The impact of capture and trade in African grey parrot populations (*Psittacus erithacus*) in Lobeke National Park, south east Cameroon

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ABSTRACT

Although recognised as the third most commonly traded wild bird species, African grey parrots account for 50% of the total bird species exported from Cameroon. More than two thirds of the birds caught within the national territory are from Lobeke and surrounding forest region. Each year, more than 15,000 birds are captured from this area for export trade. Most parrot populations in the region inhabit forest clearings in which they feed and nest in trees. Results of this study indicated an average of 630 grey parrots harvested monthly from Lobeke. Most of the birds harvested were adults, with 832 birds caught between February and April 2002. Meanwhile, 223 juveniles were caught during the same period, giving an average of 74 juveniles caught per month. Parrot capture and trade pose a serious problem in Lobeke and thus the need to develop appropriate management strategies to curb current unsustainable trends of harvesting. Success of designed strategies would depend on strong commitment of protected area management authorities to enforce existing regulations on capture and trade.

Key words: Grey parrot, Population, Forest , Forest Clearing, Trapping, Capture, Species, Wild bird, Harvest, Trade, Export

RESUME

Bien que reconnus comme la troisième espèce d'oiseaux sauvages les plus communément commecialisés, les perroquets gris à queue rouge représentent 50% de l'ensemble des espèces d'oiseaux exportées depuis le Cameroon. Plus des deux-tiers d'oiseaux capturés au sein du territoire national provinnent de Lobeke et de la région forestière environnante. Chaque année, plus de 15,000 oiseaux sont capturés dans cette région à des fins d'exportation. La plupart des populations de perroquets gris à queue rouge de la région habitent les clairières forestière où elles se nourissent et se nichent dans les arbres. Les résultats de la présente étude ont montré qu'une moyenne de 630 perroquets gris à queue rouge sont capturés à Lobeke par mois. La plupart des oiseaux capturés étaient des adultes, les captures s'élevant à 832 entre Février et Avril 2002. Parallèlement, 223 jeunes ont été capturés au cours de la même période, ce qui donne une moyenne de 74 captures par mois. La capture et la commercialisation des perroquets gris à queue rouge constituent un sérieux problème pour la région forestière de Lobeke. D'où la nécessité de mettre au point des stratégies de gestion appropriées aux fins de maîtriser les méthodes de capture en cours qui ne sont pas viables. Le succès des stratégies conçues dépendra de l'engagement ferme des autorités en charge de la gestion des aires protégées quant à l'application de la réglementation en vigueur en matière de capture et de commercialisation.

Mots clés: Perroquet gris à queue rouge, Population, Forêt, Clairière forestière, Piégeage, Capture, Espèce, Oiseaux sauvage, Recolte, Commerce, Export.

INTRODUCTION

The forest region of Lobeke in the south east corner of Cameroon has been of great focus over the past decade, both at national and international levels owing to its rich natural resources. The outstanding conservation importance of Lobeke is due to its multitude abundance of mega fauna, avifauna and the rich variety of various commercial tree species. Its conservation potentials are bound, coupled with the numerous threats, basically due to increased demand in resource exploitation by both local communities in the region and external major forces as logging and sport hunting companies.

The area harbours an unusually high density of forest mammals, particularly amongst so called "charismatic mega fauna" such as elephants (*Loxodonta africana cyclotis*), gorillas (*Gorilla gorilla gorilla),* chimpanzee (*Pan troglodytes*), bongo (*Boocercus euryceros*), and forest buffaloes (*Synceros caffer nanus*). Wildlife Conservation Society, 1996.

The avifauna of the region is very rich, comprising of more than 283 bird species that include 3 species (*Ageslates niger, Apaloderma equatorial* and *Criniger olivaceus*) of restricted distribution and in the IUCN red data book. The forest clearings of the area attract a lot of African grey parrots (*Psittacus erithacus*) and green pigeons (*Treron australis*), the two most highly captured and commercialised bird species in the central African region.

Majority of the grey parrot population in Lobeke inhabits forest clearings where they feed on various plant species, soils rich in mineral salts and nest in trees with height 10-30m (Dandliker, 1992; Forshaw, 1989). Most of the birds caught and destined for parrot trade in Europe, America and to some extent South Africa and Asia account for 50% of the total birds exported from Cameroon (World Conservation Monitoring Centre, 1997), with a total of 80% from the Lobeke forest only (Wildlife Conservation Society, 1996). Two forest clearings in Lobeke, Bolou and Djangui "bais" as called by Baka pygmies, harbour significant populations of grey parrots. More than 15,000 birds are taken out from these two clearings and its surroundings each year, with half dying on their way due to poor handling (Wildlife Conservation Society, 1996).

JUSTIFICATION

Given the complex nature of this trade, the unsustainable harvest of these birds prompted biological studies to gain more knowledge on the impact of capture on species population in the wild. The study also, seeks to ensure successful base line data on the capture and trade in African grey parrots, which may later be used to set quotas on this third most important species of Psittacid in Cameroon.

The African grey parrots are not yet in the threatened list of Psittacid, but the excessive exploitation, illegal trade and the hunt for red plumes in this part of the country, makes it a significant factor affecting survival in the near future, given that, no concrete biological data exist on this specimen.

OBJECTIVES

- Collect baseline data on grey parrot harvesting in and around the Lobeke forest.
- Evaluate quantities of birds harvested in the region and more importantly the two clearings of the Lobeke national park.
- Carry out surveys to determine local trading networks for the parrot trade.
- Develop a strategy to preserve grey parrot population in protected areas.
- Carry out future studies to analysed the implications of trapping on species social and reproductive ecology.

MATERIALS AND METHODS

Data was collected using interviews on the spot, in-forest observations and also by review of existing literature from project documents. Interviews took the form of informal and formal discussions with questions focusing on capture, capture trend and major sites. Interviews were conducted with trappers of all categories and indigents who act as porters or guides.

In-forest observations were done in two forest clearings using observational towers (miradors) to monitor activities of trappers between February and April 2002. Monitoring was carried out twice a month for at least 14 days despite late start of study in October 2001. Monitoring was also done through regular patrols (from 6:00am to 11:00am) in the forest, during in-forest activities and data recorded on sample sheets. Routine patrols by game guards were usually done on the first and third week of every month. Data collected

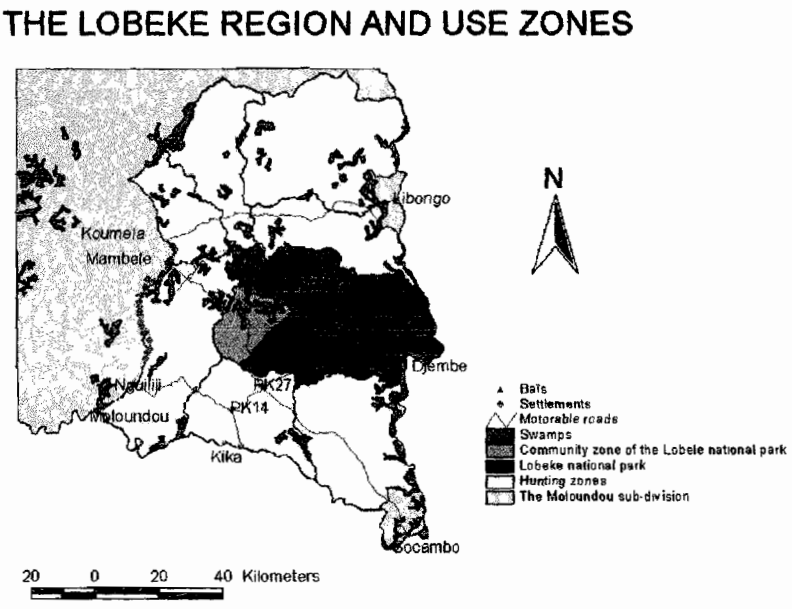

Figure 1: Map of Lobeke and used zones

Lobeke is a dense semi-deciduous forest, characterised by a patchwork of high forest, secondary forest and low-lying swamp interwoven with a mosaic of Maranthaceae forest, mono-dominant stands and forest clearings. The vegetation is described in detailed by Gartlan (1989) and can be summarised as being swamp/transitional-closed forest, part of the evergreen Cameroon-Congolese forest types. Whilst much of the habitat is natural, logging over the past 30 years has led to vast opening of forest canopy in several areas. This patchwork of the forest types promotes a high diversity and an abundance of certain large mammals such as elephant in the region. Preliminary surveys of birds and herperto fauna in Lobeke suggest that the area may be an important refuge for rare species (Smith et al, 1994; Lawson, 1994).

The area is characterised by a low human population density of less than 1 person per Km², clustered within the semi-deciduous evergreen and swamp forest types covering the region (Letouzey, 1985; CTFT, 1985). The forest of the region, while not as floristically diverse as evergreen, still represents a high diversity of plant communities minimally disturbed by human activities (Hall, 1993).

RESULTS

Interviews

Results from interviews indicate that Lobeke given its rich fauna and avifauna attracts many non-indigents who are involved in poaching and other illegal exploitation as parrot capture and trade. Most of these people live in small logging towns in the area as Kika and Moloundou that also represent trading centres notably for bush meat.

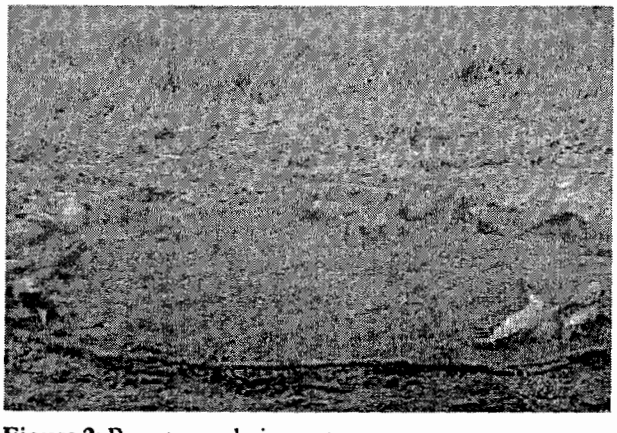

Figure 2: Parrots caught in a net

Figure 3: Trapper with parrot case coming out from a forest clearing

Capture trend

Trappers spent at least 8 days per month for trapping except during the wet season when they stayed for much longer periods, given difficult field conditions. They used local materials such as, shaped vine frame ('C' shaped cane), broomsticks, raffia branches and liquid forest gum to do trapping. Meanwhile, other materials like nets and nylon twine threads are bought from the local market.

Figure 2 is an example of a trap made out of a net, with shaped vine frame on one side. The trapper, after positioning himself 5-6m away from the net, pulls a cord attached to the edge of the net, so that it flips over the birds as seen in figure 2.

Adult parrots are undoubtedly victims of most harvest and currently being captured in an unsustainable manner in the Lobeke region. Preliminary results indicate an average of 630 birds caught per month with 80% being adults.

Figure 4 below provides monthly harvest trends for the 3 months that data was systematically collected for parrot trapping activities in forest clearings. The month of April represented the peak period of capture, almost doubling the amount of birds captured in the previous two months. A total of 832 birds were captured between February and April, giving a monthly mean of 277adults.

Figure 5 provides a comparison by age group of birds captured during the 3 months period. Some 223 juveniles were caught with similar monthly averages.

Routine patrols

Activities of game guards in the Lobeke region were necessary because of intense bird trapping, elephant poaching and bush meat trade. During the three months of routine patrols, 34 trappers were arrested with one female trapper in the group. Within the same period, a total of 291 grey parrots and 339 green pigeons were ceased from these trappers. Some of the birds ceased were freed back into the wild, while those with destroyed feathers killed or abandoned in the forest.

DISCUSSION

The numbers of African grey parrots taken out by a relatively small group of trappers (12,000 to 15,000 in 1996) and the vast wastage involved, almost 80%, makes the take-off far from being sustainable. The CITES conference in Zimbabwe of June 1997 removed all legal trade in parrot in Cameroon, in an attempt to stem the unremitting flow of birds from the forest. The response was surprisingly rapid in Lobeke, despite the long distance from the national markets of Yaounde and Douala. By August 1997, trappers in Bolou in the southern part of Lobeke had already modified their activities such that birds are now killed on site and the red tail feathers removed for sale (Davenport & Usongo, personal communication). The consequence of this is that even more grey parrots are being killed in the forest.

The capture trend was estimated on an average of 630 grey parrots harvested per month by trappers in and around the Lobeke national park, with a mean of 357 grey parrots harvested in the park. Figure 4 shows, the month of March had the lowest harvest and April the

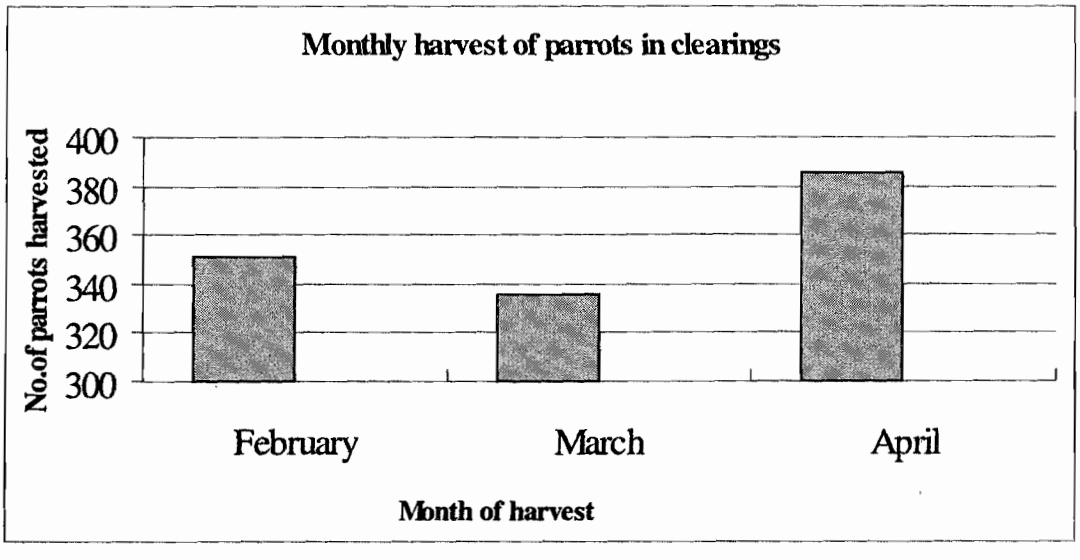

Figure 4: Harvest of parrots at Bolou and Djangui clearings (2002).

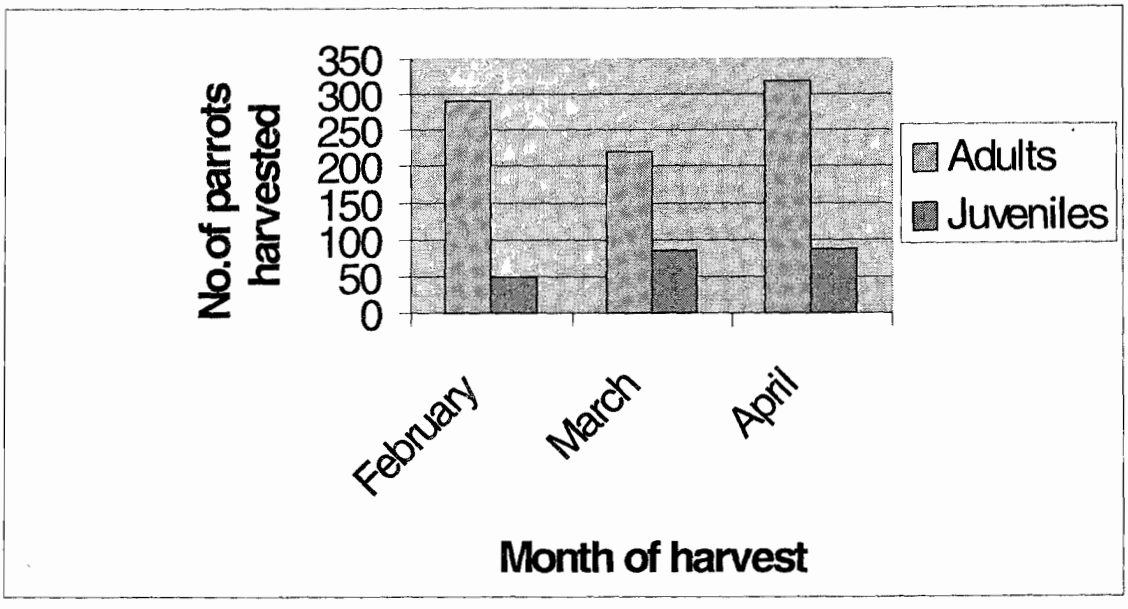

Figure 5: Monthly harvest of parrots within the Lobeke national park (2002).

highest in 2002. This was due to pressure put in by game guards in the month of March following activities of trappers in February. Meanwhile during the month of April, patrols could not be intensified because of limited numbers of game guards as against activities on site. On the other hand, the capture of juvenile parrots should be encouraged to avoid any impact on the reproductive circle, while maintaining birds population in the wild. This is because most adult parrots represent the reproductive generation of this species; thus unsustainable exploitation of this generation would undoubtedly create a vacuum in the bird's population. In a report by Beissinger, S.R. & Bucher, E. H. (1991), it was observed that in parrots, nesting are preferred to adults for harvesting because they make better pets, their harvest has a relatively low impact on wild populations, and they can be harvested in greater numbers.

Potentially, this can be accomplished by locating, managing and adding other nest sites (in form of boxes), introducing food supply, protecting nest from predators or multiplying clutching of wild pairs etc (Munn, 1994). This, unfortunately, will take years and the habitat conditions do not permit comprehensive nest harvest. Consequently, there is need to verify evidences of stable populations and increase in productivity resulting from management programs. This increase (population) can be harvested while waiting to get concrete results from nesting population.

The impact caused by trappers affects the natural behaviour and physiology of wild animals and also negatively impact parrot populations given the intensity of their activities in the clearings.

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