

Ethnobotanical Survey of Plants in Bokkos District Of Bokkos Local Government Area of Plateau State

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-----ABSTRACT-----

An ethnobotanical survey of four villages in Bokkos district, situated in Bokkos Local Government Area of Plateau State was conducted between October and November 2019. Oral interviews were conducted among traditional medical practitioners, housewives, farmers, elderly men and women. From the survey, 50 plant species distributed across 22 families were recorded with at least one medicinal, food, fodder, spiritual significance and other economic value to man and livestock. Most of the plant families recorded belonged to the family Fabaceae, which accounted for 8 species (40%) of the total plant species recorded. This was clearly followed by the family Asteraceae which had 6 species (12%), and Euphorbaceae with 4 species (8%). The families Malvaceae, Lamiaceae, Moraceae and Verbenaceae had 3 species (6%) each. Apocynaceae and Poaceae had 2 species (4%) while Rhamnaceae, Vitaceae, Annonaceae, Rubiaceae, Araliaceae, Oxalidaceae, Asparagaceae, Commelinaceae, Araceae, Asphodelaceae, Pedaleaceae, and Loranthaceae had one species each. Fifteen (15) (30%) of the fifty (50) plant species were found to be used as food, condiments and spice. Seven (7) (14%) of the plants are used as fodder and 6 (12%) of the plants are used for spiritual purposes. **Keywords:** Ethnobotanical Survey, Medicinal plants, Indegenous Knowledge, Bokkos Local Government Area, Plateau State.

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I. INTRODUCTION

Ethnobotany is the study of how communities of a particular region use indigenous plants for food, clothing medicine and other activities. The documentation of such plants is critical for the conservation and utilization of biological resources. From the very beginning of human civilization, plants have been employed for alleviating human suffering and records of the use of plants have been documented for thousands of years. The active principles isolated have provided breakthroughs in the development of several life-saving drugs, which are in use today and different civilisations have developed their own indigenous system of medicines (Akwaji *et al.*, 2017). There is currently a general paucity of information on the ethnobotanical information/indigenous knowledge of plants in Plateau State, in Nigeria, also known as the home of Peace and Tourism.

Ethnobotany is the scientific study of the relationship between people and plants. It interfaces between indigenous people and their wild exploits of plants around them, which is a significant aspect of the conservation of biological diversity. Herbs are generally valued for virtues as food as well as medicine. Herbal medicine has long been recognised as one of the oldest forms of remedies used by humans. Many people in developing countries still rely on traditional healing practices and medicinal plants for their daily healthcare needs, in spite of the advancement in modern medicine. There is an abundance of undocumented traditional knowledge of herbal remedies used to treat diseases in most cultures. Different traditional healing practices worldwide are designed for either therapeutic or prophylactic use in human or animal diseases. Several studies carried out in Africa, Asia, Europe, Latin America and North America show that plants are routinely used as remedy for animal diseases (Nkechi *et al.*, 2011).

In many places across the world, home gardening is a traditional conservation system, where some key versatile plant species are grown by local farmers near their houses. Many studies have focused on home gardens investigating their potential to host biodiversity or to alleviate poverty. The role of home gardens as repositories of biological diversity has been acknowledged through a comprehensive and interdisciplinary investigation of their agro-biodiversity (Valere *et al.*, 2014).

Medicinal plants are presently in high demand and their acceptance is increasing progressively. Undoubtedly, plants play an important role by providing essential services in the ecosystem. Without plants human and other living organisms cannot live in the way they should. Herbal remedies, especially medical herbs have constantly acted as overall indicators of ecosystem health. In fact, the use of medicinal plants for the treatment of diseases dates back to the history of human life, that is since human beings have sought a tool in their environment to recover from a disease, the use of plants was their only choice of treatment (Zakra & Hossein 2018).

Medicinal plants are important for a plethora of reasons. Firstly, it ensures that indigenous culture heritage is preserved from being lost for the use of both present and future generations. Studies have shown that indigenous knowledge about herbal medicines is continuously being lost through themes such as acculturation and biodiversity losses. Secondly, through further research such as phytochemical, biochemical, pharmacological and clinical studies information on indigenous herbal medicine can lead to discovery of new bioactive agents for the treatment of various ailments. For these reasons, the harvest should be documented and sustained, so these can continue to be profitable resources for future generations (Augustine & Alex, 2017).

The documentation of indigenous knowledge via ethnobotanical studies will not only safeguard disappearing knowledge but will also help in the preservation and sustainable utilization of medicinal plants. The in-depth traditional knowledge of medicinal plants is at risk of extinction due to the dependency on oral transmission, and as such there is an urgent need to document such knowledge (Kwalme *et al*, 2019).

According to the world health organisation (WHO) the definition of traditional medicine may be summarised as the sum total of all the knowledge and practical, whether explicable or not used in the diagnosis, prevention and elimination of physical, mental or social imbalance and relying exhaustively on practical experience and observation handed down from generation to generation whether verbally or in writing (Monier, 2006).

Medicinal plants have been used since ancient times for the treatment and management of diabetes mellitus (DM) in traditional medicine systems of many cultures throughout the world. Currently medicinal plants continue to play an important role in the management of diabeties mellitus, especially in developing countries where many people do not have access to conventional anti diabetic therapies (Paul *et al*, 2015).

According to Thillaivanan, (2014), drug adulteration is one of the challenges of traditional medicine. Drug adulteration is defined as the mixing or substituting of the original drug material with other spurious, inferior, defective, spoiled, substances or drug which do not confirm with the official standards.

Fundamental challenge to traditional medicine is the wide spread reported cases of false healers and healing. Traditional medical resources may be doomed to extinction by over exploitation resulting from excessive commercialisation. The proof requires that the active components contained in medical plants are useful, safe and effective (Salihu *et al*, 2014).

Previous studies by Aliget (2014), has revealed some useful Timber and Non-Timber forest products in four districts (including Bokkos district) of Bokkos Local Government Area of Plateau State in Nigeria. Just recently, Musa (2021) has reported on the ethnobotanical Assessment of Kadim Forest located in Bokkos Local Government Area, same as that where the current study was undertaken revealed that the timber and non-timber potentials of the Forest.

There is however, a general paucity of documented information on the ethnobotanical potential/indigenous knowledge of plants in the area under study and generally in Plateau State, which is made up of 17 Local Government Areas and endowed with many plants therein.

Study Area

II. MATERIALS AND METHOD

The study was carried out in Bokkos District of Bokkos Local Government Area (LGA) of Plateau State, Nigeria. Bokkos local Government area is one of the 17 Local Government Areas of Plateau State in Nigeria. It is 77km south of Jos the Plateau State Capital. It was first created in 1980, scrapped in1983 and recreated on the 7th of October 1991. It is bounded to the north by Barkin Ladi LGA, to the east by Mangu LGA to the south by Qua'anPan LGA, and to the west by Sanga LGA in Kaduna State and has a land mass of about 3,053sqkm.

Bokkos LGA has its headquarters in the town of Bokkos at 9⁰1800''N 9⁰00'00''E/9.300000⁰N 9.00000⁰E. It has an area of 1,682km² and a population of 178,454 from the 2006 census. Bokkos local government has eight districts namely Bokkos, Mushere, Daffo, Sha, Manguna, Richa, Toff, and Kamwai. It has a population of about 130,000 people as per the 1999 population project.



(www.racerthought.wordpress.com)

Data Collection

The data for the Ethnobotinical survey in Bokkos District covering four villages namely: Bokkos and Tangur Shar, Mambung, Bokkos and Tarangolwur villages. Was conducted via oral interviews where semistructured questionnaire were administered to obtain indigenous knowledge about medicinal plants used in the treatment of various ailments such as food, fodder, and for spiritual purposes.

Through purposive sampling, twenty (20) respondents, made up of Traditional Medical Practitioners (TMPs), herb sellers, farmers and herbalists were interviewed using the native language and the information documented on the semi-structured questionnaire. Respondents were selected based on their knowledge as recommended by community leaders and local authorities.

Plants were identified on the field and elevation and GPS coordinates of the plants documented were recorded. Plant specimens indicated in the report were collected and prepared as herbarium specimen.

III. RESULTS Table 1: SUMMARY OF ETHNO BOTANICAL SURVEY CONDUCTED IN BOKKOS DISTRICT, IN PLATEAU STATE, NIGERIA

S/N	PLANT NAME	FAMILY	COMMON NAME	RON NAME/L OCAL	HAUSA NAME/L OCAL	GPS COORDINAT ES	USE	PART USED
1	Assuthassa	Astanagaga	Derictly	NAME	NAME	Elaw/261ft	It is used to treat	The
1.	Acaninospe rmum hispidum DC.	Asteraceae	starbur	Ayawo	yawu	N09 ⁰ 21.820' E009 ⁰ 02.062'	pile infections.	whole plant.
2.	Ageratum conyzoides L.	Asteraceae	Goat weed	Mangun	Ahehen	Elev:4271ft N09 ⁰ 18.685' E009 ⁰ 00.580'	It is used to treat wounds like fractures.	The whole plant.
3.	Albizia zygia DC.	Mimosaceae	Nongo	Ushu		Elev:4281ft N09 ⁰ 18.687' E009 ⁰ 00.584'	It is used for fishing.	The leaves.
4.	Aloe schweinfurt hii Baker	Asphodelace ae		Dau		Elev:4266ft N09 ⁰ 18.706' E009 ⁰ 00.578'	It is used to treat fractures.	The whole plant.
5.	Annona senegalensi s Pers	Annonaceae		Rakul	Gwandar daji	Elev:4333ft N09 ⁰ 18.541' F009 ⁰ 59.431'		I
6.	Asparagus africanus Lam	Asparagacea e	Asparagus fern	Arenikus ham		Elev:4369ft N09 ⁰ 21.821' E009 ⁰ 02.062'	It is used to treat infections of the testes	Roots
7.	Bidens pilosa L.	Asteraceae	Black jack	Mashor		Elev:4335ft N09 ⁰ 21.819' E009 ⁰ 02.067'	It is edible.	The leaves.
8.	Biophytum sensitivum	Oxalidaceae	Little tree plant	Mashafen		Elev:4366ft N09 ⁰ 21.850' E009 ⁰ 02.047'	It is used spiritually for home security	The whole plant
9.	Cammelina hirsute	Commelinac eae	Benghal dayflower	Mavotlon g		Elev:4282ft N09 ⁰ 18.687' E009 ⁰ 00.584'	It is used as fodder (to feed	The whole
10.	<i>Carissa</i> <i>edulis</i> Vahl.	Apocynaceae	Black	Uk weren g	Lemun sunsu	Elev:4384ft N09 ⁰ 21.854'	It is edible and also used to treat	The fruits and
11.	Cissus araloides Welw.	Vitaceae		Wollol		Elev:4253ft N09 ⁰ 16.344' E009 ⁰ 02.982'	It is used spiritually to repel guns and knife charms	The whole plant.
12.	Clerodendr um capitatum (Willd.) Schum. & Thonn	Verbenaceae	Glory bower	Yitmavit or		Elev:4289ft N09 ⁰ 18.684' E009 ⁰ 00.591'	It is used to treat fever.	Leaves.
13.	Croton macrostach yous	Euphorbiace ae	Broad leaved crotton	Mapur		Elev:4286ft N09 ⁰ 18.681' E009 ⁰ 00.577'	It is used to bury a poor man.	The leaves.
14.	Hochst. Cussonia arborea Hochst	Araliaceae	Cabbage tree	Ganglin		Elev:4375ft N09 ⁰ 21.854' E009 ⁰ 02.046'	It is used to generate fire.	The whole
15.	Desmodium sp Desv.	Fabaceae	Chikta	Atakoshe		Elev:4328ft N09 ⁰ 18.498' E009 ⁰ 59.459'	It is used to charm ladies (rituals).	The seeds.
16.	Dichrostac hys cinerea Wight et Arn	Mimosaceae	Sickle bush	Kadaram		Elev:4329ft N09 ⁰ 18.491' E009 ⁰ 59.450'	It is used to treat dysentery and diarrhoea.	The leaves.
17.	Eucalyptus camaldulen sis Depph	Myrtaceae	River red gum	Agardene r	Turare	Elev:4240ft N09 ⁰ 16.331' E009 ⁰ 02 983'		
18.	Euphorbia camerunica	Euphorbiace ae	Cactus	Kabat	Kerena	Elev:4246ft N09 ⁰ 16.012' E009 ⁰ 03.007'		

19.	Euphorbia poissonii Pax.	Euphorbiace a	Candle plant	Karangas h		Elev:4238ft N09 ⁰ 16.333' E009 ⁰ 02.990'	It is used spiritually for farm security	The whole plant.
20.	Ficus abutifolia (Mia) Mia	Moracea	Large leaved rock			Elev:4257ft N09 ⁰ 16.349' E009 ⁰ 02 982'	against thieves.	
21.	<i>Ficus sur</i> Forssk.	Moraceae	Fig tree	Makamb ong	Baure	E009 02.932 Elev:4254ft N09 ⁰ 16.374' E009 ⁰ 0.010'	It is dible.	The fruits.
22.	Hyparrheni a	Poaceae		Ahor		Elev:4283ft N09 ⁰ 18.746'	It is used for fodder and also	The whole
23.	Staph. Hypoestes	Acanthaceae	Polka plant			Elev:4362ft	houses. It is used as	The
	(Vahl.) Soland ex Roem & Schult.					E009 ⁰ 02.068'	livestock.	plant
24.	Hyptis suaveolens	Lamiaceae	Bush tea			Elev:4380ft N09 ⁰ 21.856'	It serves as blood tunic.	The whole
25.	(L.) Polt. Jatropha curcas L.	Euphorbiace ae	Physics nut	Garau	Benidazu gu	Elev:4253ft N09 ⁰ 16.377' E009 ⁰ 03.009'	It is used to treat ulcer, tooth ache and pile	The latex.
26.	Lantana camara L.	Verbanaceae	Lantana weed	Ashaitigo rock	Kashinku da	Elev:4422ft N09 ⁰ 16.332' E009 ⁰ 02.999'	It is edible.	The fruits.
27.	Leucas martinicens is (Jacq.) R.Br.	Lamiacea	Whitewort		Bunsurun fadam	Elev:4249ft N09 ⁰ 16.348' E009 ⁰ 02.983'	It is used spiritually to repel against gun shot.	The leaves.
28.	Pennisetum pedicellatu m Trin.	Poaceae	Fountain grass	Pwer		Elev:4360ft N09 ⁰ 18.484' E009 ⁰ 59.477'	It is used as fodder by animals.	The whole plant.
29.	Pennisetum polystachio n (L.)	Poaceae	Mission grass	Pwer		Elev:4360ft N09 ⁰ 18.484' E009 ⁰ 59.455'	It Is Used as Fodder for animals.	The whole plant.
30.	Phoenix reclinata Jacq.	Palmaceae	Wild date palm	Akwep		Elev:4287ft N09 ⁰ 18.708' E009 ⁰ 00.576'	It is edible, could also be used to make mats and cloths.	The fruits and leaves respectiv ely.
31.	Psidium guajava L.	Mytaceae	Guava	Aguava	Gwaba	Elev:4261ft N09 ⁰ 16.377' E009 ⁰ 0.01'	It is used to treat dysentery and it is also edible.	The leaves and fruits respectiv ely.
32.	Saba senegalensi s (A. DC.)	Apocynaceae	Weda	Munja	Ciwo	Elev:4257ft N09 ⁰ 16.342' E009 ⁰ 02.983'	It is used to treat stomach ache and it is also	The roots and fruits respectiv
33.	Pichon Senegalia ataxacanth a (DC.) Kyal. & Boatwr	Mimosaceae	Flame thorn	Buse	Kwadariy a	Elev:4378ft N09 ⁰ 21.859' E009 ⁰ 02.046'	edible. It is used to treat wounds resulting from fire burns.	ely. The whole plant.
34.	Senna abutilifolia	Moraceae		Maduyi		Elev:4223ft N09 ⁰ 16.332' F009 ⁰ 02 999'	It is edible.	The leaves.
35.	Senna ocidentalis (L.) Link		Coffee senna	Ammadu yi		Elev:4378ft N09 ⁰ 21.852' E009 ⁰ 02.047'		The whole plant
36.	Senna singueana (Del.) Lock	Cesalpinacea e	Sticky pods	Mez	Runhu	Elev:4227ft N09 ⁰ 16.326' E009 ⁰ 02.995'	It is used to treat pile infections.	The bark
37.	Sesamum indicum L.	Pedaliaceae	Sesame	Ciream	Karkashi	Elev:4330ft N09 ⁰ 18.497' E009 ⁰ 59.454'	It is edible (used in soup making).	The leaves.
38.	<i>Sida acuta</i> Burm.f.	Malvaceae	Broom weed	Matadul	Tsadar lamarudu	Elev:4293ft N09 ⁰ 18.686'	It is used as charm against	The whole

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						E009 ⁰ 00.59'	iron.	plant.
39.	Spermacco ce verticilata Le	Rubiaceae	Shrubby false buttonweed	Machwai kawan	Karyagam a	Elev:4242ft N09 ⁰ 16.333' E009 ⁰ 03.010'		
40.	Tamarindus indica L.	Caesalpinace ae	Tamarind	Machani	Tsamiya	Elev:4251ft N09 ⁰ 16.396' E009 ⁰ 03.010'	It is used to treat stomach ache and it is also edible.	The fruits.
41.	<i>Topianthus</i> globiferus (A. Rich.) Tiegh	Loranthaceae	Mistletoe	Undur	Kauchi Doruwa	Elev:4326ft N09 ⁰ 18.496' E009 ⁰ 59.457'	It is used to treat hypertension.	The whole plant.
42.	Urena lobata L.	Malvaceae	Caesar weed	Amatadul		Elev:4334ft N09 ⁰ 18.489' E009 ⁰ 59.450'		
43.	Uvaria chamea P.Beauv.	Anonaceae	Finger root	Biorot	Rukuki	Elev:4252ft N09 ⁰ 16.337' E009 ⁰ 02.983'	It is used to treat diarrhoea and is also edible.	The leaves and fruits respectiv ely
44.	<i>Vernonia</i> adoensis Sch. Bip.	Asteraceae	Bitter leave	Munan	Chusar- doki	Elev:4243ft N09 ⁰ 16.394' E009 ⁰ 02.982'	It is used to treat gonorrhoea	The roots.
45.	Vernonia amygdalina Delile.	Asteraceae	Bitter leaf	Munag	Shuwaka	Elev:4323ft N09 ⁰ 18.551' E009 ⁰ 59.425'	It is used to treat typhoid and malaria.	The leaves.
46.	<i>Vernonia</i> perottetii Sch. Bip	Asteraceae		Wezen		Elev:4223ft N09 ⁰ 16.332' E009 ⁰ 02.999'	It is used for cultural dance.	The whole plant.
47.	Vitex doniana Sweet.	Verbanaceae	Vitex	Ngul		Elev:4335ft N09 ⁰ 18.532' E009 ⁰ 59.445'	It is edible.	The fruits.
48.	Vitex simplicifoli a Oliy.	Verbenaceae		Mbyen		Elev:4217ft N09 ⁰ 16.332' E009 ⁰ 03.001'	It is used spiritually for food security.	The seedlings
49.	Waltheria indica L.	Sterculiaceae	Sleepy morning			Elev:4279ft N09 ⁰ 18.685' E009 ⁰ 00.577'	It is used to treat leprosy.	The roots.
50.	Ziziphus abysinica A.Rich.	Rhamnaceae	Catch thorn	Magariya		Elev:4250ft N09 ⁰ 16.996' E009 ⁰ 02.998'		

From the survey of economic plants in Bokkos district of Bokkos local Government Area of Plateau state, fifty (50) different plants, each having at least one medicinal, food, fodder, spiritual significance or other economic value to humans and livestock were recorded. These plants were distributed across 22 families. Some other economic importance of plants recorded during the study include the use of the plants for timber, clothing, mats and for fuel wood. Majority of the plant species recorded belonged to the family Fabaceae which recorded eight (8) species (40%) of the total plant species documented, this was closely followed by the family Asteraceae which recorded six (6) species (12%), and Euphorbiaceae with 4 species (8%), while the family Malvaceae, Lamiaceae, Moraceae, and Verbenaceae had 3 species which cumulatively amounted to 6% of the total plant species recorded. Two families Poaceae and Mrytaceae, Araliaceae, Oxalidaceae, Asparagaceae, Commelinaceae, Arecaceae, Asphodelaceae, Pedaleaceae and Loranthaceae had one species each (Figure 2):





Remarkably almost all the plant species recorded in this study have at least one medicinal value or the other. The family Fabaceae has more members with medicinal value than the other families with each of its plants having at least one medicinal value. The study reveals that the locals used leaves of plants more than any other part for medicinal purposes; with leaves of 15 plant species having medicinal uses. However, it was also observed that the leaves are mostly used in combination with other plant parts and /or additives in form of decoctions, infusion, tincture or even in powdered form. The leaves of fifteen out of the fifty plants recorded for their medicinal value are used in various medical treatments. The second most preferred plant part for medicinal purpose was the whole plant with 10 out of 50 plants used wholly for preparing medicine. The whole plant is used to treat one ailment or the other. Other parts of the plants use for medicinal purposes include: The flowers, stem, bark, roots and latex. Bark and stem having the least use as shown in Figure 3:



Figure 3: Showing Plant parts used for Medicinal Purpose

Plants used as Food

The studies reveal that 15 out of 50 plants are used as food in soup, oil and other forms of spice. Majority of the plant parts used for this purpose are the fruits. The fruits and leaves are basically used as foods whereas, other plants like *Tamarindus indica* is used to spice up "Kunu" (a locally prepared pudding) and *Sesamum indicum* is used as oil producing plant as shown in Figure 4.



Figure 4: Plant parts used as Food

Plant part used as fodder

The studies revealed that 7 out of the 50 plant species are used as fodder. Majority of the plant parts used for this purpose are the whole plant. The leaves and the whole plant are basically used for the purpose of fodder for livestock as shown in Figure 5 below:



Figure 5: Plant parts used as Fodder

Plant Part used for Spiritual Significance

The studies revealed that certain plant species can be used for spiritual significance by the locals. The plant part that is mostly used is the whole plant and also the leaves of certain plant species as shown in figure 6 below:



Figure 6: Plant parts used for spiritual Significance

IV. DISCUSSION

In most parts of the world, plants are more easily recognised by their local names. The locals were interviewed orally and provided the local names of the plants that were collected. Aishatu *et al*, 2017 stated that local plants play a vital role in ethnobotanical study of a specific tribe or region. The local names mentioned were authenticated with their respective botanical names, as Aishatu *et al*, (2017) had observed that local names are not recommended directly for scientific accounts of plants because they lack uniformity and consistency.

The current study recorded some plant species that were also reported by Aliget, (2014). *Eucalyptus camaldulensis* and *Pheonix reclinate* (Timber Forest Products), *Carisa edulis, Dicrestachys cinera, Psidium guajava, Senna occidentalis, Tamarindus indica* and *Uvaria Chamae* (Non-Timber Forest Products) in an Ethnobotanical Survey of some Timber and Non-Timber Forest Products of Bokkos LGA of Plateau state.

The Family that recorded the highest number of individual plants used mainly for medicinal purposes was Fabaceae. Remarkably, in the Course of this research, it was found that the locals, mostly used plants that are from the family Fabaceae to treat several ailments. Soledad and Ana (2011), have stated that their medicinal values lies partly in their effectiveness in the treatment of a wide variety of human ailment. The highest number of plant species families used mainly for medicinal uses is the Fabaceae family. Jemilat *et al.* (2016) had also noted that the highest number of plant species used to treat several ailments are found in the family Fabaceae. An investigation of medicinal plants conducted in Barkin-Ladi Local Government Area of Plateau State Nigeria to identify some of the plants used by the people in treating various ailments has also revealed the family Fabaceae to have the highest occurrence of plant species (Gyang, 2017).

The research also revealed that the locals use Plants species in the family Asteraceae for food. This has also been reported by Shuo *et al.* (2014).

It is evident from the present survey that Bokkos district of Bokkos local government Area of Plateau State is an area rich in plant biodiversity whose ethnobotanical potentials need to be harnessed further and fully documented. The availability of vernacular (Ron) names for most of the plant species is a good indicator of the rich traditional knowledge resident in the community studied. The vegetation is valuable due to its natural resources. The natural resources must be looked after and managed, and in order to conserve these resources; the local people must become actively involved in the evaluation, planning, implementation, and monitoring process as they are the best conservators of the area.

Similar studies conducted in Mushere district of the same Local Government Area, revealed thirty (30) timber and non-timber in the Dulu Forest of Mushere in Bokkos Local Government Area. Species wise, plants such as *Annona senegalensis, Ficus sur, Uvaria chamae, Carissa edulis*, and *Vitex doniana*, were plant species recorded therein (Musa, 2021), which were also documented in the present study.

V. CONCLUSION

The present study has provided valuable ethnobotanical information on fifty plant species in Bokkos Local Government Area of Plateau State, in Nigeria, on which future research can be based, geared towards obtaining a more comprehensive ethnobotanical documentation of the entire State.

REFRENCES

- [1]. Aishatu, S., Mohammed, G.M, Jamilu, Y, & Abubakar, A. (2017). Ethnobotanical Survey of Medicinal Plants used for the Management of Depression by the Hausa Tribes of Kaduna State, Nigeria. *Academic Journals* v.11(36). Pp562-567.
- [2]. Akwaji, P.I, Eyam, E.O, & Bassey, R.A (2017). Ethnobotanical Survey of Commonly Used Medicinal Plants in Northern Cross River State, Nigeria. <u>www.worldscientificnews.com</u> V70(2).
- [3]. Aliget, A.P. (2014). Ethnobotanical Survey of Some Timber and Non-Timber Forest Products of Bokkos LGA of Plateau Stat. Unpublished Undergraduate Project of the Department of Plant Science and Technology University of Jos, Plateau State, Nigeria.
- [4]. Augustine A. Boadu & Alex Asase (2017). Documentation o herbal medicines used for the Treatment and Management of Human Disease by Some Communities In Southern Ghana. Evidence –Based Complementary and Alternative Medcine Volume 2017, Article ID 3043061, 12 Pages.
- [5]. Augustine, A.B & Alex, A. (2017). Documentation of Herbal Medicines Used for the Treatment and Management of Human Disease by Some Communities in Southern Ghana. Evidence-based Complementary and Alternative Medicine Vol. 2017, Article ID 3043061, 12 Pages
- [6]. Gyang, J. (2017). Ethnobotanical Survey of Some Medicinal Plants in Barkin-Ladi Local Government Area of Plateau State. Unpublished MSc. Thesis of the Department of Plant Science and Technology, University of Jos, Plateau State, Nigeria.
- [7]. Jemilat, A.I, Henry, O.E, Adeola, I.J, Grace, E.U, Ibrahim, M, Oluyemisi, F.K. & Karniyus, S.G. Medicinal Plants Used and the Perception of Plant Endangerment by the Traditional Medicine Practitioners of Nassarawa State, Nigeria: A Pilot Study. *International Journal Of Biodiversity and Conservation* v.8(1)pp 8-20.
- [8]. Kwalme, S.A, Clement, P.O, Hossein, K.M, Richard, A.O, Sylvia K., Aotey, A.C., Onwona S.A, Yosei O, Keisuke, k & Yoshiharu, F. (2019). Medicinal Plants Used in The Ejisu Juaban Municipality, Southern Ghana: An Ethnobotanical Study.
- [9]. Monier, M.A. (2016). Traditional Medicinal Plants of Nigeria: An Overview. Agriculture and Biology Journal of North America.7(5). Pp220-247.
- [10]. Musa, F.M. (2021). Ethnobotanical Assessment of Kadim (Mushere) Forest: Its Timber and Non-Timber Potentials. Unpublished Undergraduate Project of the Department of Plant Science and Biotechnology, University of Jos, Plateau State, Nigeria.
- [11]. Nkechi, V.O, Sunday, M., Ishaku L.E, Micah S.M, Jurbe G.G, Christiana J.D, Olusola, O.O, Ann, S.L, David, S. (2011). Ethnobotanical Survey of Medicinal Plants Used in The Treatment of Animal Diarrhoea in Plateau State, Nigeria. <u>www.biodcentral.com</u> V.7(36).
- [12]. Paul, C.C, Okey, A.O.J & Kanayo, C.N. (2015). Overview of Antidiabetic Medicinal Plants: The Nigerian Research Experience. Journal of Diabetes and Metabolism V.6(6).
- [13]. Salihu, Z.A., Abdulbaqi, Abdullateef, R. & Olayinka T.T. (2014). Problems and Prospects of Africaan Traditional Medicine in Nigeria. *Illorin Journal of Business and Social Sciences* V.16(1)pp181-194.
- [14]. Shuo, L, Ying-Hua, H, Young, L, Rudolph, B, Lian, P, Outao, S.Y. &Young-Hong,Y. (2014). Rapid Identification of Asteraceae Plants with Improved RBFNN Classification Models Based on Mos Sesnor E-Nose. V(2014) Article ID425341 Pg6.
- [15]. Soladed, M. & Ana, L. (2011). The Usefulness of Edible and Medicinal Fabaceae in Argentine and Chilean Patagonia: Environmental Availability and Other Sources of Supply. *Evidence Based Complementary and Availability Medicine*. V(2012), Article ID 9019819. 12pages.
- [16]. Thillalvanan, S, Sumra, J.K (2014). Challenges, Constrain and Opportunities in Herbal Medicine. A Review of International Journal of Herbal Medicine. V.2(1). pp 21-24.
- [17]. Valere, B., Rodrigue, H., Kolawole, K., Castroyedomon & Salako G. (2014). Biodiversity Conservation in Home Gardens: Traditional Knowledge, use Patterns and Implications for Management. *International Journal of Biodiversity Sciences, Ecosystem and Management*. V.10(2).
- [18]. Zakra, L., Hossein, A. (2018). Medicinal Plants: Past History and FuturePerspective. Journal of Biodiversity Sciences, Ecosystem and Management. V.10(2).

Nyam D. D. "Ethnobotanical Survey of Plants in Bokkos District Of Bokkos Local Government Area of Plateau State." *The International Journal of Engineering and Science (IJES)*, 10(07), (2021): pp. 13-21.