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# A SURVEY OF BUSH MEAT HUNTING AND TRADING IN TARABA STATE, NIGERIA

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***ABSTRACT***

***This study examined Bush Meat Hunting and Trading in Taraba State using structured open and close questionnaires, which were administered to one hundred and twenty (120) respondents and survey of bush meat processing centres were deployed to collect data for this study. Collection of data spanned for three months (November 2022 to January 2023). The result on age group showed that most of the respondent were between the age group of 31-45 (n=54, 45%), while none was at the age of 60 and above. The results of marital status of the respondents showed that 68 respondents (58%) were married and 3 respondents (2 %) were widowed. The results of educational level of the respondents indicated that most were secondary leavers (n=56, 47%) and (n=12, 10 %) had no formal education. The family size of respondents shows that most of the respondents had a family size with more than 11 members (n= 60, 52%) and the least being the family size of 1-5 (n = 7, 3%). The occupations of respondents indicate that most were hunters (n=76, 63%), followed by farmers (n=32, 26 %) while other occupations such as traders and primary school teachers (n = 12, 10%) were among those mentioned. The results on bushmeat consumption shows that almost all the people in the study areas consume bushmeat (Gashaka 100%, Bali 100% and Kurmi 100%). The results on general meat sources in relation to bushmeat showed that the most preferred meat type is bush meat (67%). The results on bushmeat preference among the varieties of bushmeat indicated that grasscutter is the most preferred bush meat on the average (51%).The study shows that hunters earned the sum of #36,000 - #40,000 per month on the average. Stiffer laws and policies should be created and implemented to put off illegal hunters. Government should grant loans to poultry and fish farmers to increase their farms since they serve as alternative sources of meat and income. Poverty alleviation programmes should extend to rural areas for wealth creation. The findings of this study showed that wild animals hunting for bushmeat is still common in Taraba State. The formulation of policies and laws with stiffer penalties on wild animal hunting for bushmeat will go a long way to restore high populations in protected areas of the state for future generations.***

**Key Words:** Survey, Hunting, Methods, Bush Meat

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## INTRODUCTION

Over the next fifty years, the world population is estimated to increase by up to 3 billion people and reach 10.6 billion people by 2050 (D., & Robinson, E. J., 2003). The countries that are projected to have the greatest population increase tend to have the highest poverty rate, the least amount of inhabitable land, severely limited natural resources, and the weakest economies (United Nations, 2004). The United Nations Department of Economic and Social Affairs' Population Division projects that through 2050, Eastern Africa, Middle Africa, and Western Africa, will grow at a much faster rate compared to every other region in the world (United

Nations, 2004). This accelerating growth in human population will intensify demand for resources such as food and fresh water.

These natural resources are already greatly stressed in many parts of Africa, leading to concerns about the ability to maintain a sustainable food supply and future food security across the region. More than one quarter of sub-Saharan Africans, about 234 million people, currently suffer from under-nourishment at some time over the course of each year (Carr, 2012). Food security is often linked to economic security: poverty and deprivation can escalate conflict over scarce resources, which can lead to more restrictive laws, less personal freedom, and increased violence and warfare, further perpetuating the unsustainable use of natural resources and threatening the livelihoods of local people (Wilkie *et al.*, 2005).

The exhaustion of natural resources can be exacerbated through ineffective management, leading to deforestation and over-hunting (Wilkie *et al.* 2005). A particular manifestation of this overpopulation in Africa is the bush meat crisis: the unsustainable hunting of wild animals for human consumption. Bush meat may comprise over 80% of the consumption of animal protein in some indigenous and rural African communities that consider bush meat a staple or supplement to their diet (Wilkie & Carpenter, 1999). Bushmeat is essential to both local and national economies; however, much of the bushmeat trade is unregulated. Bushmeat consumption is increasingly linked to deadly diseases such as HIV/AIDS, Ebola, and foot-and-mouth disease (Wilkie& Carpenter, 1999).

Wildlife has been hunted for food throughout human evolution. Only recently has bush meat become an important source of income in West and Central Africa (Young, 1962). In rural areas, people once made money growing and selling rice, cotton, cacao, coffee, and peanuts. Over the past 20 years, livelihoods have suffered as increasingly poor road systems make it more difficult and costly to transport goods to markets (Lamh, 1993). With farming unprofitable and almost no off-farm jobs available, many rural people have resorted to commercial hunting and trading of bush meat because high returns can be made from a relatively small investment, and wildlife are free-for-the-taking. Urban populations fuel the demand for bush meat; these populations have grown substantially since the 1960s and their buying power has declined with the weak economy (Adeyoju, 1992). Families that were once able to afford to eat beef, chicken, and pork have now shifted to typically less expensive wildlife as their meat of choice (FAO, 1997). Bush meat is relatively inexpensive because hunters do not pay the costs of producing wildlife as do farmers who raise livestock. Moreover, logging companies have opened up once-isolated forests, providing hunters with easy access to abundant wildlife and traders with cheap transportation, which in turn reduces bush meat production costs and increases supply to urban markets (Falconer, 1992). Hunting and consumption of bush meat can be driven by a variety of factors, depending on the cultural-economic context of the region, and are broadly related to income, culture, and taste. For example, household wealth can influence bush meat consumption: often poorer groups in communities hunt the highest percentage of bush meat because they rely on it for income (Fa *et al.*, 2001). Conversely, in some situations bush meat consumption increases with household income, because it is preferred over domestic livestock protein (Wilkie *et al*, 2005).

## RESULTS

### Demographic characteristics of the respondents

The results in table 1 shows that most of the respondents were between the age group of 31-45 (n = 54, 45 %), followed by 46 - 60 (n = 41, 34 %), and 16-30 (n= 25, 21 %) while none was at the age 60 and above. The results on marital status of the respondents shows that 42 respondents (35 %) were single while 68 respondents (57 %) were married, 7 respondents (6 %) were divorced and 3 respondents (2 %) were widowed. The results on marital status shows that most of the respondents were secondary leavers (n =56, 47 %), followed by primary school leavers (n =33, 27%) and tertiary (n=19, 16%) while (n = 12, 10%) had no formal education. Most of the respondents had a family size of greater

than 11; 60 (52 %), followed by 6 -10; 53 (45 %) and the least being the family size of 1 - 5; 7 (3 %). Occupation of most of the respondents was hunting 76 (64 %), followed by farmers 32 (26 %) and others 12 (10 %) which include traders, and civil servants.

**Table 1: Demographic characteristics of the respondents**

| Demographic characteristics | Frequency | Percentage |
|---|---|---|
| Sex | | |
| Male | 105 | 87.5 |
| Female | 15 | 12.5 |
| Total | 120 | 100 |
| *16 – 30* | 25 | 21 |
| *31 – 45* | 54 | 45 |
| *46 – 60* | 41 | 34 |
| *61 >* | - | - |
| **Marital Status** | | |
| Single | 42 | 35 |
| Married | 68 | 57 |
| Divorced | 68 | 57 |
| Widowed | 3 | 2 |
| **Level of Education** | | |
| Primary | 33 | 27 |
| Secondary | 56 | 47 |
| Tertiary | 19 | 16 |
| No Formal Education | 12 | 10 |
| **Family Size** | | |
| 1-5 | 7 | 3 |
| 6-10 | 53 | 45 |
| >11 | 60 | 52 |
| **Occupation** | | |
| Hunting | 76 | 64 |
| Farming | 32 | 26 |
| Others | 12 | 10 |

**Field work (2023)**

**Bush meat consumption in the study area**

The result on bush meat consumption (fig. 1) indicates that all the people in the study area consume bush meat (Gashaka100%, Bali 100%, Kurmi 100%)**.**

**Bush meat Hunting Method**

The results on the methods used in harvesting bush animals indicates that most hunters use gun (36 %), followed by Bush burning (25 %), after by poisoning (19 %), Bow and Arrow (11 %) while the least was trap (9%)**.** And the result on bush type caught per day(table 3), showed most bust meat caught are the non-rodent mammals(45), followed by rodents (36), followed by reptiles (25), followed by birds (15) and the least was amphibians (10). The result in table 3 showed that Mammal(non-rodents) are the most abundant animals in the study area, followed by rodents, reptiles, aves and amphibians respectively.

**Table 2: Bush Meat Hunting Methods**

| S/No. | Hunting Methods | Percentages |
|---|---|---|
| 1 | Gun | 36 |
| 2 | Bush Burning | 25 |
| 3 | Poisoning | 19 |
| 4 | Bow and Arrow | 9 |

*Field work (2023)*

**Table 3: Average Number of Bush Meat Caught Per Day**

| Class of Animal | Number |
|---|---|
| Mammal (non-rodents) | 45 |
| Rodents | 36 |
| Reptiles | 25 |
| Amphibians | 10 |
| Aves | 15 |
| Total | 131 |

*Field work (2023)*

**Determination of respondents' preference of meat varieties**

The results on meat type preference (table 4) shows the percentages of respondents who chose meat types as 1st choice, the most respondents preferred meat type was bush meat (67 %), followed by fish (17 %), chicken (12 %) and beef (4 %) respectively.

**Table 4**: **Percentages of respondents who chose various meat types as 1st choice**.

| Meat type (favourite) | Number | Percentage (%) |
|---|---|---|
| Bush Meat | 80 | 67 |
| Chicken | 15 | 12 |
| Beef | 5 | 4 |
| Fish | 20 | 17 |
| Total | 120 | 100 |

*Field work (2023)*

**Determination of Bush meat Preference**

The results on bush meat preference (Table 5) indicates that grasscutter is the most preferred bush meat (40%), followed by antelope (16%), monkey (12%), Buffalo (11%), Duiker (10%), Bush buck (6%) and others such as birds and reptiles were the least preferred by the respondents (5%) respectively.

**Table 5: Bush meat preference**

| S/No. | Bush Meat | Percentages (%) |
|---|---|---|
| 1 | Grasscutter | 40 |
| 2 | Antelope | 16 |
| 3 | Monkey | 12 |
| 4 | Buffalo | 11 |
| 5 | Duiker | 10 |
| 6 | Bush buck | 6 |
| 7 | Others | 5 |

*Field work (2023)*

**Table 6: Direct Observation of bush meat in the study area**

| Common Names | Scientific Names | Frequency | Percentage |
|---|---|---|---|
| Roan antelope | *Hippotragus equinus* | 20 | 11 |
| Klipspringer | *Oreotragus oreotragus* | 7 | 4 |
| Olive baboon | *Papio anubis* | 5 | 3 |
| Petas monkey | *Erythrocibus pats* | 15 | 8 |
| Tantalus monkey | *Chlorocebus tantalus* | 13 | 7 |
| Bush buck | *Tragelphus scriptus* | 11 | 6 |
| Grasscutter | *Thryonomys swinderianus* | 35 | 19 |
| Crested porcupine | *Hystrix cristata* | 8 | 4 |
| Giant rat | *Critecosmysganbianus* | 17 | 14 |
| Hare | *Lepus capensis* | 10 | 6 |
| Red fronted gazelle | *Eudoreas rufifrons* | 11 | 6 |
| Short tail monitor lizard | *Vanranidaeexamthematicus* | 5 | 3 |
| Tortoise | *Testudo marginata* | 3 | 2 |
| Guinea fowl | *Numidamelliagres* | 8 | 4 |
| Stripped ground squirrel | *Epixarusepii* | 6 | 3 |
| Bush-pig | *Potamochoerusaporcus* | 2 | 1 |
| Snakes | | 4 | 3 |

**DISCUSSION**

The results of age showed that most of the respondents were between the age group of 31-45 (n = 54, 45 %), followed by 46 - 60 (n = 41, 34 %), and 16-30 (n= 25, 21 %) while none was at the age 60 and above. The hunters were at the peak of their youthful age. This may be because a lot of them are married having so many responsibilities to shoulder. Bifarin *et al*., (2008) reported that this age

group of people was active, brave and energetic since hunting as an occupation is risky and tedious in nature. And perhaps, because of the numerous responsibilities youths have not only to the nation but to themselves and families. That youths like exploring new avenues and because they are full of energy and are ambitious, they try everything to explore their potentials. No hunters were recorded at age above 60 years, this could be due to old age and inability to the strenuous adventure, at this age there is usually fewer responsibilities to shoulder. Another reason could be because life expectancy in Nigeria is low (44.74 years), this is in tandem with Sola (2017) while very few hunters were within the age group of 16 – 30 (n= 25, 21 %), this agrees with the assertion of FAO (2014), that hunting is for men, children and women only assist mostly after harvest.

The results of marital status of the respondents show that 42 respondents (35 %) were single while 68 respondents (57 %) were married, 7 respondents (6 %) were divorced and 3 respondents (2 %) were widowed. The high number of married hunters may be linked to the numerous responsibilities saddled by man to meet the needs of his family. This assumption agrees with the assertion of FAO (2014) that hunting and gathering of wild animals is a major source of protein, income and livelihood of most families in most villages in Africa. Furthermore, FOA (2014) reported that hunting is primarily carried out by men and not common among children and widows which is not far from the findings of this study. A similar case as suggested by this study could be revealing on the fact that most hunters were from the youth category with low mortality rate.

The results of education the respondents indicate that most were secondary leavers (n =56, 47 %), followed by primary school leavers (n =33, 27%) and tertiary (n=19, 16%) while (n = 12, 10%) had no formal education. Most of the hunters were secondary leavers (n =56, 47 %), as against the assertion of M. Aline *et al* (2016) that the least educated were hunters and middlemen involved in the trade of bush meat as against primary school leavers (n =33, 27%) and (n = 12, 10%) had no formal education. While a few (16%) were graduates which is in consonant with M. Aline *et al.,* (2016) who asserted that most of the town's graduates were not involved in the bush meat harvest and trade. It is important to note that education status of hunters in the study area was adequate for the introduction of enlightenment campaigns on conservation, sustainability, selective hunting, among others.

The results of family size of respondents show that most of the respondents had a family size with more than 11 members (n = 60, 52 %), followed by 6 -10 (n = 53, 45 %) and the least being the family size of 1-5 (n = 7, 3 %). This result is in tandem with Fa *et al.,* (2005) who asserted that constraints on families relaxes with large family size as members are used as farming "machines" and hunting. Hence, family size is related to wealth.

The results of occupation of the respondents indicate that most of the respondents were hunters (n =76, 63 %) and farmers (n=32, 26 %) while other occupations such as traders and primary school teachers (n=12, 10 %) were among those mentioned. This result is in disagreement with the work of Michael A. A. (2016) who asserted that most rural dwellers are farmers, this variance maybe because this study is centred on hunters.

The result on bush meat consumption shows that almost all the people in the study areas consume bush meat (Gashaka100 %, Bali 100 %, Kurmi 100 %)**.** This is in tandem with of G. H. G. Martin (2016)'s report that almost nearly all the people in the study area eats bushmeat. This could be because bush meats are rich in proteins, contain less fat and cholesterol which make them healthier than other meats. Wild game meat is high in Eicosapentaenoic acid, an essential omega – 3 fatty acids that has several health benefits. From conservation point of view, a 100 % acceptance on bush meat could be an indication that illegal hunting

is still common in the study area. It may not be out of place to state that illegal hunting is still common in the study area.

The results on preferred meat types in relation to bush meat show that the most preferred meat type is bush meat (67 %), followed by fish (17 %), chicken (12 %) and beef (4 %) respectively. This is in agreement with the work of G. A. Kalio (2009) who compared bush meat, sheep, goat and cattle. Bush meat was rated the most preferred meat type but this is in variance with the work of Brittany et al., (2017) who asserted that pork meat is most preferred meat type in the UK this variance may be due to differences in culture and bush meat availability. This may not be far from the point as most studies in Africa will suggest that bush meat is the preferred meat type probably linked with availability while pork is readily available and at affordable prices in the UK. Religious background probably influences human choice of meat type: a situation where meat slaughtered by the opposite religious man may be tagged as a taboo to his counter religious fellow.

The results of bush meat preference among the varieties of bush meat indicates that grasscutter is the most preferred bush meat (51%), followed by antelope (20%), monkey (15%), Buffalo (11%), Duiker (10%), Bush buck (8%) and others such as birds and reptiles were the least preferred by the respondents (5%) respectively. This is in agreement with the work of G. H. G. Martin (2016), he recorded bush animal sold by the roadside and found out that grasscutter was most sold, followed by antelope.

## CONCLUSION

Bush meat is a prominent delicacy among Taraba state people. Hunters use different hunting techniques in the State among which some are destructive. Selection of bush animals for hunting is not practised; both pregnant and juvenile animals are being hunted.

There is therefore, the need to implement strict wildlife laws to deter hunters from incessant and indiscriminate hunting of bush animals.

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