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Chapter 10

Rapid Assessment of Large Mammals in the Ajenjua Bepo and Mamang River Forest Reserves in the Abirem North District, Eastern Region, Ghana

Oscar I. Aalangdong

SUMMARY

An inventory was conducted in the Ajenjua Bepo and Mamang River forest reserves to determine the species richness of large mammals within the reserves. Line transects were used to survey large mammals within the two reserves and interviews were conducted in nearby villages. A total of 16 mammal species were directly observed, all 16 being present in Mamang River and 10 in Ajenjua Bepo. Of these, three species are considered to be Near Threatened on the IUCN Red List (July 2008): Maxwell's Duiker *Cephalophus maxwelli*, Black Duiker *C. niger* and Pel's Anomalure *Anomalurus pelii*. Interviews suggested the possible presence in Mamang River of an additional seven species, including three more species of conservation concern: Olive Colobus *Procolobus verus*, Black and white Colobus *Colobus polykomos* and Royal Antelope *Neotragus pygmaeus*, all considered Near Threatened. Forest canopies of both reserves are open and habitat has been degraded through farming and hunting activities. Many footpaths were noted in both reserves. Hunting, indiscriminate of national wildlife laws and regulations, is a considerable threat to the remaining species of large mammals within these reserves. Suggestions are made for improvement of biodiversity conservation in the reserves including alternative livelihoods.

INTRODUCTION

Biodiversity conservation in Ghana is in a critical state as a result of severe hunting pressure, accelerating timber extraction and escalating population pressure which have led to encroachment of primary forests, reducing them to small refuges in which the biota struggles to survive (Grubb et al. 1998). As a result of these pressures, forests are opened up to agriculture, further restricting the survival of many large mammal species. Many areas in the country have lost their endemic wildlife species as development activities have encroached on the land depriving many large mammals of necessary habitat (Parren and de Graaf 1995). Southern Ghana is exploited for both timber and minerals, often with no consideration for biodiversity conservation. Local communities derive many benefits from the forest for their livelihood as in other parts of West Africa (Sunderland and Ndoye 2004). In Ghana, however, there are few records that show the loss of wildlife species in the country. The purpose of this Rapid Assessment Program (RAP) survey, conducted by Conservation International in the Abirem North District in the Eastern Region, was to undertake an inventory of a number of taxa, including large mammals, in the Ajenjua Bepo and the Mamang River forest reserves.

METHODS

For details on survey sites, see Gazetteer.

Transects were walked daily from base camp to sections of the reserves to determine the presence of large mammal species. Mammal species were recording using both direct observa-

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tion of species and indirect observation through identification of footprints and tracks, dung/pellets, feed and feeding sites, and calls of animals to determine their presence. Species identification was based on Kingdon (1997). Old shotgun shells and wire snares used for hunting were also collected. Calls of nocturnal animals were identified during the night in both reserves. One hunter from the Ajenjua Bepo area and three hunters from the Mamang River area were interviewed, as was the large mammal survey guide. The number of old shotgun shells and wire snares was used to assess local hunting pressure within the two forest reserves.

RESULTS AND DISCUSSION

Ten and sixteen large mammal species were identified from Ajenjua Bepo and Mamang River, respectively (Appendix 9). The difference in the number of large mammal species sighted in Ajenjua Bepo and Mamang River is most likely due to the sizes of the reserves. Ajenjua Bepo is a smaller and more disturbed forest than Mamang River. There was no evidence of monkeys in Ajenjua Bepo, due to both its small size and the much higher intensity of hunting and human activities in the area. While Mamang River is larger and has more large mammal species than Ajenjua Bepo, there are numerous footpaths and wire snares in the reserve suggesting intense hunting and human activities. Fewer antelopes were found in Ajenjua Bepo compared to Mamang River. The presence of black duiker and red river hog in Mamang River is probably due to the large habitat of the forest, since habitat fragmentation is one major reason for the decline of large mammal species in the forest zone.

During interviews, hunters reported the presence of 23 species of large mammals in Mamang River (Appendix 9). The reported list is similar to the list of species recorded during the survey in Mamang River (interviews indicated the possible presence of seven species not recorded during our survey). However, both the recorded list and the list resulting from interviews differs greatly from the list given by Grubb et al. (1998) which listed about 40 species of large mammals found in the area. Many large mammal species have been exploited locally and are likely to have been driven to local extinction during the past century (Lee et al. 1988, Wilson 1994). The IUCN Red Data book lists many animals found in Ghana that are threatened, endangered or extinct (IUCN 1990). Indiscriminate hunting and clearing of forest for agricultural purposes have both played major roles in causing the decline and extinction of wildlife species in the area.

There are clear signs of indiscriminate hunting in both reserves. The old shotgun shells and wire snares found in the reserves testify to this. People hunt without game licenses, and many are not aware of the closed season on hunting as stipulated in national wildlife regulations. However, there was no sign of bushmeat trade in the communities around the reserves. The interviewed hunters said that they do not sell bushmeat but use it for home consumption. The scarcity of animal protein in many Ghanaian villages is very real, leading to a high demand for bushmeat in Ghana (Asibey 1974, 1976; Ntiamoah-Badu 1998), as in many countries in West Africa (Jeffrey 1977, Ajayi 1979, Martin 1983, Falconner and Koppell 1990, Bakarr et al. 2001).

Local communities have easy access to both reserves. In Mamang River, the logging operations of about 10 years ago, through the creation of numerous associated paths/routes in the reserve, have opened the area to activities such as hunting and farming. There are farms within the northern sector of the forest reserve boundaries. Such activities are all major causes of degradation within the forest and loss of biodiversity. In Ajenjua Bepo, farming activities have encroached within the forest reserve boundaries. This has resulted in a loss of large mammal species. Ajenjua Bepo is undergoing reforestation but similar past attempts have not shown much success within Ghana.

Interesting species or genera

Many mammal species were not observed, likely as a result of hunting and forest degradation. The Gambian sun squirrel and the potto are not very common in Ghana. It is important to conduct an inventory of these species in the forest reserves and other vegetation types in Ghana. The black duiker seems threatened in Ghana as hunting and habitat destruction are prevalent throughout its range. The black duiker is not adaptive to habitat changes like maxwell's duiker and will decline in such disturbed habitats.

CONSERVATION RECOMMENDATIONS

Ajenjua Bepo Forest Reserve

All efforts should be made to replant the portion of the Ajenjua Bepo reserve that has been farmed, with regular patrols to monitor hunting activities in the reserve. The reserve should be enlarged and logging activities should be stopped in order for the reserve to be ecologically viable for mammal species. Alternative sources of livelihood should be developed, in collaboration with the Forest Service Division (FSD), to assist local communities in obtaining animal protein. Grasscutter farming and snail rearing could be introduced into the communities as alternative sources of livelihood that provide necessary protein, and beekeeping could be encouraged as well. If mining activities proceed in the reserve, an environmental impact assessment should be conducted to identify the biodiversity conservation problems of the area and also to determine the development needs of local people.

Mamang River Forest Reserve

Agricultural activities occurring within the reserve boundaries in in the northern sector of the reserve should be stopped and the reserve should be protected and managed for biodiversity conservation. Access to the reserve should be restricted and hunting activities regulated. Alternative livelihoods, such as grasscutter farming and snail rearing, should

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be encouraged in nearby communities to give the people a source of protein. Exploitation of non-timber forest products should be regulated. Efforts should be made to conserve this forest are important as most other nearby forests have been seriously degraded and no longer offer habitat needed for the maintenance of large mammal populations.

There is no doubt that the West African rainforest is highly threatened by logging, agriculture, mining, and increasing human populations which have all led to habitat fragmentation. The results of this fragmentations has been the decline and local extinction of wildlife, particularly large mammals. Biodiversity conservation is urgently important in West Africa as many forest and wildlife resources are being depleted quite rapidly. Very few species of large mammals were identified in the two forest reserves and hunting pressure is very high. Wildlife regulations are not observed by inhabitants living around the two reserves who have acknowledged hunting without appropriate licenses and disobeying (through a lack of awareness) regulations on the season closed to hunting. These activities have depleted the large mammal resource in both reserves. Local people should be educated with regard to wildlife regulations and procedures for hunting and encouraged to obtain appropriate game licenses. Local conservation education is extremely important in order to sustain biodiversity conservation in the area.

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