

Kakum National Park, Ghana.

Field Trip Report for March-April 1993.

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A reconnaissance trip was made to the Kakum National Park, Ghana with the objective of developing a working plan for a more detailed survey to assess the status of and threats to non-human primates living there, as well as to provide recommendations for conservation training and management. This reconnaissance was conducted under contract to Conservation International in conjunction with CEDECOM and MUCIA.

Methods:

Although relatively little time was spent in the field (diurnal: Struhsaker: 14 hours in 4 days; Struhsaker + Oates: 21 hours in 5 days; Oates: 13 hours in 4 days), an attempt was made to visit as many different areas of the park (plus the adjacent Assin Attandaso Game Production Reserve and Pra Suhien Forest Reserve) as was possible. Ten different sites were visited, but in most cases our surveys were all within 3-4 kms of the park boundary. An appreciable amount of time was spent in making arrangements, traveling and discussion. During our walks in the forest we attempted to move slowly and as quietly as possible. Often, however, there were 3 and sometimes as many as 7 people walking together and this relatively large number of people may have interfered with our ability to detect primates.

Results:

Our impressions were that monkeys in Kakum were very shy and relatively uncommon. Only 3 species were regularly encountered: Campbell's guenon (Cercopithecus campbelli), spot-nosed guenon (C. petaurista), and olive colobus (Procolobus verus). Numerous trackers and other biologists reported that the black-and-white colobus (Colobus vellerosus) is present in Kakum, but we neither heard nor saw it. There were also infrequent reports of the rolway monkey (Cercopithecus diana rolway), but it would appear to be extremely rare if not extinct in Kakum. There were no reports of red colobus (Procolobus badius waldroni), the mangabey (Cercocebus atys lunulatus), or chimpanzees, which occur in western Ghana.

Encounter rates with associations of monkeys were among the lowest recorded for African rain forests (seventeen associations or one per 3.0 daylight hours of search). This low rate of encounters may have been due to at least 3 factors: low population densities; shyness of monkeys; and sometimes to the presence of too many observers. We were impressed with how infrequently monkeys were heard vocalizing. Male loud calls were unusually rare and even when we were able to stalk close to the monkeys before they detected us, they rarely gave contact calls to one another. Upon detecting us the monkeys gave only a few alarm calls and then remained silent as they fled quickly and quietly away from us. Occasionally they fled into dense liana

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0.33/hr

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thickets overhead and "hid". Based on past experience, it would appear that these monkeys had been recently exposed to heavy hunting pressure. This was supported by reports from some of our trackers.

In contrast to the rather discouraging status of monkeys, nocturnal primates seem to be maintaining healthy populations in Kakum. On one 2-hour night walk along the 1.5 km Kuntan trail, we saw 2 pottos (Perodicticus potto) and 4 dwarf bushbabies (Galago demidoff); on a second, shorter 1-hour walk we saw 1 potto. This is a relatively high rate of encounter and in addition many more bushbabies were heard. We also heard several tree hyrax and once heard the rare Nkulengu rail.

Duikers were also uncommon (8 in 49 daylight hours or one per 6.1 hours). The majority of duikers flushed were not clearly seen, but most sounded like small duikers and were probably Maxwell's (Cephalophus maxwelli). One Maxwell's was clearly seen during the 2-hour night walk.

In spite of the apparently low monkey and duiker densities, we found relatively little direct evidence of recent hunting. Only one gunshot was heard (at Gyaware) and only one shotgun cartridge was found (in Pra Suhien); two piles of carbide ash were seen. Discussions with trackers and others with experience in Kakum suggest that this apparent low level of hunting may be due to several factors. Firstly, hunters may be removing spent cartridges and secondly, with recent increased patrolling by the park

guards, the hunters may have shifted their activities further into the reserve and away from the boundaries where most of our walks were made. Thus, the apparent low densities and extreme shyness of monkeys and duikers may be due to heavy hunting pressure in the recent past.

In addition to hunting, monkey and duiker densities may have been adversely affected by the extremely heavy logging which has occurred over much of Kakum. Although logging records were not available to us, many areas that we visited had been logged as intensively as possible short of clear cutting. Studies elsewhere in Africa have clearly shown that such heavy logging reduces densities of most monkey and duiker species.

Of relevance to the impact of logging it was observed that in those areas of Kakum that had been most heavily logged there was an extensive invasion of a weed called Acheampong (Chromolaena odorata or Eupatorium; Compositae). This species is said to be exotic and it forms a dense semi-woody tangle that appears to suppress all other vegetation and will likely prevent forest regeneration where it occurs.

A list of noteworthy medium to large mammal and bird species seen in the course of our survey is given in the appendix. Elephants were widespread, but nowhere common. Bongo were heard and their tracks and dung seen in only one area about 1-2 kms southeast of Antwikwaa. Tortoises (Kinixys spp.) seemed to be unusually common.

General observation:

Two general points should be made.

Firstly, despite the extensive and extreme damage from logging, Kakum appears to be of considerable botanical interest, particularly with its diversity of canopy tree species.

Secondly, even with more effective management, Kakum cannot be regarded as a key site for primate conservation because it does not contain a full complement of Upper Guinean forest species. Furthermore, primates should not be emphasized as a major tourist attraction because the vegetation is so dense as to make them difficult to observe even if they should become better habituated to humans.

Problems:

A number of problems were noted of relevance to the biological survey work as well as to the general management of the park. These include:

1) Transportation: We experienced serious delays in our survey due to unreliable transportation. This was alleviated part way through the survey when another vehicle was kindly sent on short-term loan by the Department of Game and Wildlife headquarters in Accra.

2) Research Station: There is no suitable base for researchers adjacent to the park. We had to travel from Cape Coast before beginning a survey walk.

3) Forest Access: There were few well-established paths leading into the interior of the park. This made access to the center of the park slow and difficult.

4) Morale and Effectiveness of Park Staff: The park staff, particularly the patrol force, were largely unsupervised and lacked direction. Guards were rarely on patrol and senior staff often seemed uncertain of their duties. This relative lack of leadership had a pronounced demoralizing effect on all park personnel.

5) Inappropriate Planning: Current plans and priorities often appeared to be based on insufficient information and/or perspective, e.g. location of new major road, siting of research station and advisor's residence.

6) Unsustainability of Project in Long-term: The project as it is presently being operated depends very largely on foreign aid. Among other things, these funds cover vehicles, fuel, and relatively high levels of field allowance for park staff. We are concerned that even the present level of management will not be sustained when this foreign financial assistance is no longer available, as is likely the case within the next 3-5 years. Once the staff become accustomed to a certain standard of living and professional support, they are very likely to become even more demoralized when the funds and support are substantially reduced. What plans are being made now to ensure the sustainability of the project in the long-term future?

Recommendations:

Biological Survey

Our objectives for the second phase of our survey to be carried out in August and November 1993 are to:

i) conduct a more detailed study of the central areas of the park because our surveys have so far concentrated largely on the park periphery.

ii) survey other forests in southwest Ghana to broaden our understanding of the conservation status of forest primates in Ghana, particularly the highly endangered subspecies Procolobus badius waldroni, Cercopithecus diana roloway, and Cercocebus atys lunulatus.

iii) contribute to a management plan for Kakum, including assistance in the design of a nature trail, interpretive center, research priorities, research station, and training program.

In order to be most effective in this second phase we will require the following:

i) our own vehicle and a sufficient fuel advance.

ii) a cross-park trail with a simple km² grid and camp situated near the middle of the park near an adequate source of water.

iii) accurate map of park.

iv) one or two Ghanaian counterparts.

In addition, the following would be very helpful:

i) Forest Department records (working plan, stock mapping, and offtake).

ii) recent aerial photos.

iii) require the current patrol force (park guards) to begin collecting information immediately on sightings of larger mammals (including monkeys), giving date, time, location and any other details. These records should be compiled and collated monthly by one of the senior staff. This information may provide useful leads on some of the rarer species.

Park Planning and Management

1) Park guards should be given improved accommodation outside of and away from villages.

2) Enforcement must be better organized.

3) There is a need for a research station that is carefully located based on knowledge of the park's ecology and research priorities. It must be carefully designed to minimize the problems of researchers as based on the experience of research stations elsewhere. Features should include: separate units for maximum quiet and privacy, excellent ventilation with large windows, clean water source and hygienic latrines, numerous shade trees, and must be well constructed especially the roofing (not asbestos) and rain gutters.

4) Tourism:

a) a guide book to Kuntan nature trail that focuses on forest ecology

b) assign 2 patrol staff to follow and attempt to habituate monkeys on Kuntan trail every day for 8 hours per day (they should follow, but not chase the monkeys and when the monkeys hide nearby they should simply sit near them)

c) establish a trial observation tower (steel girders) on logging road (preferably ridgetop for maximum visibility) and place salt blocks along road within view; some clearing of brush along logging road may be necessary

5) Role of Senior Park Staff:

Their responsibilities should be clearly defined within the framework of a broader plan. For example, one might be assigned the task of overseeing antipoaching, another might deal with tourism and environmental education, and another with research and surveys.

6) Paramount Chiefs and Park Protection

It was brought to our attention that Paramount Chiefs administering the areas adjacent to the park are in a unique position to assist with law enforcement, environmental education, and ecotourism. We recommend that this possibility be explored immediately as top priority.

7) Forest Regeneration and Exotic Weeds

Attention should be given to developing a management plan that addresses the problem of controlling the exotic and invasive weed called Acheampong (Eupatorium). Selective weeding coordinated with broadcast seeding of fast growing colonizing trees, like Musanga, might be one possibility.

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The possible role of elephants in inhibiting forest regeneration will also require some attention.

8) Bee Keeping on Park Edge

One of several benefits to the surrounding communities of Kakum Park is the potential for further developing bee keeping outside, but near the park boundary. Hives could be developed from reeds and banana fiber (rapidly renewable resources). Some instruction may be necessary to expand bee keeping and this is an activity in which an organization like CARE or the Peace Corps might become involved.

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Appendix I

List of Sites Visited

Antwikwaa

Logging road

2 other trails

Kuntan nature trail

Brisco I

Brisco II (= Mesomago)

Jyaware (Gyaware)

Aboabo (Assin Attandaso Game Production Reserve)

Afioso

Obengkrom

Pra Suhien Forest Reserve (logging road adjacent to Kakum)

Appendix II

| <u>Daylight Primate Encounters</u> | <u>seen</u> | <u>heard only</u> |
|------------------------------------|-------------|-------------------|
| Procolobus verus | | 1 |
| Cercopithecus campbelli | 2 | 8 |
| Cercopithecus petaurista | 6 | |
| C.p.+C.c.+P.v.? | | 1 |
| C.c.+P.v. | 1+C.c. | P.v |
| C.c.+C.p. | | 1 |
| ? | ② | 1 |

Other notable mammals detected

Manis tetradactyla

Crossarchus obscurus

Dendrohyrax dorsalis

Protoxerus stangeri

Heliosciurus rufobrachium (et al.?)

Funisciurus pyrrhopus

Potamochoerus porcus (tracks)

Boocercus euryceros (Bongo)

Elephants

Notable birds detected

Crowned hawk eagle

Great blue turaco

Verreaux's turaco (Tauraco macrorhynchus)

Ceratogymnus hornbills

Bycanistes fistulator

Tropicranus albocristatus

Nkulengu Rail (Himantornis haematopus)