

## Utilization of Wild Animals Used for Bushmeat in South Western Nigeria: Implications for Wildlife Conservation

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**Abstract:** There are lots of challenges posed by bushmeat trade in Nigeria. As a result of this, it is very important to know the dynamics of bushmeat, to assess the pattern of utilization of wild animal in bushmeat trade and also to determine the relationship between bushmeat trade and some selected demographic data of the respondents. Random sampling technique was employed; the respondents were selected from surveyed in 12 out of 30 Local Government Areas in Osun State. An open-ended questionnaire was administered on food vendors and the bushmeat sellers in the selected Local Government Areas. It is recommended that there should be regular and persistence campaign against unregulated hunting of wild species to prevent them from being dragged to extinction and domestication of species traded by the bushmeat traders is encouraged to satisfy the market demand of bushmeat. This will guarantee less hunting pressure on wild species and thereby maintaining the stability of the ecosystem biodiversity. This will guarantee less hunting pressure on wild species and thereby maintaining the stability of the ecosystem biodiversity.

**Key words:** Bushmeat Trade, Biodiversity, Utilization

### INTRODUCTION

Bushmeat (the meat of wild animals) has traditionally been a natural protein source for people all over the world, most especially in West and Central Africa. During the past decades, however, bushmeat hunting and trade have become widespread commercial activities, with serious negative consequences on wild animal populations. As human populations continue to grow and poverty increases, increasing numbers of people are becoming dependent on bushmeat and on the income opportunities from its trade (Bowen-Jones et al. 2002 and Milner-Gulland et al. 2003). Over the past decades, the hunting for wildlife across West and Central Africa has increased so drastically that it is now recognised as a major threat to the region's rich biodiversity, including Africa's great apes (Wilkie et al. 1999, Fa et al. 2002, Nganje 2003, Kaiser 2003, Walsh et al. 2003 and Whitfield 2003). In fact, one of West Africa's primates, the Miss Waldron's red colobus (*Procolobus badius waldroni*), was declared extinct in September 2000 as a result of many years of overexploitation (Oates et al. 2000).

Bushmeat is transported from forests (where the hunting mainly takes place) to markets within local communities or to larger markets in urban centres, where it is then sold or traded. A great number of animal species can be found in these markets, ranging from birds, reptiles, bats, rodents and antelopes to larger mammals such as elephants, buffalos, leopards and primates. The current rate of exploitation is not only unsustainable but also indiscriminate, i.e. all animals are taken whether they are common or endangered (Bowen-Jones et al. 2002).

Surveys of markets across West Africa show that the current commonly traded bushmeats are smaller mammals, with animals such as the grasscutter/cane rat (*Thryonomys swinderianus*), duiker (*Cephalophus spp*), porcupine, bushbuck, birds specie, tree hyrax and pangolin being the most frequently traded and consumed bushmeat species (Cowlshaw et al. 2005 and Ntiamao-Baidu 1998). It has been suggested that this is the result of an extinction filter: vulnerable taxa (slow reproducers) such as primates and other large mammals have been historically depleted, so that mainly species with fast reproduction such as rodents and small antelopes are now hunted (Cowlshaw et al. 2005). The ratio of rodents to other taxa for sale in the local bushmeat markets can thus be a rough estimate of the impact hunting has had on local wild animal populations, indicating a depletion of large bodied species (Stephenson 2003). The hunting for wildlife in the humid tropics, particularly in West and Central Africa, poses a serious threat not only to the biological diversity and to the ecological processes, but also to future generations who are highly dependent on bushmeat as a source of protein and income (Bowen-Jones et al. 2002 and Milner-Gulland et al. 2003).

Also in contributing to the health of the people, the basis for traditional medicines and the primary ingredients used by the traditional healers are wild animal and plant species. The practice is widespread in Africa and market stalls selling plants and animal parts for medicines are common in both rural and urban markets in African towns and cities (FAO, 2007, Soewu and Adekanola 2011). This study will look into the rate



## RESULTS AND DISCUSSION

**Table 1: Level of Experience, Any Other Means of Livelihood and Willingness to Support Biodiversity Distribution of the Respondents**

<b>Variables</b>	<b>Frequency</b>	<b>Percentage</b>	<b>Cumulative percentage</b>
<b>Level of experience (year's)</b>			
1 – 10	12	10.0	10.0
11 – 20	46	38.3	48.3
21 – 30	43	35.8	84.2
31 – 40	16	13.3	97.5
41 – 50	3	2.5	100.0
<b>Any other means of livelihood</b>			
Yes	14	11.7	11.7
No	106	88.3	100.0
<b>Willingness to support biodiversity conservation</b>			
Yes	65	54.2	54.2
No	55	45.8	100

**DISCUSSION**

The variety of wild animal species encountered during the study agrees with the results of previous studies by several other authours (*Ntiamoa-Baidu 1987; Kakati and Duolo, 1999; Costa-Neto 1999; Adeola 1992; Marshall 1998*). However, the numbers of species encountered during this survey differ from most of the previous researches. This survey recorded 10 species while (*Taylor and Fox 1992*) recorded 55 species in Lome Fetish Market, (*Togo; Kakati and Doulo, 2002*) recorded 23 species in a study on zoothrapeutic use by Chakhesang tribe of Nagaland in India; (*Costa-Neto, 1999*) encountered 17 species in zoothrapeutic practices in Bahia, Brazil while (*Sodeinde and Soewu, 1999*) documented 45 species for southwestern Nigeria. For the bush meat markets, (*Fa. et al. 2000*) reported 14 and 21 species respectively in 1991 and 1996 on Bioko Island, Equitorial Guinea, (*Anadu et al. 1988*), recorded 25 species in southwestern Nigeria.

Although there have been several quantitative studies on the bush meat trade, there is still paucity of information on the quantity of individual species traded for utilization in Osun State. On the conditions of animals supplied to their stalls, the bushmeat sellers generally said that there appears to be a general decrease in the sizes of virtually all the animals they receive over the years. Also, it was reported by food vendors that bushmeat available in the markets was on a continuous decline. Another factor that calls for concern is the fact that trade in wild animals utilisation as encountered during this study readily cuts across all age grades: young ones, medium ages and adults.

Table 1 shows the level of experience, other means of livelihood and those that support biodiversity. From this table majority of the respondent had experience between 11 – 20 years with 35.8, majority of the respondents have other means of livelihood with 88.3% and majority also support biodiversity conservation with 54.8%.

Table 2 shows the number of the bushmeat species in all the local government during the period of the study. From this it was noted that the most utilized bushmeat is the grasscutter having the highest significant counts of 2390 and the total wild animal traded during the study was 8322 counts.

Average prices for each animal were collected in (table 3); the prices were stated according to the size of the animal.

The likely impact of bushmeat trade to biodiversity conservation is that too much pressure on particular species may lead to local extinction. Thus, the higher the rate of utilization the higher the risk of the species extinction.

**Table 2: Number of the Bushmeat traded Over a Period Of 4weeks in all the Selected 12 Local Government in Osun State**

S/N	Bushmeat	Ayedade	Ede	Egbedore	Ejigbo	Osogbo	Olorunda	Ifelodun	Orolu	Ife North	Ife Central	Ilesha East	Ilesha West	Total
1.	Grasscutter	160	183	189	190	204	206	205	204	215	212	213	209	2390
2.	Antelope	53	39	33	33	28	30	31	34	27	19	27	28	382
3.	Porcupine	20	19	17	17	14	16	18	20	20	15	12	20	208
4.	Maxwell duiker	28	36	40	40	48	42	41	45	45	41	112	45	563
5.	Bushbuck	31	32	36	36	51	49	52	63	61	48	53	44	556
6.	Guinea fowl	39	49	49	60	71	70	70	77	74	67	74	59	759
7.	African civet cat	18	26	18	22	30	40	43	43	43	31	37	26	377
8.	Giant rat	74	79	81	76	83	77	85	98	96	72	84	79	984
9.	Tree squirrel	129	130	131	141	146	152	144	152	157	148	151	130	1711
10.	Monitor lizard	29	28	28	23	39	39	50	41	36	30	25	24	392

Total wild animal traded during the study was 8322 counts.

**TABLE 3: Average Prices for the Sales of Bushmeat**

S/N	Common names	Scientific names	Adult(₦)	Medium Size(₦)	Young ones (₦)
1.	Grasscutter	<i>Thryonomys swinderianus</i>	2000	1300	800
2.	Antelope	<i>Tragelaphus eurycerus</i>	5000	2500	1200
3.	Porcupine	<i>Hystrix cirstata</i>	2700	1300	600
4.	Maxwell duiker	<i>Philantomba maxwellii</i>	4500	2300	1100
5.	Bushbuck	<i>Tragelaphus scriptus</i>	5000	2500	1200
6.	Guinea fowl	<i>Numida meleagris</i>	1800	1100	600
7.	African civet cat	<i>Civettictis civetta</i>	4000	2000	800
8.	Tree squirrel	<i>Funisciurus pyrrhopus</i>	2000	1000	700
9.	Giant rat	<i>Cricetomy gambianus</i>	2000	1000	600
10.	Monitor lizard	<i>Varanus Indicus</i>	3000	1500	1000

As at this period a dollar = ₦199.5

## CONCLUSION AND RECOMMENDATIONS

It is important to start communicating wildlife conservation issues to the entire bushmeat user communities, that is, hunters, food vendors, bushmeat sellers and end users. This allows these communities to be involved in the process to provide helpful inputs, and to plan adequately for restrictions on supply and use. If they are informed early enough, their readiness to voluntarily cooperate and comply with the law and regulation constitute will be there. Also, the messages used to communicate conservation needs should be packaged carefully and thoroughly so as to make it acceptable, thereby enjoying maximum voluntary cooperation.

Prohibiting the utilisation of bushmeat species simply does not make meaning to many people because many believe that the bushmeat is provision of the nature. Therefore, the concept of wildlife conservation education can be employed to create awareness among them. It is important to accept and respect differing views of the value of wildlife, while at the same time explaining the necessities of conservation measures.

It was also established that there is too much pressure on a particular species as result of high number of traded by the bushmeat stakeholders (food vendors and bushmeat sellers). The economic implication is that many of these wild animals which serve as important stabilizer of the ecosystem may be lost to local extinction.

**Based on the findings of this study**, it is hereby recommended that: (i) There should be regular and persistence campaign against unregulated hunting of wild species to prevent them from being dragged to extinction and (ii) Domestication of wild species should be encouraged by bushmeat sellers in order to satisfy market demands. This will guarantee less hunting on wild species and thereby maintaining the stability of the stability of the ecosystem biodiversity.

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