African Grey Parrot conservation: a feasibility evaluation of developing a local conservation program in Principe

Åsa Fahlman

Arbetsgruppen för Tropisk Ekologi
Committee of Tropical Ecology
Uppsala University, Sweden

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Äsa Fahlman, DVM
ABSTRACT

The local capabilities and need for developing a conservation program for the African Grey Parrot (*Psittacus erithacus*) were evaluated during a 2 months period in Principe, Central Africa. The island’s parrot population is declining due to intense trapping by locals for the international pet trade. Presently there is no law prohibiting capture and trade of parrots in the country, still parrots become confiscated during trade by authorities. A health survey of parrots on the island was initiated, and a preliminary rehabilitation center was set up for confiscated parrots. If reintroduction of rehabilitated parrots is to be considered, a thorough health assessment of confiscated as well as free-ranging parrots must take place to avoid inadvertent introduction of diseases, and the cause of the parrot population decline (i.e. trapping) must be reduced drastically. There is an urgent need for a law prohibiting parrot trapping and trade in the country, which is not a party of CITES, and to protect the areas where the parrots are nesting. The local awareness of the existing parrot trade is high, but not everybody is aware of that it could lead to depletion of the species. The importance of public education regarding threats to wildlife and the environment cannot be stressed enough. The introduction of biology in schools is very important, as well as informing visiting tourists about the negative impact of the parrot trade. For conservation actions, including ecotourism, to be successful in a long-term perspective it is crucial that the local inhabitants are involved and benefit from it. The need for foreign support in future conservation work for the parrots in Principe is imperative.

*Keywords*: African Grey Parrot, *Psittacus erithacus*, conservation, Principe
INTRODUCTION

One of the worldwide most popular pet birds, the African Grey Parrot (*Psittacus erithacus*), exist in declining populations in Central and West Africa. The African Grey Parrot in Principe was believed to be an endemic subspecies (*P. e. princeps*) (Bannerman 1914, Snow 1950), but since 1953 the subspecific status has not been recognized. Endemic parrot populations are under the same environmental pressures as many other groups of animals: habitat destruction, indiscriminate use of pesticides, and hunting by local inhabitants for either consumption or sale (Hanson 1987). In Principe, trappers heavily harvest the African Grey Parrots for the pet trade and the population has fallen precipitously over the last decade. In 1994 the species was still considered common but the increasing trade was suspected to result in the depletion of the species (Peet and Atkinson 1994). Local inhabitants have declared a noticeable reduction in the number of parrots, which used to be seen in vast flocks on the island (Juste 1996). The size of the remaining population is unknown.

Since 1995 the African Grey Parrot has been listed on CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) Appendix II as a species that may be threatened with extinction unless trade is subject to strict regulation. There is no existing general environmental legislation and no laws prohibiting parrot capture in Principe and the country is not a party to CITES (Peet and Atkinson 1994).

Because of the urgent need for protection of the species, this study was initiated with the objectives to evaluate the local capabilities for conservation actions for the African Grey Parrot in Principe, and to perform a health assessment of free-ranging and captive held parrots. This includes

- characterization of the parrot trade and clarification of specific legal and policy issues surrounding the collection, sale and export of African Grey Parrots, including legal status in the country and law enforcement activities
- perform clinical examination of wild and captive African Grey Parrots and by blood sampling look for serological evidence of infectious diseases and compare if captivity has altered the disease status, and collect information regarding rehabilitation and reintroduction to make decisions of what is suitable to do with confiscated parrots
- evaluate the concerns of local residents, the status of ecotourism being developed and the possibilities for local conservation education efforts.

STUDY AREA AND METHODS

Principe, a volcanic island (17 x 8 km, 1°32’-1°43’ N and 7°20’-7°28’ E) in the Gulf of Guinea, is part of the Democratic Republic of São Tomé and Principe. The vegetation is mainly tropical rainforest, partially cleared, and the temperature is 28-30°C all year round. The islands São Tomé and Principe have never been connected to mainland Africa or to each other and as a result of this isolation both have developed a rich endemic flora and fauna (Peet and Atkinson 1994).

Data was gathered in São Tomé and Principe between February 14 and April 12, 2000.
Interviews with six parrot trappers were carried out to achieve information for characterization of the parrot trade and the trappers’ situation. Eight local inhabitants, varying from plantation workers, school teachers, resort workers to villagers, were interviewed about their opinion of the parrot situation to evaluate the concerns of local residents and the need and possibilities for local conservation education efforts. Meetings with authorities and various organizations were held to investigate the legal status in the country concerning the parrot trade, to identify possible conservation partners and to evaluate the status of developed ecotourism and conservation education efforts.

A health survey of 25 wild-born but captive-held parrots was performed. Fifteen of these parrots were confiscated from trappers by authorities and brought to the Bom Bom Island Resort (tourist facility in Principe), while ten parrots were held in captivity by private persons. The health survey included physical examination, body measuring, weighing and blood sample collection. Blood samples were collected from the right jugular vein in heparinized syringes. After centrifugation, within two hours of blood collection, plasma was frozen and stored for future infectious disease serological tests. Examined parrots were leg banded, unless their legs were too thick for the leg bands available. In order to assess the disease status of the wild population, by blood sampling and examining wild parrot chicks, a two-day trip was carried out to the south of Principe where most parrot nests were located. A local professional tree-climber climbed trees with nests to look for chicks, still not fledged, to examine.

Initially, 12 parrots were confiscated by officials in the harbour in Santo Antonio February 17, 2000. As no other facilities were available, they were initially kept at the ECOFAC*

* ECOFAC is a European Union project aiming at preserving forest ecoregions in Central Africa
office under non-suitable conditions. Six days later a preliminary rehabilitation facility was created at the Bom Bom Island Resort in conjunction with ECOFAC. The age of the parrots varied from chicks, covered with secondary down and emerging pin feathers, to juveniles and wing-clipped adults. The parrots were held in cages and initially fed three times daily. Chicks dependent on parent feeding were fed by hand. Depressed anorectic adults had to be force fed. The available diet consisted of banana, papaya, palm fruit, corn, rice, bread, and occasionally boiled eggs and safu (a local fruit). As a calcium source, the food was sprinkled with crushed cuttle-fish bone. The parrots were weighed daily. Ex-trappers were employed as bird keepers at the preliminary rehabilitation facility.

In the beginning of April another six parrots were confiscated in the harbour and were brought to the Bom Bom Island Resort for health examination and rehabilitation.

RESULTS AND DISCUSSION

The trappers, the parrot trade and the legal status

The oldest trapper had been trapping parrots in Principe since 36 years. None of the trappers interviewed earned their living entirely on trapping. Except for parrots, some trappers also trap or shoot monkeys. Interviewed trappers trap between 10 and 120 parrots each every year. Most trappers work in a team of two to four persons, and in general they knew 10-30 other trappers. One trapper said he knew over 100 persons involved in trapping and said that the younger generation also wants to trap parrots. The actual number of active trappers was difficult to estimate due to varying reports, but trapping parrots is a common activity on the island.

Figure 2. Parrot trappers in Principe
Collection of parrot chicks, by climbing trees with nests, starts in November and ends in March. Adults are trapped from June to August with small lassos arranged in palm trees. The trappers stated that it was important not to trap adults during the breeding season. Depending on when a buyer shows up, the trappers sometimes keep the parrots for up to three months. The parrots are kept together in cages, barrels or boxes, often with domestic fowl in the surroundings. Parrot chicks are mainly fed boiled corn, and some trappers supplement with local fruits and rice. The trappers most commonly sell the parrots to intermediaries, mainly different businessmen from São Tomé visiting Principe. In Principe the price is usually around 70 000 dobras (US$ 1 = 7400 dobras) per chick, and between 50 000 and 70 000 dobras per adult, whereas it is the double amount in São Tomé. Only one of the trappers interviewed occasionally goes to São Tomé to sell parrots. He said it is easy to bring the parrots by plane or boat as the parrots stay quiet if you give them cassaramba (local wine).

A meeting was arranged in Santo Antonio in Principe to gather people involved and concerned about the parrot trade to discuss the issue. Participants were the regional President of Principe and representatives from the National Police, the Port Customs (ENAPORT), the Airport Security (ENASA), the Department of Forestry (Direção de Florestais), ECOFAC, the Wildlife Conservation Society, the Bom Bom Island Resort, and local inhabitants such as parrot trapper, veterinarian, villagers and private land owners. As Juste reported 1996 (Juste 1996), there is still no general environmental legislation existing in the country, and no specific legislation considering the parrot trade. Still trappers accept that employees from the Forestry Department or ECOFAC confiscate parrots. The local air lines (TAP Air Portugal and Air São Tomé e Principe) do not permit air passengers transporting parrots on board. Luggage is checked by airport personnel, still large numbers of parrots are transported out of Principe and São Tomé every year. In Portugal, which is a member of CITES, people who are caught smuggling parrots into the country are fined and the parrots get confiscated and sent to the Lisbon Zoo.

At the meeting in Santo Antonio there was a request from the government in Principe to create a new local law in Principe to protect the parrots. After the meeting a proposition stating prohibition of capture, commerce, and transport of African Grey Parrots in Principe, was written by ECOFAC and an official lawyer. The government in Principe has accepted the proposition, but it still needs to be signed by the regional president before it will be in force.

In southern Principe the remaining area of primary forest, where most high trees with parrot nests are, need immediate protection. Suitable boundaries for a protected area have been designated in the Zona Ecológica plan already back in 1985 (Peet and Atkinson 1994).

**Health survey, rehabilitation and possible reintroduction**

Enforcement of the future law prohibiting trapping, trade and transport of parrots requires confiscation of parrots found in the possession of trappers. If parrots get confiscated it will be necessary to have a suitable facility where they can be housed and guidelines for their rehabilitation and, if deemed possible, reintroduction.
The body condition of the first twelve confiscated parrots was either very thin or emaciated, and they were all in a generally bad condition. Their body weights ranged between 265 and 392 grams upon arrival. Adult African Grey Parrots in captivity generally weigh between 450 and 500 grams, but already around 5 weeks of age their body weight reach around 400 grams. Within eleven days after confiscation seven parrots died, either after a short period of lethargy, inappetens and regurgitation, or with no preceding symptoms of disease. The second set of confiscated parrots weighed between 212 and 360 grams initially. Three of these parrots were adults in good body condition while the other three were emaciated chicks.

Infectious disease serological tests and plasma chemistries and enzymes has not yet been performed due to a lack of available serological tests in Sweden and therefore the need of re-exporting the samples.

A health survey of wild parrots could not be initiated as all nests visited during the trip to the south were empty. Either the parrot chicks were already full-fledged and had left the nests, or the nests had been plundered by trappers. Signs of trappers, such as poles leaning against tree trunks, were seen.

The aim was to employ local people from Principe as bird keepers, and preferably ex-trappers to enable them alternative incomes to trapping parrots. As supervision of initial parrot staff proved necessary daily during every feeding occasion, to ensure it took place at all, the set-up was unsatisfactorily. When caring for young parrot chicks, completely dependent on humans to survive by frequent feeding, it is important with responsible trustworthy staff. If young
parrot chicks do not get fed regularly they easily lose condition, and quickly die. It is of major importance that an animal keeper has a well-developed sense of responsibility taking.

Reintroduction, in the broad sense of deliberate releases of birds from captivity into the wild, should serve a direct benefit to conservation of wild species. Releases should not be undertaken solely for the purpose of disposing of confiscated birds. Before reintroduction is performed detailed studies should be made of the status and biology of the wild population to determine the species critical needs, such as habitat preferences, social behaviour, group composition, home range size, shelter and food requirements, foraging and feeding behaviour, predators and diseases (Anonymous 1992). The addition of individuals to the existing population of African Grey Parrots in Principe can increase the overall security of the species, but it can also pose a severe risk to the wild population by inadvertent introduction of diseases (Woodford and Kock 1991). The importance of veterinary involvement and monitoring diseases in confiscated parrots cannot be underestimated because the risks of disease transmission may outweigh the conservation benefits of reintroduction (Sanz and Grajal 1998). Baseline health data should be established for wild-caught confiscated parrots and the wild parrot population to determine if removal from the wild has altered the disease status (Woodford and Kock 1991). In general, when wild-caught parrots are held by trappers in local villages they are often exposed to domestic fowl and pigeons, which can carry and spread diseases like Chlamydia or Newcastle disease to the parrots (Woodford 1993, Woodford and Kock 1991). The disease status of domestic and free-living birds in Principe is yet not known. If reintroduction of confiscated rehabilitated parrots is to be considered, it is important to prevent introduction of novel pathogens to the wild population by thorough health assessment, pre-release disease screening and adequate quarantine of each individual (Woodford 1993). Parrots confiscated in Portugal should not be brought back to São Tomé and Principe, and they are not candidates suitable for release, as they during the international trade could have been exposed to diseases not existing in the country of their origin.

Reintroduction should not take place as long as the initial causes for the population decline still exist at a significant level (Sanz and Grajal 1998). As interviewed trappers demonstrated, trapping parrots is a common still on-going activity in Principe, involving a lot of local people. Also, if reintroduction shall take place, the release site for rehabilitated parrots should have assured, long-term protection. There is an urgent need to ensure adequate protection of areas where parrots nest in Principe, as no such protection exist today. Reintroductions are generally long-term projects that require the commitment of long-term financial and political support (Karesh 1993, Anonymous 1992). Resources should exist for post-release monitoring to evaluate the success of the reintroduced parrots (Karesh 1993, Association for Parrot Conservation, 1994). Releasing animals into the wild in sub-optimal situations contradicts true welfare concerns for them and the wild population. Parrots non-suitable for release, due to injuries or insecure health status, could be kept in large aviaries at a rehabilitation center, well separated from parrots undergoing rehabilitation for introduction. Non-releaseable birds in aviaries could be viewed by tourists and locals for educational purposes.
**Concerns of local residents**

The common opinion of local inhabitants in Principe was appreciation of the island’s parrots. People enjoy seeing parrots and hearing their sounds. “The parrot is the symbol of Principe, as you can see on the coins. We must protect them”, was a common opinion. One farmer said the parrots are causing problems as they eat his crop. To scare the parrots he put out red flags and scarecrows, but he knew of people who shoot parrots at their farms.

Most locals had noticed a considerable decrease in the number of parrots, from groups of hundreds some years ago to groupings of less than ten today. When locals were asked if they thought the parrots are threatened everyone said: “Yes, because of the trapping”. However, one person still thought the parrots would never become extinct. Suggestions of how to protect the parrots were many: “Stop the trapping by creating a law that prohibits it and have forest guards patrolling the areas with parrots. Protect these areas as nature reserves. Find alternative jobs to the trappers. Explain to everyone why the parrot is so important to the country and its people. If people know why it is important to protect the parrots, then they can understand, now they do not know why. Teach kids about the parrots. Educate tourists both here and in their countries, where the trapped parrots are being sold”.

A local awareness of the declining parrot population and of the importance of protecting the species and educating people was obvious during interviews with most locals. This is important and promising for future conservation work on the island.

**Local conservation education efforts and ecotourism**

The school system in São Tomé and Principe ends at high school’s 11th grade (age seventeen), and there is no University in the country. In Principe the pupils can study until 9th grade. No biology teaching or environmental education is scheduled in the schools. Interviewed teachers were interested in introducing biology to the schedule but lack training and resources.

A Portuguese language teacher had his students reading texts about threatened wildlife during his lectures. An NGO is currently translating a school book about the rain forest and its future to Portuguese to be distributed to local schools. To increase the public awareness about the threats to local wildlife an art teacher suggested that the students during art lessons could paint a wall painting in Santo Antonio with parrots and other animals.

Public education regarding threats to the parrots were initiated during this study through an information poster campaign, aimed at locals as well as tourists. Posters written in Portuguese and English were put at public places, such as the airport, the harbour, the cultural center, the market, schools and restaurants, and people showed interest in viewing the posters.
The tourism industry in Principe is sparsely developed but the island has tremendous possibilities with pristine wilderness areas and deserted beaches. Unemployment is very high and work opportunities are few. Increased tourism could provide more work opportunities for the locals, but it would also lead to increased pressure on the environment. Eco-friendly tourism is imperative. For ecotourism to be an effective conservation tool it is important that the income remain in the region. Only if the local inhabitants benefit from it, they will see ecotourism as a development alternative and fully understand the value of nature conservation. Members of local communities involved in ecotourism tend to safeguard their economic futures by not exploiting their surroundings (Munn 1998). As economic alternatives to trapping, trappers with good knowledge of the parrot’s natural history and habitat could be guiding ecotourists and, if protected areas are established, work as forest guards. During the study time, the Bom Bom Island Resort was the only tourist resort in Principe, with no present ecotourism activities but a wish to develop it. ECOFAC employed an ex-trapper as full time forest guard, and another ex-trapper hourly for guiding.

Increased tourism might encourage the parrot trade, and it is important with responsible behaviour from developers and travel operators (Peet and Atkinson 1994). The author was more than once during the stay in Principe asked by visiting tourists about the possibilities to buy parrots. Also locals asked for parrots to have as pets. Persons educated about the consequences of trapping and the parrot trade are less likely to get involved in such activities (Sleeman et al 2000). A rehabilitation center for confiscated parrots partly open to visitors can change human attitudes by educating the public. The importance of public education about threats to wildlife and the environment cannot be stressed enough. The lack of resources and trained teachers in São Tomé and Principe is prominent, and foreign input is necessary to provide support and training for education concerning environmental protection.
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References


