



SURVEY OF WILD ANIMAL SPECIES HUNTED IN OWOTORO COMMUNITY, ATISBO LOCAL GOVERNMENT AREA, OYO STATE, NIGERIA

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Abstract

This study focused on survey of wild animals' species hunted in Owotoro communities, Atisbo Local Government Area, Oyo State, Nigeria. It involved the use of field survey, structured questionnaire and focus group discussions among local hunters and bush meat marketers. Data collected for the study were analyzed using descriptive statistics. The socio-demographic characteristic of the respondents revealed that majority (76.0%) of the respondents were male and age group 31-40 years and above had the highest with 42.0%. Majority of the respondents were married (66.0%) while 28.0% were single. Most of the respondents were Muslim with 54.0% and traditional religion was the least (18.0%). Seventeen (17) species of wild animals were discovered to be hunted in the study area and most of them were from the adjoining Old Oyo National Park, which is close to the communities. The reasons, seasons, time and equipment for hunting were revealed. More awareness should be created on the need to conserve these threatened wild species for the purpose of conservation and ecotourism development in the Old Oyo National Park, Nigeria.

Keywords: Survey, hunting, Wild animals, Owotoro community, Atisbo

Introduction

Wildlife is animal which is outside the direct control of man and is predominantly found in their natural habitat, caring and fending for itself. In rural tropical areas, a large proportion of human residents continue using a variety of wildlife species as sources of protein, fat, medicinal substances, clothes, tools, adornments, ritual objects, and income, among other purposes (Milner-Gulland and Bennett, 2003). Most wildlife resources are obtained through hunting, considered a subsistence activity when its primary purpose is to satisfy the hunter's and his family's basic needs (Ojasti, 2000). Hunting is a process of capturing animals alive or dead mostly in its natural habitat. Hunting is deadly to conservation of wildlife, but yet it plays a paramount role in conservation such as reducing intra specific competition for food, shelter etc. The term bush meat has particularly been used to refer to meat from wild animal in west and central Africa. Impacts of hunting on wildlife populations include declines in vertebrate biomass and shifts in the relative abundance of size classes (Peres, 2000). Studies on sustainability of hunting show that species are being extracted much above sustainable limits (Hart, 2002). Market demands for wild meat have also contributed in pushing the harvest levels of wildlife to unsustainable limits (Apaza, *et al.*, 2002). The effect of hunting by rural people has led to quantified changes in structure of mammal assemblages (Jerozolinski and Peres, 2003). Wildlife plays an important role in the lives of local people and is used for food, rituals and medicines. The sale of wild meat and wildlife products provides cash income and hunting of wildlife is also for recreation (Datta, 2002). The main motivation for commercial hunters is to exchange their prey for money. In contrast, subsistence hunters usually go hunting for food, although the sale of surplus meat within their communities may occur (Ojasti, 2000). Subsistence hunting frequently implies lower risks for wildlife populations than commercial hunting (Fa and Peres, 2001). However, studies had suggested that subsistence practices increase pressure on hunted species, generally large and medium-sized vertebrates (Peres, 2000; Wright, 2003). Among the wild terrestrial vertebrates providing food and other products to rural hunters in the rural communities are dozens of mammals (ungulates, primates and large rodents), birds and some reptiles (tortoise, turtles, snakes, iguanas and crocodiles) (Ojasti, 2000). A number of dedicated hunters usually are present in rural communities and search for game in a selective way towards highly regarded species. These dedicated hunters sometimes manage particular habitat types (e.g. they keep a harvest portion for wildlife consumption) to attract their prey and increase their hunting success. However, most subsistence hunters frequently take their prey with very little or no management strategies in an opportunistic way while traveling to their croplands and grazing areas (Naranjo, *et al.*, 2010). In addition to harvesting wild meat, subsistence hunting is practiced to prevent or mitigate crop damage by game species.

Control of this problem requires information on hunting patterns and understanding on the factors that drive local hunting (Bennett, 2003). This study seeks to answer the questions whether the roles and activities of the actors in wildlife hunting, undermine state security and National Park stability. The research focused on these gaps and attempt to identify appropriate policy responses. This study is intended to shed light on the changing dynamics of illegal hunting of wildlife resources by critically examining its actors, their motivators, driving factors, consequential implications on wildlife resources and management. Identify species of wild animals hunted in Owotoro community and examine the implication of their hunting activities to conservation of these wild animals in Old Oyo National Park, Nigeria.

Materials and Methods

Study Area

Atisbo is a rural Local Government located in the North-West of Oyo State, Nigeria, about 175km from Ibadan, the state capital. Its headquarters is in Tede. The name Atisbo is an acronym of eight (8) rural communities that made up the Local Government. Thus, Atisbo stands for Ago-are and Agunrege, Tede, Irawo, Sabe, Baasi, and Ofiki and Owo-tooro communities. It is predominantly Agrarian communities with some mining land where precious stones such as tourmaline and tantalite can be found. There are 10 wards in the Local Government and bounded in the North by Saki East, South by Itesiwaju and Iwajowa, East by Orire and Republic of Benin to the West. It has a population of 110,792 (National Population Census, 2006). Among the cash crops widely grown include cashew, Shea butter and mango.

Methods of Data Collection

This study involved the use of field survey which was conducted in the community. Purposive sampling techniques were used to select the hunters and bush meat marketers. Fifty copies of questionnaires were administered to both accessible marketers of bush meat and hunters. The hunters and the marketers were accessed through their association and leaders. Personal visits to shops, homes and observations were made in the process, discussions and interview were conducted with hunters, marketers and relevant stakeholders in the community as it relate to the study. Camera was used to obtain the photography's of some the wildlife, captured, hunted and sold by the marketers in the study area.

Data Analysis

Data collected were subjected to descriptive statistics, such as charts, tables and percentages.

Results and Discussion

The demographic characteristics of the respondents were revealed in table 1, in which male recorded the highest (76.0%) and female recorded 24.0%. Age group 31-40 years recorded the highest (42.0%), followed by 41-50 with 34.0% and the least was 51 years and above with 10.0%. The table revealed the marital status of the respondents in which majority (66.0%) was married and the least were separated with 2.0%. Also majorities (54.0%) of the respondents were Muslim and 28.0% were Christian. Species of wild animals hunted are revealed in table 2, in which seventeen (17) wild animals were recorded belonging to different species. The reasons and season of hunting are shown in table 4. It revealed that income generation is the major purpose of hunting with 54.0%, followed by consumption with 32.0% while for trophy is the least with 14.0%. Dry season recorded the highest period of hunting with 62.0%, followed by both season with 28.0% and wet season recorded the least with 10.0%. Table 5 showed the instrument used for hunting. Which include Dane gun that recorded the highest with 72.0%, followed by traps with 22.0% while bow and arrow is the least with 2.0%. Figure 1 revealed the time of hunting activities, in which during the night recorded the highest with 32% and during the morning is the least with 5 %. Figure 2 revealed the distance covered during hunting activities, in which 16km and above recorded the highest with 22 respondents, followed by 11-15km with 14 respondents and the least is 1-5km with 6 respondents. The sources of bush meat are revealed in figure 3, in which near National Park recorded the highest with 24 responses, followed by inside National Park with 17 responses and farmland is the least with 9 respondents.

The status of wild animals in the study area are revealed in table 6, in which decrease recorded the highest with 66.0%, followed by stable with 22.0% and increase is the least with 12.0% from the respondents. In table 7, it revealed that the conservation status of the hunted species in the study area were 53%, 18% and 29% for Least Concern, Near Threatened and Threatened respectively.

Table 1: Demographic characteristic of the respondents

Demography	Variables	Frequency	Percentage (%)
Gender	Male	38	76.0
	Female	12	24.0
Age Group	21-30	7	14.0
	31-40	21	42.0
	41-50	17	34.0
	51 and Above	5	10.0
Marital status	Married	33	66.0
	Single	14	28.0
	Divorce	2	4.0
	Separated	1	2.0
Religion	Christianity	14	28.0
	Islam	27	54.0
	Traditional	9	18.0
	Total	50	100.0

Table 2: Species of wild animals hunted in the study area

S/No	Common Name	Scientific Name
1	Kobs	<i>Kobus kobs</i>
2	Bush Buck	<i>Tragelaphus scriptus</i>
3	Roan Antelope	<i>Hippotragus equinus</i>
4	Olive Baboon	<i>Papio anubis</i>
5	Giant Rat	<i>Cricetomys gambianus</i>
6	Hare	<i>Lepus capensis</i>
7	Stripped Ground Squirrel	<i>Epixarus epii</i>
8	Grass Cutter	<i>Thryonomys swinderianus</i>
9	Patas Monkey	<i>Erythrocebus patas</i>
10	Warthog	<i>Phacochoerus aetheiopicus</i>
11	Guinea Fowl	<i>Numida meleagris</i>
12	Francolin	<i>Francolinus bicalcaratus</i>
13	Stone Partridge	<i>Ptilopachus petrosus</i>
14	Red Flanked Duiker	<i>Cecphalophus rufilatus</i>
15	Python	<i>Python sebae</i>
16	Cobra	<i>Naja nigricolis</i>
17	Viper	<i>Bitis arietans Spp</i>

Source: Field Survey, 2021

Table 3: Classes of wild animals hunted in the study area

Class	Frequency	Percentage (%)
Mammals	11	64
Aves	3	18
Reptiles	3	18
Total	17	100

Table 4: Reasons and seasons of hunting in the study area

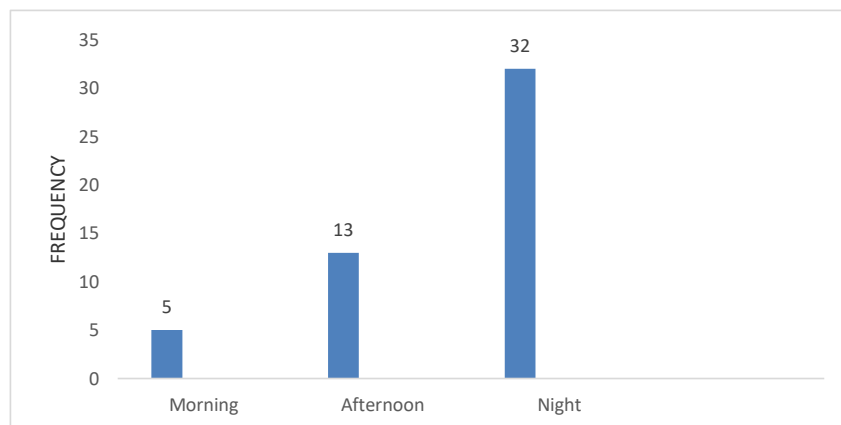
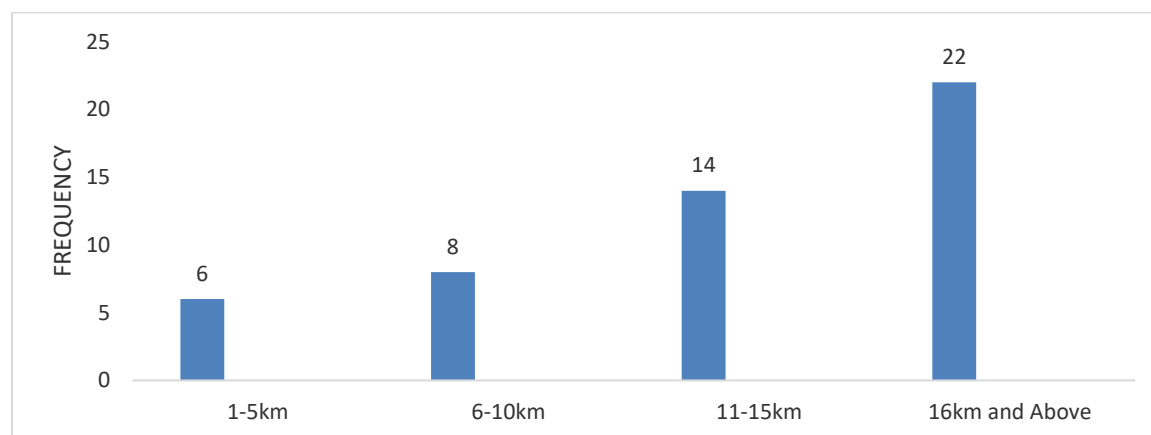
	Variables	Frequency	Percentage (%)
Reasons for Hunting	Food	16	32.0
	Income Generation	27	54.0
	Trophy	7	14.0
Seasons	Dry season	31	62.0
	Wet season	5	10.0
	Both season	14	28.0
	Total	50	100.0

Source: Field survey, 2021

Table 5: Instruments used for hunting in the study areas

Instruments	Frequency	Percentage
Dane Gun	36	72.0
Bow and Arrow	1	2.0
Traps	11	22.0
Pitfall	2	4.0
Total	50	100

Source: Field Survey, 2021

**Figure 1: Time of hunting in the study area****Fig 2: Distance covered during hunting activities in the study area.**

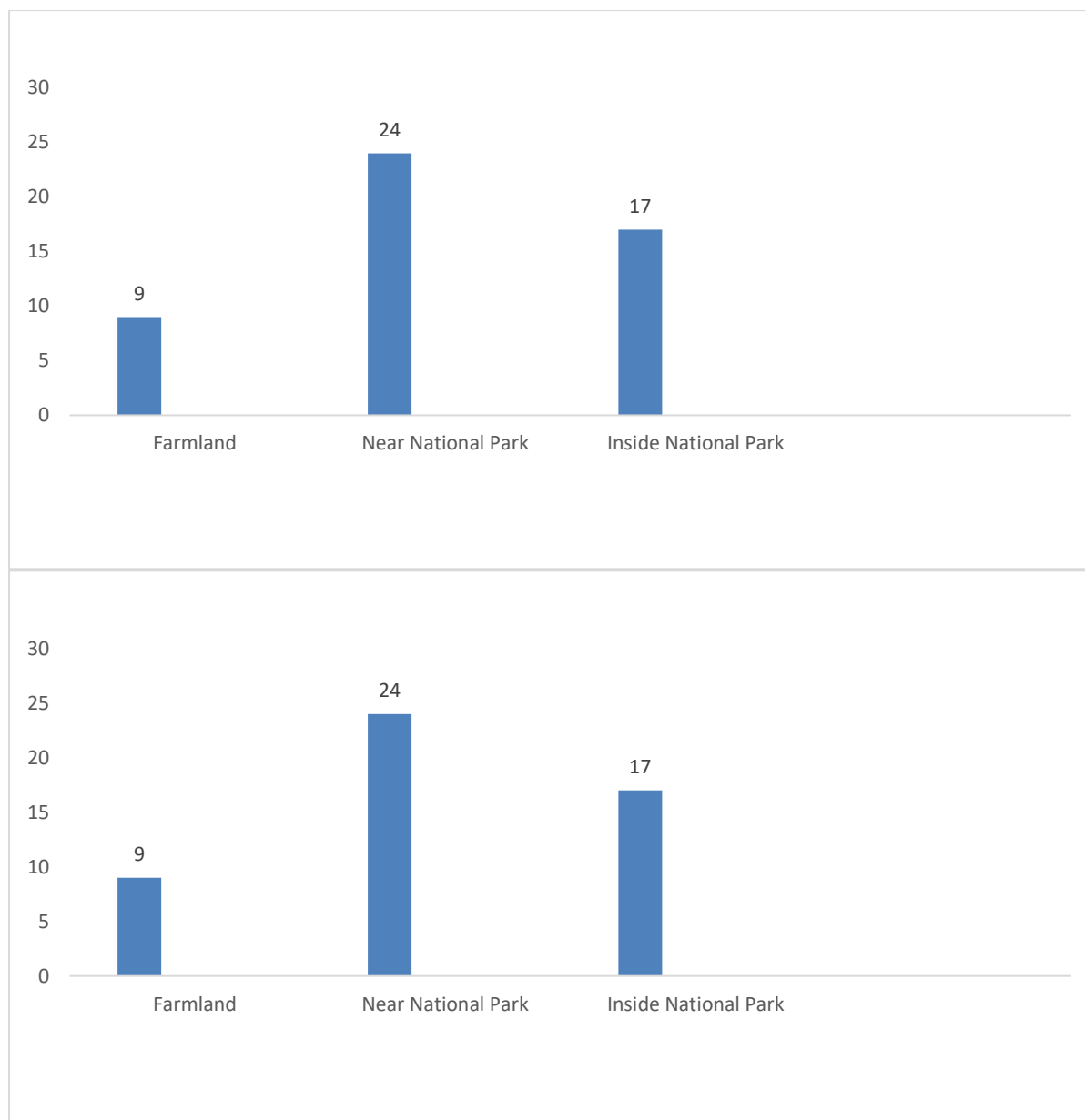


Fig. 3: Source of Bush meat in the study area

Table 6: Perceived status of wild animals hunted in the study Area

Variables	Frequency	Percentage (%)
Increase	6	12.0
Stable	11	22.0
Decrease	33	66.0
Total	50	100.0

Source: Field Survey, 2021

Table 7: Conservation status of wild animals hunted in the study Area

Conservation status	Frequency	Percentage (%)
Threatened	5	29
Near Threatened	3	18
Least Concern	9	53
Total	17	100

Discussion

The socio-economic contributions of wild animal species hunted as bush meat in Owotoro communities play a vital role in the living standard of the respondents, during the survey; gender variable showed that males were dominant in the bush meat hunting than females. This is in agreement with report of Ajayi, *et al.*, (2021) that men dominated hunting in selected communities in Ekiti State. Most of the hunters/marketers are within the age range of 31–40 years. This is similar to the report by Ojo, *et al.*, (2019) that men from an early age were involved in hunting and selling of bush meat. The result shows that most of the respondents were married people only few of them were single and divorced or separated. The major reason for hunting wild animals is for income generation. This is in line with report by Ajayi, *et al.*, (2021) that bush meat sale contributes 6-40% of all household daily income. Ajayi, *et al.*, (2021) that 72% of hunters generate an average of fifty thousand naira to one hundred and forty-nine thousand naira in bush meat trade in Ekiti state. Bush meat trade in the study area is lucrative and it is a significant source of income. This is in agreement with the report by Gally and Jeanmart, (1996) that hunters made 19% profit from the sale of monkeys and traders made 20% profit. Bush meats are available in the study area throughout the seasons but are more abundant during the dry season. Dry season was the preferred hunting season for most hunters (93%). According to hunters, wildlife ranges are open by dry season fire during dry season and hunting is easier then. During this season, they are also free from farming activities as the harvest season is over by October–November. There are some specific times during dry season when hunting expeditions are undertaken. Hunters report that hunting success is greater when a rainy night is followed by a bright morning. Seventeen (17) wild animals were identified to be hunted in the study area. However, the respondents' benefits from bush meat trade include payment of children's school fees and catering for their individual families need. Also, the socio-economic contributions of wild animals as bush meat to the people in the study area include serving as a source of animal protein for consumption, being used in traditional medicine for treating various ailments such as hypertension, protection against enemies and witches. They are important source of income to both the hunters and marketers. All the respondents said that they preserved bush meat stock using the smoking, drying and salting methods.

Conclusions

The study revealed a year round supply of bush meat amidst insecurity and global pandemic. It was established that hunting is an income generating venture for the upkeep of their family. Majority of the bush meat hunters were males, who are bread winners. Seventeen (17) species of wild animals were reported to be hunted with the use of Dane gun, traps, bows and arrows. Most of the respondents agreed that wild animals' population have decreased in the study area.

Recommendations

More conservation awareness programmes should be made to the major stakeholders in the communities to protect the dwindling wild animals' population in the study area. Game farming/wildlife domestication should be encouraged among individuals or families or groups through Non- Governmental Organizations provision of grants to discourage hunting.

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References

- Ajayi, S.R., Elekhizor, B.T., Oyeleye, D.O., Osaguona, P.O. and Ibrahim, O.A. (2021). Bush meat trade in Selected Communities of Ekiti State and its implications on biodiversity conservation in Nigeria (*Eds., P.O. Egwumah, F.S. Agbidye, T.J. Orsar, D.O. Ekhuemelo and M.I. Iwar*) Proceedings of the 4th Wildlife Society of Nigeria Conference, Makurdi, 2021, Joseph Sarwuan Tarka University Makurdi, Nigeria, held on 15-18th September, 2021, Pp. 291-296
- Apaza, L., Wilkie, D., Bryon, E., Haunch, T., Leonard, W., Perez, E., Reyes-Garcia, V., Vaduz, V. and Godoy, R. (2002). Meat prices influence the consumption of wildlife by the Tisane Amerindians of Bolivia. *Oryx*, 36, 382-388.
- Datta, A. (2002). Status of hornbills and hunting among tribal communities in eastern Arunachal Pradesh. Unpublished report. Wildlife Conservation Society and WCS-India Programme, Bangalore.
- Fa J.E, and Peres C.A.(2001): Game vertebrate extraction in African and Neotropical forests: an intercontinental comparison. In Conservation of exploited species. Conservation biology^o 6. Edited by Reynolds JD, Mace GM, Redford KH, Robinson JG. Cambridge: Cambridge University Press; 2001:203–241.
- Fa, J. E., Juste, J., Perez del Val, J. and Castroviejo, J. (1995). Impact of market hunting on Mammal species in Equatorial Guinea. *Conservation Biology*, 9, 1107-1115.

- Gally, M. and Jeanmart, P. (1996). Etude de la chasse villageoise en foret dense humide central. Faculte Universitaire des Science Agronomiques de Gembloux. Travail de fin d'etudes.
- Hart, J. A. (2002). Impact and sustainability of indigenous hunting in the Ituri Forest, Congo Zaire: a comparison of unhunted and hunted duiker populations. In *Hunting for Sustainability in Tropical Forests*. Robinson, J. G and E. L. Bennett. (Eds.). pp. 106-153. Columbia University Press.
- Jerozolinski, A and Peres, C. A. (2003). Bringing home the biggest bacon: cross-site analysis of the structure of hunter kill profiles in Neotropical forests. *Biological Conservation*, 415-425.
- Lande R (1998): Anthropogenic, ecological and genetic factors in extinction and conservation. *Researches Popul Ecol* 1998, 40:259–269.
- Milner-Gulland E, and Bennett E, (2003): Wild meat: the bigger picture. *Trends Ecol Evol* 2003, 18(7):351–357.
- Naranjo E.J, López-Acosta J.C, Dirzo, R. (2010). Biodiversitas 2010, 91:6–10. 23. Escamilla A, Sanvicente M, Sosa M, Galindo-Leal C: Habitat mosaic, wildlife availability, and hunting in the tropical forest of Calakmul, Mexico. *Conserv Biol* 2000, 9(5):1116–1126.
- Ojasti, J. (2000): Manejo de fauna silvestre Neotropical. Washington DC: Smithsonian Institution/Man and Biosphere Program; 2000, 450 pp.
- Ojo, V.A., Zira, B.D., Orimaye, J.O., Oduntan, O.O., Matthew, E.D. and Kehinde, A.O.(2019).Contributions of Bushmeat Trade to Livelihood of Bushmeat Traders in Maiduguri Bushmeat Market, Borno State. (Eds., A.T. Adeyanju, *et al.*,) *Proceedings of the 3rd Wildlife Society of Nigeria Conference*, University of Ibadan, Ibadan, Oyo State, Nigeria, held on 16th-19th, 2019. Pp. 277-283.
- Peres, C.A (2000). Effects of Subsistence Hunting on Vertebrate Community Structure in Amazonian Forests. *Conserv Biol* 2000, 14(1):240–253.
- Pérez-Gil R, Jaramillo F, Muñoz AM, and Torres M.G.(1995). Importancia económica de los vertebrados silvestres en México. México: PG-7 Consultores S.C. Comisión Nacional para el Conocimiento y Uso de la Biodiversidad (CONABIO).
- Robinson, J. and Bennett, E. (2000). *Hunting for Sustainability in Tropical Forests*.(Eds.) Cornell University Press. Pp 582.
- Wilkie, D. S. and Carpenter, J.F. (2000). Bush meat hunting in the Congo Basin: an assessment of impacts and options for mitigation. *Biodiversity and Conservation*, 8, 9



Plate 1: Adult Duiker



Plate 2: Warthog



Plate 3: Captured Young Duiker



Plate 4: Bush bucks



Plate 5: Young Duikers



Plate 6: Hare



Plate 7: Cobra snake



Plate 8: Python snake



Plate 9: Kob