

## Understanding Hunters-Wildlife-Spirits Relationships around Natural Saltlicks: Analysis of Mythical Narratives of Hunters' Experience

A.A ALARAPE  
University of Ibadan, Nigeria.

R.O. ADEWALE  
Olabisi Onabanjo University, Ayetoro Campus, Ogun State, Nigeria.

**Abstract.** The knowledge of the drivers of geophagy in human and animals has received a wide spread debate among scientists but yet to reach a conclusive understanding. The idea of hunters hiding around natural saltlicks (NSs) for hunting is not new and has been in existence for more than a decade, however, little is understood about hunters-wildlife-lick (HWL) relationships, perhaps in a spiritual context. This has consequently limited our understanding of the mystery behind NSs of which eco-tourists depend for game viewing. Recently, knowledge on the existence of spirits in human-animal affairs is considerably gaining attention in the scientific world. Experience of such phenomenon is scarce among the park protection staff of Old Oyo National Park (OONP), except for the well-experienced old-hunters (OHs) who also lack documentation. Understanding this may perhaps elicit the impulse behind wildlife geophagy. This study therefore focuses on the assessment of hunters' experience on the spiritual myth of wildlife around NSs of OONP. To investigate this, a combination of semi-structured interview and personal observation methods were used. Nine volunteered key-informants (from among OHs not < 65years of age) were purposively selected across different ranges of the park for interview using snow ball technique. The results indicate that the OHs' experience of NSs seem not to vary, but spiritually based. It appears that OHs encounter with spirits-cum-wildlife is real, from whom they acquire favour for bumper harvest, spiritual divination and medicinal knowledge. This is a confirmation that hunter-wildlife-spirits (HWSs) relationships is an integral part of our nature, of which detail understanding may offer us a whole lot of new possibilities into the cause(s) of geophagy.

**Keywords:** Geophagy, Indigenous knowledge, Spiritual myths, Nature spirits, Hunters-wildlife-lick

### 1. Introduction

Knowledge of local community in human-wildlife relationships has rarely been considered for management in various conservation areas, especially when it comes to spiritual matters, which has hitherto limited effective conservation efforts, despite many recommendations from many researchers (Gumo et al., 2012; Ayaa & Waswa, 2016; Bortolamiol et al., 2018; Adewale & Alarape, 2020b). Again, the use of mystical powers for good or bad has been the practice of hunters and Africans traditional religion (ATR) from time immemorial and has greatly impacted their moral and social behaviour till date (Gumo et al., 2012). Mystical powers are extra-ordinary forces, inter-connectively influencing everything in the cosmos either negatively or positively through supernatural beings (spirits, living dead and ancestors) (Gumo et al., 2012). Understanding of these mystic powers though may have helped African communities to associate with terrestrial beings in the past, but because of lack of documentation, knowledge of spirits and spirituality in relation to nature are becoming rare (Adewale & Alarape, 2020a; Ayaa & Waswa, 2016), except for some feeble tales that have been passed down by our forebearers and constantly rehearsed to us through our parents. It is however still well known among some older Africans today that spirits do exist. For instance, the use of spirits (like "esu" or totemic spirits in form of deity) as protectors or messengers for the families or communities is not uncommon (Diawuo & Issifu, 2015; Ayaa & Waswa, 2016;

Adewale & Alarape, 2020b). One example of such in Nigeria is the celebration or worship of reptile's totemic spirits in some communities in delta state (Rim-Rukeh et al., 2013).

There have been ever increasing debate on spirits-cum-animals and their roles in the life of man, hence communicating a new revolution in conservation (Bortolamiol et al., 2018; Tedeschi & Jenkins, 2019). Many Nigerian hunters opined that spirits can be wildlife or human incarnate at will and usually favour or harm hunters whenever they have encounter, especially during night hunting (Olusola, 2005). Spirits can be fixed or transient, eat or drink, talk (like human) or mute (to which human response or listen), appear (in any form) or disappear, accept sacrifice or offerings and inhabit objects (like stone, water bodies), plants (most especially trees), animals (dog, cat and snake) and even human who occasionally venerate them (Olusola, 2005; Gumo et al., 2012; Bortolamiol et al., 2018). Many of the known traditional medicines today may have been gotten through this means (Olusola, 2005; Nyabwari & Kagema, 2014). In fact, the ecological significance of spirits in the life of Africans (especially hunters) cannot be over emphasized.

Natural saltlick (NSs) is known to have detoxification and nutrient supplementation effect on the consumers. However, the active constituent responsible for such healings effect is uncertain (Krishnamani & Mahaney, 2011). Some practitioners of African traditional medicine opined that the presence of certain spirits in every substance of the earth is capable of such assertion (Luyaluka, 2017). Although, hypothesis like this rarely receive a scientific backup, which is part of the reasons for limitation of research in this area. Other reason is attributed to the phobia people had for diabolical forces (Chidili, 2014). Recently, few researchers like Luyaluka (2017) had used solar cosmological interpretation (SCI) to prove the impact of spirits in the life of human. Bortolamiol, et al., (2018) also documented the relationship between human and nature spirits.

Africans' belief with respect to human-wildlife-spirits (HWSs) is deeply rooted in many of their proverbs, folklores and rituals. This has continued to trigger lots of questions in the scientific world; how did a buffalo-woman get marry to a hunter and bare children, when they were not of the same species (Olusola, 2005)? How would trees talk, to resist being cut and revenge by killing people, when it is no human (Bortolamiol et al., 2018)? How would human being change to animal and animal change to spirits

(GechikoNyabwari & NkongeKagema, 2014)? Or could it be that spirits have influence as to what and how many wildlife a tourist or researcher stand the chance to encounter during their exercise? Or can tourist or researcher get the spirits offended innocently during their visit? The answers to these lingering questions may be realistic, perhaps, if HWSs interactions is recognized and investigated. Such phenomenon may possibly hold a new dimension in conservation (Bortolamiol et al., 2018), and moreover, may give more interpretations to our world of nature. This study therefore investigates the perceptions of old-hunters (OHs) around OONP on HWSs associations. It is hoped that incorporation of results of these findings into the management planning of the conservation areas may serve as a guard in management decision making.

## 2. Methodology

### 2.1 Study Sites

The research was conducted in Old Oyo National Park (fig.1), a place found in Northern part of Oyo State and west central part of Nigeria, between latitude 8°10'N and 9°05'N, and longitude 3° and 4°20'E. It is divided into five ranges (Oyo-Ile, Sepeteri, Marguba, Tede and Yemoso), covering an area of 2,512sq.km<sup>2</sup> to rank it as the fourth largest park in Nigeria.

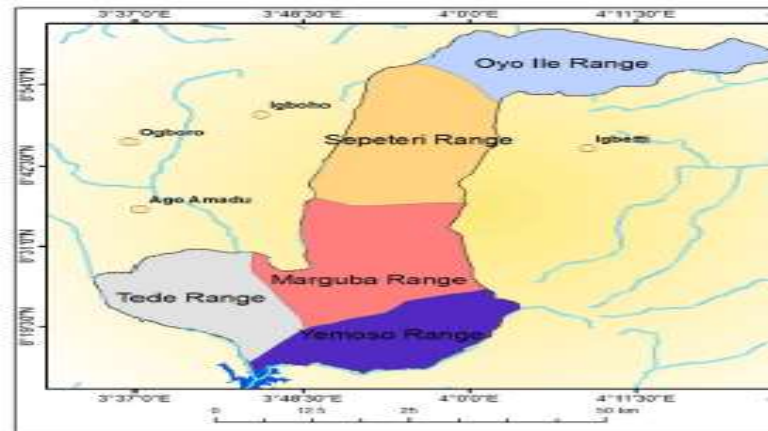


Figure 1: Map of Old Oyo National Park (Akinsorotan, 2017)

### 2.2 Sampling Procedure

Sampling procedure followed that of Adewale & Alarape (2020b) except that the population of the study focused more on older hunters between the ages of 65 and 90, who were purposively selected because of their vast experience in regards to the objective of the study, using snowball sampling

techniques, with at least two respondents drawn from each range to make a total of nine respondents (R<sub>1-9</sub>). Apart from in-depth interview, direct visitation to some places mentioned by the respondents in the park was also undertaken for personal observations (fig. 2-3).

### 2.3 Data Collection

Data were collected between May and July, 2019 to verify the HWSs relationships by interviewing all the volunteered OHs (n = 9) about their narratives in regards to their encounters with spirits at geophagic areas of the park using one or more of the following open-ended questions:

**Question 1:** “Have you any story relating to wildlife-spirits relationships during your hunting activities”. The affirmation of this question probes the second question.

**Question 2:** “Could you please share the story with us”.

**Question 3:** “Do you have any ritual or sacrifice you usually make or follow to avert evil spirits during hunting”

Where the participant gave a “No response” to the first question, another participant was sought for, until a “Yes” response was given from among many

hunters turned to for interview across the four selected ranges; Marguba (M), Tede (T), Yemoso (Y) and Oyo-Ile (O). Only the participants, whose response to the first question was “Yes”, were included in the report. It is worth mentioning here that, the fear of my accomplice (ranger/referrer usually in a para-military uniform during the interview) accounted for the small number of the participants, who probably thought they were to be investigated or apprehended for the crime of illegal hunting they might have committed in the past. The interview of each respondent (R<sub>1</sub>,R<sub>2</sub>...R<sub>9</sub>) was tape recorded in Yoruba (Oyo dialect) and later transcribed into English by arranging it thematically, using the code generated from their respective location and age (MR<sub>1</sub>-66year-old, MR<sub>2</sub>-83year-old, TR<sub>3</sub>-68year-old, TR<sub>4</sub>-65year-old, TR<sub>5</sub>-70year-old, YR<sub>6</sub>-84year-old, YR<sub>7</sub>-87year-old, OR<sub>8</sub>-67year-old, OR<sub>9</sub>-65year-old) for easy representation. This is in line with the recommendation of Kumar (2012) and Creswell (2014).

### 2.4 Data Analysis

Using thematic content analysis, the emerged themes of each conducted interview were descriptively analyzed for each case and across different cases (Adewale & Alarape, 2020b).



*Figure 2: Researcher Observing NSs at Abata Olotaara near River Ogun at Marguba Range*



*Figure 3: Natural Saltlick at Eleerin Area in Yemoso Range of OONP*

### 3. Results and Discursion

#### 3.1 Demographics

Just as Adewale & Alarape (2020b) had reported, all respondents in this study were male (n=9), but older between the ages of 65 and 82 years. With the exception of one who had secondary education, and two who had elementary education, the majority (6 out of 9) of the respondents were illiterates.

#### 3.2 Natural Saltlicks as Taboo Area for Hunting

There is no doubt that cultural taboo impost on hunting in some areas has greatly helped in preservation of wildlife (Rim-Rukeh et al., 2013; Ayaa & Waswa, 2016). In this case, it could have been similarly helpful if NSs of OONP were taboo areas of hunting. When asked whether NSs is a taboo area for hunting or not, all the hunters affirmed that NSs is never in anyway restricted for hunting only that extra care must be spiritually taken when hunting at NSs.

*Hunting at NSs ('Ako') is not really a taboo but only that NSs are special places with spiritually powerful animals. That is the reason why our people use to say only spiritually powerful hunters hunt at NSs areas, "Okunrin takun takun lo n peran loju Ako" (MR<sub>1</sub>-66year-old & YR<sub>6</sub>-84year-old).*

This is in line with the report of some authors that marshy areas (like licks) are spiritually dangerous places to visit (Bhagwat et al., 2011; Rutte, 2011). The name "Akho", though appears in this study as "Ako" as been mentioned by Adewale & Alarape (2020b) to mean NSs in Yoruba.

#### 3.3 Hunting Challenges around Natural Saltlicks

Hunters of OONP believed NSs areas to be a place of spirits and spirit animals, thus referred to it as a "spiritual abode". Therefore, they deemed it necessary to make some sacrifices to appease the spirits before killing at NSs areas (Adewale and Alarape, 2020b). Popcorn (guguru), eggs of local fowl ('eyin ororo') and wood ashes (eeru) are sacrificial items commonly presented to appease the spirits. However, in some cases, the choice of the ingredient for the sacrifice is usually based on the instruction of the spirits, who might appear as human to inform the hunters as to what he or she wants.

*In the spiritual dimension, we believe that all wild animals are associated with one spirit or the other and it is necessary for the hunters to appease them*

*for bumper harvest. Such sacrifice also helps in safe guarding and protecting us against all odds while hunting as well (YR<sub>7</sub>-87year-old).*

Sometimes, when such animal at NSs are given as a gift (from the spirit) to kill by the hunters, it is always good to reciprocate by given a part of it as compensation, being a share to the spirit. Such spirit would have informed the hunters on how to go about it. For example, the spirit may ask the hunter to give such share of the animals to the first person he (the hunter) meets on his way home, as if it has pre-informed the person. This practice is predominant among the hunter and all the interviewees testified to it. Violation of such ritual agreements between the spirits and the hunters may cause unknown sickness either to the hunters or to some members of their family (Olusola, (2005). The same concept has been used to describe one of the causes of diseases in Democratic Republic of Congo (DRC) (Luyaluka, 2017).

*The spirits or spirit animals, if not appeased, could sometimes prevent successful hunting, especially at NSs by going to the extent of impersonating one of the hunters or relatives to prevent being killed. Although, majority of us believed that, this only happened when the hunter involved would have committed one abomination or the other to enable him to be over powered by the spirits, thus committing murderers. Although, the effect may be lessened where such happened in the presence of other spiritually powerful hunters (MR<sub>2</sub>-83year-old, TR<sub>5</sub>-70year-old & OR<sub>9</sub>-65year-old).*

*A Yoruba adage says, animals killed at the NSs are not treated or handled the same way like those killed elsewhere. "Ise ti ase eran ibomii, ako gbodo se eran oju Ako bee" (YR<sub>6</sub>-84year-old).*

#### 3.4 Spiritual Grounding in Wildlife

Grounding or earthing is beginning to gain attention in human medicine. It is described as an act of making human body in contact with the surface of the earth barefooted for healings. In advance situation, several electronic devices (electrode patches and body bands) have also been developed technologically for indoor use, using the same principle (Ober et al., 2014; Chevalier et al., 2015a). A study by Chevalier et al. (2015a) demonstrated how one-hour contact of 40 individuals with the earth showed improvement in their blood circulation, which in turned enhanced their nervous system. In the study, the long disconnection of man from the earth by constant shielding of their body



through synthetic materials, instead of natural material was implicated

*Some of these geophagic animals (not all) visiting the NSs and having just contact with it, without eating it somehow appear to have been wounded or sick in some cases. This is usually common in wet Natural saltlicks (TR<sub>4</sub>-65year-old & YR<sub>6</sub>-84year-old).*

Going by the principle of grounding which states that; until electric potential is equalized, there will always be an exchange of electrons between the surface of the body (skin) and the earth in contact. These “exchange electrons” have been thought to act as antioxidants, thus responsible for improving human health (Oschman, 2007). It may be argued that this phenomenon may not be applicable to wildlife since they constantly engage in contact with nature, as with man in the Stone Age. On the contrary, the instinctive selection of wet NSs (fortified with mineralized clay and some beneficial microorganisms) by the wildlife, (for the supposed grounding) as preference over other types of soil (Williams, 2011; Young et al., 2011) is what seems to be scientifically challenging and thus worth giving attention. The earth is a reservoir of countless beneficial mobile electrons (Chevalier, 2012), which increases with increase saturation, thus having a higher electrical conductivity (Abidin et al., 2014). Like a magic, these excited Earth’s electrons are capable of diffusing from the point of contact to all other parts of the body to affect their healings and protection, most especially when injury is sustained (Oschman et al., 2015). This type of healing has been observed by many authors as somewhat miraculous, in that it is not only faster but effective, compared to western ways of healing wound, which is why wildlife may visit NSs to balance their physiology, mood and fatigue (Chevalier et al., 2015b; Oschman et al., 2015).

Since wild animals are susceptible to wound both in the wild and in the hands of the hunters (Ober et al., 2014), one possible reason for which grounding may be special in wildlife can be for healing of wounds or for mere energy boosting, which demands a scientific investigation. Oschman et al., (2015) attributed grounding to an accelerator of wound healing and overall body wellness.

*“Grounding appears to improve sleep, normalize the day–night cortisol rhythm, reduce pain, reduce stress, shift the autonomic nervous system from sympathetic toward parasympathetic activation,*

*increase heart rate variability, speed wound healing, and reduce blood viscosity” (Oschman et al., 2015)*

The health benefits from grounding cannot be over emphasized, ranging from enhancement of blood circulation, repair of damaged tissues and overall improvement of general health (Chevalier, 2014). The emphasis of majority of our respondents that wildlife engages in special grounding for healings is interesting. In addition to several hypotheses reviewed by Krishnamani & Mahaney (2000) and Pebsworth et al., (2018) on geophagy, it may therefore be stated that NSs provides healings to wildlife through special grounding.

*To us, natural saltlicks are pools of special ingredients for spiritual healings of wildlife, since they themselves are spirit-incarnate. Therefore, their use as strength or power renewer/giver for healings is not surprising (OR<sub>9</sub>-65year-old).*

It is not surprising that the respondents noted that not all animals visiting the NSs engage in geophagy, some visit for mating and socializing, while some actually come to look for prey (Young et al., 2011; Pebsworth et al., 2018). What is surprising is that the hunters believed that wildlife at NSs engage in some kind of supernatural communication with nature by immersing their legs into the depressed marshy place for a while, as if they were into some sort of special connections with the soil, before they quietly leave. This is like coming to obtain strength or one kind of mystical power from the place. A research conducted with the use of camera trap for the observation of geophagic animals at NSs of OONP also showed similar trait (Alarape and Adewale, unpublished data).

*Not all animals found at the natural saltlicks area actually come to eat soil, carnivorous animals like lions don’t eat the soil but luck around to prey on herbivores that predominantly feed on the NSs .Other animals do come there to receive power (TR<sub>3</sub>-68year-old, TR<sub>4</sub>-65year-old & OR<sub>8</sub>-67year-old).*

In fact, the hunters’ description of this rare behaviour of animals matches with that of Oschman et al. (2015) that the Earth acts like “battery for all planetary life”

*.We also believe that feeding is not complete, until animal pay homage to the place of NSs by immersing their legs into it. “Eran o ni jejeje titi, kio ma fi ese ba Ako” (YR<sub>7</sub>-87year-old & MR<sub>1</sub>-66year-old)*

The hunters’ observations of geophagic areas acting like a power house, where wildlife visits to reload their used energy (a sort of grounding phenomenon)

is thought-provoking. Although, this hypothesis has been investigated for humans (Oschman, 2007; Chevalier, 2012; Chevalier, 2015a; Chevalier, 2015b) but hardly studied in wildlife, except for few writers, like Ober et al. (2014) who shared stories of how some animals (cow and dogs) experienced accelerated healings and extended life span because of grounding.

While grounding is thought to act as “electron donor” in human medicine, majority of our respondents shared a contrary opinion. Their belief is that whatever (kind of healing energy) the wildlife receives from NSs during grounding is more of spiritual element than has been physically envisaged in human medicine today. In support of this assertion, Luyaluka (2017) reported similar traditional method of healing in DRC, in which the active ingredients meant for healing in every substance on earth (most especially herbs, water and mineral substances like NSs) are believed to be spirits. These methods may be found in lots of cultures, as a traditional way of healing domestic animals but hardly been documented (pers. comm). Still, Africans believe that

the spirits found in water and probably in clay-containing-water are the same with the one found in plants which Luyaluka (2017) reportedly used for instant healing of a child diagnosed with pulmonary problem with mere contact. The instinctive awareness of this fact by wildlife, that mere contact with substance of the earth could heal their disease is perturbing. The healing of the sick through the use of water, plant and minerals (found in clay) will give us an insight into a new paradigm of way of healing. The healing of wound described by Richard and Forrest (1982) is in support of the use of water and clay by ancient people but argued that the origin of the knowledge may be per chance; from hunters watching the animal did the same. It, however, appears that the knowledge of wound treatment with clay is traceable to ancient hunters, since many of them had a strong relationship with wild animals.

*Sometimes the animals do not just stand inside the natural saltlicks but sit in it, without ingesting the soil, most especially the monkeys. I think it is just to ensure that certain part of its skin touches the ground very well without necessary consuming the soil (YR<sub>7</sub>-87year-old & OR<sub>8</sub>-67year-old).*



**Figure 4:** How application of French clay poultice cured Buruli ulcer infection within few days (Williams, 2017).

Though, from the statements of the respondents, it is not clear whether the animals wallow in the soil or not, however, many authors had demonstrated the important benefits of rubbing wet clay on the skin (fig. 4-5), as an anti-bacterial or anti-fungi (Williams & Haydel 2010; Williams et al, 2017). However, from the findings of several authors (Oschman, 2007; Chevalier, 2012; Chevalier, 2015a; Chevalier, 2015b; Oschman et al., 2015), it appears that the transfer of electrons from the earth by mere contact with the surface of the Earth suffice for healing of wound. It is however possible that such wildlife may have come to heal itself of skin infections or irritation through contact.

*Even the ingested clay is a function of its spiritual constituents, which directly or indirectly impact the lifestyle of the users (YR<sub>7</sub>-87year-old & OR<sub>8</sub>-67year-old).*

The topical application of mud spas (fig. 5) to human skin (pelotherapy) as it is practiced in the science of naturopathy in human medicine is another example

(Naturopathy Health Education Programme [NHEP], n.d.). In a recent research, Qamar et al. (2018) investigated the healing effects of bentonite clay on a rabbit model. The result showed a significant reduction in wound size and inflammation, and fibroblast migration within few weeks. Although, the scientific mechanism by which this kind of clay impact its superior healing effect over all other types of soil has not been fully understood. Chevalier et al. (2012) and Oschman et al. (2015) demonstrated how effective and rapid healing can be impacted by grounding (not just on clay soil alone but on any types of soil on earth) through the transfer of mobile electron from earth surface to the sick (human) body to create antioxidant microenvironment. In animal world (as observed by some respondents during hunting), it appears that clay (soil) of NSs can effectively produce more healing effect than any other surface of the earth, which is why wildlife cannot do without having contact with it, if not eating it.



**Figure 5:** Topical Application of Mud Spas to Human Skin for Healings in India (NHEP, n.d)

Understanding the health effect of grounding in wildlife may bring a new paradigm shift in the scientific method of domesticating them, most especially caged animals. Investigation may also include whether a particular soil produce health effect to the animals better than other types of soil, as a medium of grounding. While there may be other scientific reasons that justify the patronage of NSs by wildlife, the presence of power-giving spirits cannot still be denied as stipulated by many of the respondents. The use of “holy clay” for spiritual healing of human in Chimayo, New Mexico is in support of the view of OHs in this study. This holy soil is either consumed or applied topically on the affected areas by the sick. Because of the wonder it performs in the healing of the sick, this clay has been tagged “miraculous” (Ray & Ferrell, 2008).

### 3.5 Spirit-human Incarnate; Hunters’ Narratives

Majority of the hunters opined that NSs is not only a unique area for powerful spirits but also emphasized that geophagic animals can either be human or spirit incarnate. Although, these spirits can sometimes be helpful by guiding hunters towards a successful hunting (bumper harvest), most especially when they are appeased to. Some of the mythical narratives shared by respective key informants are summarized below:

#### Narrative 1

One of the respondents (MR<sub>1</sub>-66year-old) narrated that he was once asleep while hunting at the NSs one day, when one spirit, in human incarnate woke him up and asked him to leave the place, claiming that the place was dangerous, but not without at the same time asking for a compensation, in the form of a sacrifice for the help rendered.

This spirit was narrated to show kindness to the hunter, however some of them could as well be dangerous, which is the reason why hunters sometimes use incense (*turari*) to scare bad spirits away during hunting. The offering of sacrifice to the spirits and communication of people with the spirits is not a new thing. Over the years, hunters have learnt to abide by the dictate of the spirits whenever they are commanded to do something. If hunters however fail to meet up as promised, sometimes the spirit may revenge by killing him (Bortolamiol et al., 2018). Thus, hunters always take along things like kola nut (*obi*), snuff (known as “*asa*” or “*taba*”- a smokeless tobacco that is usually sniffed or snorted through the nose) and cigarette or traditional tobacco, when hunting especially around NSs.

*I have frequently sat, side by side, with spirits in the form of human while hunting. They usually guide towards large kill thereafter, but not without compensating them with something like kola and snuff (MR<sub>1</sub>-66year-old).*

#### Narrative 2

Another hunter (MR<sub>2</sub>-83year-old) narrated his ordeal with the spirits saying, while he was hidden behind leaves, on a tree around NSs one day, a short old man, holding a staff, came along to approach him. The hunter climbed down to greet him. There they sat down together, under the tree and started charting. The spirit then asked him whether he had had enough kill (of wildlife) for the day, to which he said no. Again, he asked him to give him kola nut and snuff, to which he obliged, for which the spirit started praying that the hunter will reap a bumper harvest that day. And true to the spirit’s words, according to the respondent, it was not too long after the prayer that he killed a very big waterbuck (*Kobus defassa*) that day and he was very happy. He further recounted that

due to that experience, he would never go on hunting expedition without taking along a gift for the spirits in order to bless him. On asking whether he also use incense too, he said incense is usually not a gift for the spirits but rather used to scare bad spirits away from the surrounding.

### Narrative 3

Another respondent recounted that he once had an encounter with a spirit in human incarnate one day, while he was hunting at NSs and the spirit asked him to give him snuff. He searched his bag several times but couldn't find any.

*I was very sad that day because I could not get any animal to kill, much far and fast as I ran quickly back home to get the snuff, but could no longer find the spirit, when I came back the following day. So I had to go home, after spending lots of days in the forest without a single kill. It was indeed very painful days for me (TR<sub>3</sub>-68year-old).*

### Narrative 4

Sometimes, the spirit incarnates a newly dead person (living dead) in town and appeared before the hunters while hunting, changing forms from person to animal and animal to person at NSs. One respondent narrated how he once saw a corpse, rapped in white (life and direct), rolled from nowhere down to the NSs by a strong blowing wind at one mid-night, while hunting. All of a sudden, the living dead changed to roan antelope (*Hippotragus equinus*). This situation may be scary to amateur hunters but are commonly experienced by most professional hunters.

*When the cloths finally stripped off the corpse by the wind, I could identify the dead body (spirit animal/owner of the body). Then, it became no new story to me when it was announced to me when I got home that the person was dead last night (MR<sub>2</sub>-83year-old).*

To this hunter, he believed that such persons are usually dead bad people and as such, the experience are usually kept as secret as possible, never to be divulged to anyone, not even when the corpse is dare close to the hunter. Also, it is better not to kill such animal-spirit incarnate, however where such spirit animal is killed by the hunters, it becomes necessary for the hunter(s) to appease the spirit through sacrifice; usually by presenting the left hand of the killed animal to the first person the killer meets on the way back home.

*There are lots of unexplainable magical things to witness when one hunts at the NSs because it is a place of spirits. Magical or spiritual animal are capable of human incarnate. Such wildlife should never be killed if the hunter is not supernaturally powerful (YR<sub>6</sub>-84year-old).*

### Narrative 5

A hunter (MR<sub>1</sub>-66year-old) related his experience in one of his encounter with spirit animals at NSs; he said he was on a night hunting one day with some younger hunters, when one of them called his attention to see something coming towards them. On looking there, they saw a tall man (supposedly a spirit) with complete white clothes wrapped around him approaching them, then it became shortened all of a sudden and a black duiker appeared (like a magic). As he made attempt to shoot, the animal took the appearance of some of the younger hunters whom he brought for hunting. He could not kill it and so he had to exercise patience for a while to comprehend what was happening.

*Like our Yoruba adage will say "a hunter will not go for hunting except with his bag of charms" (ti ode ba roko, tohun ti apo re nii rin)(MR<sub>1</sub>-66year-old).*

He immediately reached out to his charms and in the end he was able to overpower the spirit. The killed animal was indeed magical, as it has one special horn and a left over used-bullet right on his head (from an injury sustained in the past) in addition to its two horns (which made it appeared like a four-horned animal). As a rule, he did not butcher the animal nor did he eat it, but took it home to give to older hunters in form of a gift (MASH-66year-old & MASH-83year-old).

The association of such living dead corpse with devilish people and forest spirits is very common in African oral literature and this has been accounted for by Rim-Rukeh et al. (2013), where the corpse of people who were guilty of witchcraft, abominable acts or who died mysteriously are thrown into an evil forest to prevent their spirits from reincarnating as human. Perhaps, such living dead spirits of humans may therefore continue to dwell in the forest as wildlife incarnate. More so, in the past, it is not uncommon to find typical African men to attach talisman (charms or amulets) to themselves for a particular kind of protection (Chidili, 2014; Nyabwari and Kagema, 2014). For effectiveness, the use of spells and/or incantations is part of the ingredients of charm used by Africans (Chidili, 2014) to engage the spirits, most especially by the hunters.



This experience of spirits mimicking human form is most feared by many hunters as it can get them confused, thus mistakenly killing unintended person. Although, in the hunters' world, it is believed that hunters are capable of overpowering such spirits if he is free of any blemish (heinous act) in the past. Most victims of such act are usually guilty of certain atrocity in the past (such as committing adultery with their fellow hunter's wife) for which they must be punished by the gods of iron (Ogun deity), which is the reason why the spirit-wildlife can easily take their form and thus making them victims of mistakes during hunting (Oguntade, pers. comm.). With this in mind, it means that the ability of the OHs to be able to overpower the spirit-wildlife in the end is an indication that such hunter was free from an act of abomination in the past. This is one of the reasons why most hunters are regarded as truthful people in the society.

### **Narrative 6**

Lucking around NSs to kill wildlife may attract some unknown visible and invisible visitors, which may be spirits or spirits human incarnate. A hunter narrated how he once shot a waterbuck at the NSs. The animal stumbled and struggled to escape the place, and as usual, he pursued it by following its track from place to place without citing it, until he was tired. As he was taking time to rest, a man suddenly appeared before him. Though he could never tell how or where the man came from. He said he was not that afraid, because this is not the first time this will happen when hunting and moreover real hunters are usually prepared for such unfortunate happenings. As he was still wandering who the person was, the man (spirits) announced:

*"[...] that animal you are pursuing can never be killed, so do not waste your time for nothing, rather go back and follow this path (pointing a finger to demonstrate), you will see two other animals to kill to your satisfaction"*

The spirit had asked him to forgive the animals (ko foriji), as it claimed that the animal was then under intensive care and was not meant to die. Hearing that, the hunter left the scene, followed the spirit instruction and true to its words, he found two very big animals to kill that day. This kind of story of animal-human incarnate is common in African folktales, though may be controversial. Most Yoruba folklores indicate series of relationship between spirit animals and hunters, where spirit-animals reciprocate a favour by compensation the hunters with bumper harvest or otherwise. One of such is the one reported by Olusola (2005), narrating the story of beautiful

woman-buffalo incarnate that got married to a powerful hunter out of gratitude to the hunters, for keeping her (double lives) secret. Ayaa & Waswa (2016) also reported similar story where the people of Iteso community (in Kenya) never killed a certain bird that did them a favour in the past.

### **3.6 Spirit herdsmen**

A hunter claimed to have seen a number of spirit herdsmen in human form (tall like a bamboo tree) herding wildlife animals towards NSs and elsewhere, on several occasions. Although, it seems, sometimes the spirit may not direct them to the NSs if he (the spirit) knew that it is dangerous for them (may be because of hunters' presence). Or rather make the animals come to feed at the NSs but invincible to the hunters. The animals will be feeding on the soil, right in the hunters' presence, but the hunters will not see them, except for the sound of their feeding that will be heard. In cases like this, hunters usually shoot at the spot. And, per chance, a maimed/dead animal may instantly appear.

### **3.7 How Hunters Appease the NSs Spirit**

Killing animals at the NSs is highly challenging for hunters, as most of the animals at NSs are believed to be dragged there by the spirit herdsman. It may cause trouble (like sickness of children) for such hunter, if such animals are killed without permission from the companion spirit. All the respondents affirmed that sacrifice is usually given to the god of iron (Ogun deity) for protection and easy target, before embarking on hunting (Adewale & Alarape, 2020b).

### **3.8 Ritual at Natural Salt licks**

Many respondents also reported the use of NSs as a center for making sacrifice or burying different kind of charms (juju) especially for demotion. The uses of special spots for similar purpose have been reported by others (Bortolamiol et al., 2018; Gumo et al., 2012). It appears, some members of the community, including the hunters regard NSs as a sacred place for appeasing some particular kind of spirits for certain favour. Hunters may utilize animal hair or soil found at the lick for making charm called "Arinako" (a charm that make hunters to encounter much wildlife during hunting). The use of hair for making black magical power has been mentioned by GechikoNyabwari & Nkongekagema (2014). Hunters also help some people to collect lick soil of which they never knew the purpose for which they needed it for (Adewale & Alarape, 2020b).

Generally, people are known to express their apprehension anytime they have contact with the spirits of any kind (Gumo et al., 2012; Chidili, 2014), however, the fearless attitude displayed by the OHs in these study is surprising, indicating their preparedness towards such encounter and more so, it is an affirmation that meeting with spirits during hunting has become part and parcel of them, so much that they always long for it. Chidili (2014) opined that it is not unusual to find some people earnestly seeking to encounter this magical experience because of the benefits they intend to derive from it. In preparation for encountering magical wildlife, hunters usually possess various charms, amulet and talisman for a successful hunting (GechikoNyabwari & NkongeKagama, 2014). All animals, either domestic or wild are capable of exhibiting one spiritual power or the other for which their inclusion as ingredients for making magical spells largely depends on certain quality they possess. The capability of animals to be possessed by spirits or changed to human and vice versa is well known in Africa (GechikoNyabwari & NkongeKagama, 2014).

African beliefs regard living dead, as ambassadors of supernatural beings on the surface of the earth and so can manifest themselves before any being at will to communicate (Gumo et al. (2012). It could therefore be understood when some of the respondents attested to the fact that living dead can manifest themselves as wildlife before hunters during hunting at the NSs. Example of Yoruba adage that depict the relationships among HWSs can be found in one of the incantations usually made by some hunters, diviners and traditional medicine men to summon the living dead spirits:

*The spirit, if it refuses to answer) ..... shall become mud house-eating goat, palm frond-eating sheep and lizard roaming around the house. (Ti aba pe oku , tio ba je)..... odi ewure jelejele, odi aguntan jemojemo, odi alangba/alaamu tin je leba ogiri.*

This indicates that animals like goats are known to be feeding on mud house (made up of red clay) and they are therefore likened to the fresh living dead roaming around the house.

Contrary to the common beliefs in Islam and Christianity (which is the promise of paradise), the practitioners of the African and Hindus religions believe in the philosophy of re-incarnation, in that, the human soul undergoes change of status depending on the character of the soul in the previous life. While Hinduism stressed endless recirculation of life and death as incarnate of man and animal, African

religions believe that, once you die, the spiritual attainment of your soul as ancestral being (living dead/spirits) or as a reborn person after death greatly depends on how better the owner of the departed soul had lived his or her life on the earth before death overtakes him (Chidili, 2014).

#### 4. Conclusion

Although, the correlation between wildlife/human and spirits is rarely documented except in few reports (Bortolamiol et al., 2018; Gumo et al., 2012), however beyond this low representation, it is interesting to note that the belief in the spirit and the practice of divination still receive a wide spread acknowledgement among the hunters till today. Therefore, the experience of the OHs and some other authors, in relation to the knowledge of the spirits, as related in this study cannot be denied, for the mere fact that it cannot be experimented. In this study, hunters' narratives are testimonies of the existence of spirits-animals in the midst of man and nature (NSs), as it appears that spirits have special influence as to the success of hunters during hunting exercises. Results further demonstrated how human-wildlife-spirits relationship at NSs was exhibited and suggests how such findings can further investigation in this area, in an attempt to encourage protected areas to consider it in management planning.

#### Acknowledgements

The authors are very grateful to the Management of the Old Oyo National Park for authorizing the conduct of this study. Our appreciation also goes to the volunteered respondents (old-hunters), who in the means of their apprehension, still manage to respond to our interview.

#### References

- Abidin, M.H.Z. Ahmad, F. Wijeyesekera, D.C. & Saad, R. (2014). The influence of basic physical properties of soil on its electrical resistivity value under loose and dense condition. *Journal of Physics: Conference Series*, 495.
- Adesina, L.M. & Akinbulire, T. O. (2018). Development of an improved earthing method for power and distribution transformers substations. *Nigerian Journal of Technology*, 37(3) : 720-726.
- Adewale, R.O & Alarape, A.A. (2020a). Appraisal of natural saltlicks management of Old Oyo National Park for wildlife and eco-tourism:

- A baseline study. *KIU Journal of Humanities*, 5(3) : 109-118.
- Adewale, R.O & Alarape, A.A. (2020b). Assessment of knowledge and experience of hunters on natural saltlicks of Old Oyo National Park. *IOSR Journal of Agriculture and Veterinary Science*, 13 (12): 13-2.
- Akinsorotan, O.A. (2017). Status and determinants of large mammal occupancy in a Nigerian protected area. PhD Thesis, Nottingham Trent University.
- Ayaa, D.D & Waswa, F. (2016). Role of indigenous knowledge systems in the conservation of the bio-physical environment among the Teso community in Busia County-Kenya. *African Journal of Environmental Science and Technology*, 10(12): 467-475.
- Bhagwat, S., Ormsby, A.A. & Rutte, C. (2011). The role of religion in linking conservation and development: challenges and opportunities. *Journal for Study of Religion, Nature and Culture*, 5(1) : 39-60.
- Bortolamiol, S., Krief, S., Chapman, C., Kagoro, W., Seguya, A. & Cohen, M. (2018). Wildlife and spiritual knowledge at the edge of protected areas: raising another voice in conservation. *Ethnobiology and Conservation*, 7(12): 1-26.
- Chevalier, G. (2014). Grounding the human body improves facial blood flow regulation: results of a randomized, placebo controlled pilot study. *Journal of Cosmetics, Dermatological Sciences and Applications*, 4: 293-308.
- Chevalier, G. (2015a). The effect of grounding the human body on mood. *Psychological Reports: Mental & Physical Health*, 116 (2): 534-542.
- Chevalier, G., Melvin, G. and Barsotti, T. (2015b). One-hour contact with the earth's surface (grounding) improves inflammation and blood flow: a randomized, double-blind, pilot study. *Health*, 7: 1022-1059.
- Chevalier, G., Sinatra, S.T., Oschman, J.L., Sokal, K. & Sokal, P. (2012). Earthing: Health implications of reconnecting the human body to the earth's surface electrons. *Journal of Environmental and Public Health*, 1-8.
- Chidili, B. (2014). Understanding the mystical power: a case study of African and Christian religious beliefs for national development. *IOSR Journal of Humanities and Social Science*, 19(10): 62-68
- Creswell, J.W. (2014). Research design: qualitative, quantitative and mixed methods approach (4th Ed.). Thousand Oaks, CA: SAGE Publications.
- Diawuo, F & Issifu, A. (2015). Exploring the African traditional belief systems in natural resource conservation and management in Ghana. *The Journal of Pan African Studies*, 8(9), 115-131.
- GechikoNyabwari, B. & NkongeKagama, D. (2014). The impact of magic and witchcraft in the social, economic, political and spiritual life of African communities. *International Journal of Humanities Social Sciences and Education*, 1(5) : 9-18.
- Gumo, S., Gisege, S.O., Raballah, E. & Ouma, C. (2012). Communicating African spirituality through ecology: challenges and prospects for the 21st century. *Religions*, 3: 523-543.
- Krishnamani, R. & Mahaney, W.C. (2000). Geophagy among primates: adaptive significance and ecological consequences. *Animal Behaviour*, 59: 899-915.
- Kumar, R. (2012). Research methodology: a step-by-step guide for beginners. London: Sage Publications Ltd.
- Luyaluka, K.L. (2017). Spiritual healing in Kongo tradition: its nature, scientific validity, generalization to African cultures and modern continuation. *Saudi Journal of Humanities and Social Sciences*, 2(8) : 653-661.
- Naturopathy Health Education Programme (NHEP). (n.d). Information Brochure. Central Council for Research in Yoga and Naturopathy. India.
- Ngara, R. (2013). Indigenous knowledge systems and the conservation of natural resources in the Shangwe community in Gokwe district, Zimbabwe. *International Journal of Asian Social Science*, 3(1): 20-28.
- Olusola, A.G. (2005). Animals in the traditional worldview of the Yorùbá. *Folklore*, (30):155-172.
- Ober, C., Sinatra, S.T. and Zucker, M. (2014). Earthing: the most important health discovery ever (2nd Ed.), Basic Health Publications, Laguna Beach.
- Oschman, J.L. (2007). Can electrons act as antioxidants? : A Review and Commentary. *Journal of Alternative and Complementary Medicine*, 13 : 955-967.
- Oschman, J.L. Chevalier, G & Brown, R (2015). The effects of grounding (earthing) on inflammation, the immune response, wound healing, and prevention and treatment of chronic inflammatory and autoimmune

- diseases. *Journal of Inflammation Research*, 8 : 83–96.
- Pebsworth, P.A., Huffman, M.A., Lambert, J.E. & Young, S.L. (2018). Geophagy among nonhuman primates: a systematic review of current knowledge and suggestions for future directions. *American Journal of Physical Anthropology*, 168: 164 -194.
- Qamar, Z.P., Ashique, A.A., Mashkoo, A. A. & Abdul Rahim, M. (2018). Wound healing effects of bentonite: a rabbit model experimental study. *Biomedical Journal of Science and Technology Research*, 10(2) : 7683- 7686.
- Ray, E & Ferrell, J.R. (2008). Medicinal clay and spiritual healing. *Clays and Clay Minerals*, 56 (6): 751-760.
- Richard, D & Forrest, M.B. (1982). Early history of wound treatment. *Journal of the Royal Society of Medicine*, 75:198-205.
- Rim-Rukeh, A., Ierhievwie, G. & Agbozu, I. E. (2013). Traditional Beliefs and Conservation Of Natural Resources: Evidences from Selected Communities in Delta State, Nigeria. *International Journal of Biodiversity and Conservation*, 5(7): 426-432.
- Rutte, C (2011). The sacred commons: Conflicts and solutions of resource management in sacred natural sites. *Biology Conservation*, 144(10): 2387-2394.
- Tedeschi, P. and Jenkins, M. A. (2019). Transforming Trauma: Resilience and healing through our connections with animals. Purdue University Press. (Knowledge Unlatched Open Access Edition)
- Young, S. L., Sherman , P. W., Lucks, J. B. & Pelto G. H. (2011). Why on Earth? Evaluating hypotheses about the physiological functions of human geophagy. *Quarterly Review of Biology*, 86: 97–12.
- Williams, L.B. (2017). Geomimicry: harnessing the antibacterial action of clays. *Clay Minerals*, 52: 1–24.
- Williams, L.B. & Haydel, S.E. (2010). Evaluation of the medicinal use of clay minerals as antibacterial agents. *International Geology Review*, 52: 745-770.