and another with a fatty tumour (see below), weights varied from 480g - 660g. Most of the birds at 550g or less had some defect which



Street Market, Kingstown, St. Vincent.

Photo: Andrew Greenwood

might have affected their metabolism or feeding ability (see Appendix I) and birds below 550g felt thin. Fat was visible in the abdomen of birds of 650g and over. It seems therefore that an optimum weight range for the species (either sex) is around 575-675g.

The conclusion of the surgical sexing is that all the birds in the complex (except 082) are of known sex and either in breeding pairs or colour banded. The sex ration of almost 1:1 should allow rapid expansion of the population if facilities are provided.

Health status

No birds were found to have papillomata, nor were any other signs of infectious disease or nutritional deficiency found. Certainly, the nutritional health of the flock has improved tremendously since 1990; Jeggo and Allchurch's nutritional advice and the joining of two of the display aviaries by Fitzroy Springer (after a visit to Paradise Park) are undoubtedly responsible for this. It may be that a higher plane of balanced nutrition could improve fertility in the breeding birds. Recording and nutritional analysis of the diet are needed.

Results of the virological tests will be supplied when complete. Tests for chlamydia were all negative.

Health risks

The main potential health threats to the birds are the importation of diseased specimens, poor food hygiene and storage, air or arthropod-borne disease from wild birds or poultry, and food contamination by lizards.

FIELD TRIPS AND DISCUSSIONS

I was able to make two short field trips with Fitzroy Springer, one to the Vermont Nature Trail where we climbed to the Parrot Observation Platform and saw and heard a number of parrots in the late afternoon. The second was to the Congo Valley area on the windward side of the island, where forest destruction is taking place on a private estate. The forest reserve next to this estate still contains a large group of parrots (we saw a flock of about 20 after some rain) and the birds are foraging right up to the edge of the habitat. From these brief visits and discussions with Forestry staff it seems clear that the forest is quite stable (apart from minor incursions) and that it has strong regenerative powers. The truism that tropical forest, once destroyed, cannot support long-term agriculture in its place, nor regenerate itself, may not necessarily apply in St Vincent, where a thick layer of volcanic ash contributes to greater soil depth and fertility, and where agricultural plantations or forest replanting do

equally well on the cleared ground. The parrot population is certainly healthy and stable or perhaps increasing and poaching for pets and for export is all but ended. There were no feral introduced parrots surviving in the wild and competing thrashers (*Margarops fuscatus*) are not present (unlike in St Lucia and Puerto Rico).

It seems, however, that little is known of the biology of the wild birds, apart from their feeding habits - nest sites, for example, seem to be undiscovered in most areas and previously known nest sites lost.

I was unable to meet the Agriculture Minister or higher officials in his Department, but we did meet the Attorney General, the Hon. P Campbell, in his capacity as Acting Prime Minister and were able to ascertain that the government remains committed to parrot conservation and to the captive programme, although there are understandable concerns about the increasing costs and long-term aims.

Explaining the rationale behind the breeding programme is rather difficult - the reason for maintaining an expensive programme in the face of an increasing wild population is clearly open to question, and it may be that a PHVA (Population and Habitat Viability Analysis) is needed to clarify the need for an internationally-managed captive programme as an insurance policy, as well as to give the whole programme a long-term rational basis.

It is to be hoped that the advent and use of WPT finance will be seen on all sides as an indication of the sincerity of the St Vincent Parrot Consortium (an international group of zoos which hold St Vincent parrots on behalf of the St Vincent government, and co-ordinate breeding activity), and that fruitful discussions can ensue on the integration of the in situ and ex situ breeding programmes, to the general benefit of the species. Otherwise, there may be serious difficulties in maintaining the long term viability of the captive population because of the lack of provision for surplus parrots.

CONCLUSIONS AND RECOMMENDATIONS

These recommendations should be recognised as personal opinions. Like all individuals in such situations, I have been presented with an overall picture, but my competence to judge some parts is much greater than others.

1. Finance

(a) WPT and the Consortium should recommend and offer to institute some kind of "fund" to raise and provide extra money for both field and captive programmes.



Fitzroy Springer and some of his aviary bred birds.

Photo: Andrew Greenwood

At the same time, government commitment to core funding should be confirmed.

(b) The present WPT/FCO grant should go towards additional breeding aviaries (there appears to be room on the present site for 2 more blocks of 4 or 5, especially if the "quarantine" aviary is incorporated), to improve services (kitchen facilities such as stainless steel sinks, hot water, electricity and storage bins) as well as limited incubation facilities. The second part should go to interpretive materials and in situ fundraising support (collecting boxes, leaflets etc.). The main requirement for interpretive materials is that they should be weather-resistant and of sound construction. Brian Johnson should be asked to produce a costing for new aviaries as soon as possible.

(c) The Consortium should start putting in some finance, via the fund, preferably with a commitment to regular contributions.

2. Field conservation

I am unconvinced by the accuracy of the numbers. A major population and habitat survey (using volunteers?) is needed to verify the baseline. Much more field study is needed of the parrot; in particular there is a desperate need for a competent tree-climber to locate nests!

3. Captive breeding

The construction of more breeding aviaries is essential. Another 8 would allow 16 of the mature birds to be paired up and could well result in a total output of 24+ parent-reared birds per year. Intensive production with incubation and hand-rearing seems unnecessary at this stage, although cross-fostering into the nests of over-represented pairs (e.g. Aviary 1) could help even out founder representation. A competent Amazon aviculturist could, on the present performance, probably

produce 50 chicks a year from the existing stock.

Unfortunately, at present the St Vincent programme has no obvious outlet for such production, except release to the wild, which is clearly not warranted. A joint WPT/CBSG sponsored study of the overall wild/captive situation might help clarify people's minds and maintain the momentum.

4. Additional breeding centres

Any major increase in the population should lead to establishment of satellite projects in St Vincent and outside, to insure against disaster. This would severely stretch Forestry resources, and would have to involve the private sector (e.g. Young Island).

5. Training

One individual needs to be trained by an Amazon expert in incubation, hand-rearing and cross-fostering techniques. The best idea would be for him to visit a UK or US breeder during the breeding season, although this would occur at the same time as the St Vincent season. An alternative would be to fly one of these people out to St Vincent, but all the advantages seem to be in the other direction.

The two veterinarians on the island, Dr Charles Corbette the Chief Veterinary Officer and Dr Collin Boyle the Veterinary Officer are both Cuban-trained, highly motivated and very helpful people. Both do private small animal practice part-time, along with their duties in the Agriculture Department. It would be valuable to incorporate them more closely in the programme, by regular contact with the aviary and inspection of privately held birds. Their private practices make it possible for them to acquire equipment essential to avian medicine (e.g. isoflurane anaesthesia) and we can encourage and help them to do so. The Agriculture Department has some laboratory equipment, but lacks a technician to get it operating and

do the tests. All parrots dying, whether in the aviary, the wild or in private hands, should be autopsied as fresh as possible, and we will provide a protocol and recommended sampling techniques so that examinations can be comprehensive. Histopathological back-up can be provided from UK at relatively little cost.

6. Consultancy

This programme desperately needs external support to keep it running and developing. A system of veterinary, field biology and avicultural back-up needs to be established and regular monitoring visits undertaken. There has been no field biology visit since 1988 (Paul Butler) and no aviculture or veterinary input since 1990 (David Jeggo and Tony Allchurch).

An increasing partnership between the St Vincent Consortium (headed by JWPT, WPT and NYZS) and the St Vincent government would seem to be right. Much closer outside contact with the in situ programme would seem to be very desirable.

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In St Vincent, great help and hospitality were provided by Fitzroy Springer and Brian Johnson, together with many staff of the Forestry Department. The Minister of Agriculture, Hon. Allan J Cruickshank, and his Permanent Secretary, Mr Carlton Samuel, granted permission for the visit and the FCO grant was kindly administered and expedited by J de Foublanque and Mark Norton, supported locally in St Vincent by the Acting British High Commissioner, Mr Sandy Ferguson.



St. Vincent Amazon parrot.

Photo: Andrew Greenwood

The Attorney General, Hon. P Campbell, graciously gave up his time for discussions at very short notice. My colleagues, Dr Charles Corbette and Dr Collin Boyle (and his wife Dr Rosemary Boyle), were extremely helpful and Dr Earl Kirby, former Chief Veterinary

Officer, gave valuable insights into many aspects of the programme.

Shepherds Ltd. of Kingstown kindly loaned oxygen equipment.

Finally, everyone I came across in St Vincent, whether connected with the programme or not, was immensely friendly and hospitable.

THE STATUS OF GOFFIN'S COCKATOO ON THE TANIMBAR ISLANDS AND ITS IMPACT ON AGRICULTURE

By Yusup Cahyadin, Berth I. Manoppo and Paul Jepson

EDITORS NOTE:

In view of the World Parrot Trust's previous involvement with Goffin's Cockatoo, we decided to part-fund this BirdLife International/PHPA survey. The following extracts from this report reveal a surprising picture.

SUMMARY

1.1 Two parrot species are endemic to the Banda Sea Islands of South Maluku, Indonesia. *C. goffini* is endemic to the Tanimbar Islands and *Eos reticulata* is endemic to the Tanimbar Islands and the small islands of Babar and Damar to the west.

1.2 According to official figures of the Indonesian Directorate General of Nature Conservation and Forest Protection (PHPA), capture quotas for these two species in the ten years up to 1992 were between 8000 and 14000 per annum for *C. goffini* and between 1500 and 2000 per annum for *E. reticulata*.

1.3 *C. goffini* was placed on Appendix 1 of CITES (Convention

on International Trade in Endangered Species of Wild Fauna and Flora) at the 8th meeting of the Conference of the Parties in Tokyo, in March 1992.

1.4 This document reports on the findings of PHPA/BirdLife International surveys which were conducted between March and May 1993 on Yamdena, the largest of the Tanimbar Islands. The surveys (which were conducted concurrently with surveys to assess the location of a proposed Yamdena protected area) aimed to assess the status of these two species and to evaluate the damage caused to the local maize harvest by *C. goffini*.

1.5 Population estimates were calculated from data collected using Variable Circular Plot and Variable Distance Transect methodologies. The population estimates given in this report are biased towards the conservative side. Agricultural impact was assessed through direct observation measurements.

1.6 The population of *C. goffini* on Yamdena Island was found to be 347,088 + or - 82,956. Yamdena

Island constitutes 61% of the terrestrial range of the species.

1.7 The population of *E. reticulata* on Yamdena Island was found to be 171,898 + or - 46,872.

1.8 Past annual catch levels of c.3.17% of the total population of *C. goffini* and c.1.01% of the total population of *E. reticulata* were clearly within sustainable limits.

1.9 This study indicates that *C. goffini* damages in the region of 2.43% of the island's maize harvest. Overall this is small, but significant. Maize fields average

0.02 ha and, as *C. goffini* travels in flocks up to 280, the damage to an individual farmer's crop can be catastrophic. It is difficult to attribute a monetary value to this damage because maize is a subsistence crop.

1.10 On Yamdena *C. goffini* is caught only when it raids the crop. Sale of *C. goffini* was valuable in relation to local incomes. The value of this trade to villagers has dropped by approximately 60% since the species was placed on CITES Appendix 1.



Tanimbar transect forest team 1993.

Photo: BirdLife International