ISSN-L: 2223-9553, ISSN: 2223-9944
Vol. 2, No. 3, May 2012

ETHNOBOTANICAL ASSESSMENT OF HERBAL PLANTS IN SOUTH-WESTERN NIGERIA

Awoyemi, O. K.‡
Dept. of Geography, University of Ibadan
NIGERIA.

Ewa, E. E.
Dept. of Geog. & Environmental Planning,
University of Calabar, NIGERIA.

Abdulkarim, I. A.
Dept. of Geography, Bayero University, Kano,
NIGERIA.

Aduloju, A. R.
Dept. of Agric. Technology, School of
Jerricho, Ibadan, NIGERIA.

ABSTRACT

Medicinal plants have been observed to be very effective in the treatment of ailments that defile orthodox medicine. Despite this, only few people know the location and uses of most of the plants around them due to inadequate knowledge of their usefulness. In this study, common plants used by the indigenous people of Southwestern Nigeria were classified based on their locations, types and uses. These plants were briefly described and their local names provided. The study revealed that 82% of the plants used for treating ailments were sourced from the wild, while 18% were cultivated. Most of the medicinal plants were wantonly destroyed as a result of inadequate information. However, in order to sustain the practice of traditional medicine as a subsystem of the health system, it is imperative to encourage the cultivation of these fast disappearing and endangered plants by the rural farmers as a quick way of initiating short-term conservation measure, while awaiting longer policies embedded in the realms of legislation.

Keywords: Ethno-medicine, Conservation, Medicinal Plants, Conversation Southwestern Nigeria, Ethno-Motanical Approach

INTRODUCTION

In the past two decades, there has been a global resurgence of interest in traditional medicine for the treatment of ailments that defile orthodox medicine principally because many diseases have defiled or developed resistance to conventional drugs as well as a health system closer to the rural poor. As a result of this renaissance in unorthodox medicine, a lot of interest and attention have been drawn to the curative claims and norms (ethics) of herbal plants in different parts of the globe especially Africa and Asia. The need to study medicinal plants stems from widespread use of plants in folk medicine, thereby rescuing traditional medicinal plants and knowledge from imminent loss. The potential of the Nigerian flora as a veritable source for pharmaceuticals and other therapeutic materials have been documented (Gbile and Adesina, 1986). Herbal plants constitute one of the many resources of the forest on which the health of the average rural populace in Nigeria depends on. They serve as the repository of healing materials and are known to have minimum or no side effects (Gbile and Adesina, 1986).

Many plants particularly the edible ones are mainly consumed for their nutritional values without much consideration given to their medicinal importance. S This indeed has led to the destruction of these unique resources either knowingly or unknowingly. There are several varieties of these plants in the wild in the rural areas, but the gradual loss of flora genetic species deprives man of the opportunity to meet the future as well as catch up with present challenges of the use of plants for the enhancement of health of the individual. Obute and Osuji (2002), Ayodele (2005) in a similar opinion noted that the world's tropical rainforests are rich in biodiversity, but there is rapid depletion of this natural resource

‡**Corresponding Author**: Mr. Awoyemi, O. K. Research Fellow, Department of Geography, University of Ibadan, Ibadan, Nigeria. Telephone: +2348032767047 E-mail: donkunlenzoes@yahoo.com

globally as a result of anthropogenic activities. Herbs are known not to pose any threat to human life, and apart from healing, they provide the necessary nutrients for health and development of the human body. But irrespective of the value of these plants to the human body, their uses for the treatment of ailments mostly at the primary stage of infection are not well known. This may be that there is no information or indigenous information concerning their uses. As most parents or herbalists die with the information due to lack of interest of the present generation in practicing traditional medicine or the fear of knowledge transfer to ensure continuous patronage.

It is an acknowledged fact in the literature that traditional medical practitioners tend to hide the identity of plants used for different ailments for fear of patronage should the patient learn to cure himself. In buttressing this point, Obute and Osuji (2002) maintained that in order for herbal practitioners to mystify their trade, the cultivation of plant is not encouraged, as all the collection is actually done from the wild. This practice is unsustainable and a huge loss because when these practitioners die, they go along with their wealth of knowledge. In addition, relating this vital information to close relatives where no interest is shown is grossly inadequate in that its lacks continuity. It is on this background that this study documents existing plant species used by the indigenous people of Southwestern Nigeria for the treatment of ailments.

CONCEPTUAL CONSTRUCT OF THE STUDY

Herbal therapy is a system of medical treatment in which parts leaves, barks, roots, seeds, fruit, latex and resin of different plants are used in the treatment of ailments to enhance good health. Different ethnic groups in Africa have their own myths about the origin of herbal medicine. In the words of Kaibo (2004), ethno-botanical research that validates traditional knowledge is important in understanding ways in which local people perceive and use their plant resources. For example, based on their findings on agro forestry studies in Sumatra, Indonesia, Martin et al., (2001) cited in Kaibo (2004) presented three approaches that can help in understanding how local communities use and classify their plant resources. The three approaches include historical approach, ethno-scientific approach and ecological approach. The historical approach entails recording of testimonies from knowledgeable elderly people and it outlines how a community's agro-ecological systems and forest utilization practices evolve over time.

The ethno-scientific approach look at how people classify vegetation types, life forms and special plants. Aumeerudy (1994) asserted that ethno-scientific approach is also used to classify indigenous knowledge within a framework of symbolic representations, analyzing rituals, folklore and sayings that express the symbolic meaning and value of different elements of the environment. Cotton (1996) refers to this type of traditional classification as cognitive ethno-botany. The ethno scientific approach further explores how local people name plants; mostly according to the ways they are used, thereby becoming an important way of understanding local perception of medicinal plants. Lastly, the ecological approach involves the use of forest architectural profiles to help researchers understand the structure, ecology, and dynamics of forests (Martin et al., 2001). The first two approaches above are especially important for this research because they focus on local perceptions, and apply participatory methods in order to provide opportunities for information sharing and discussion of local plant resources for health (Alcorn, 1995).

Nevertheless, the three approaches can guide researchers in their collaboration with local communities on how they use and value herbal plants. Checklist of specimens of locally recognized useful plant species help to keep permanent records for possible sharing of information between health research institutions and local communities, and among all stakeholders interested in the conservation of herbal plant resources (Cotton 1996; Cunningham, 2001). Ethno-botanical research therefore describes the plant parts used for medicine, whether leaves, roots, branches/stems, flowers, or whole plant, and how they are used (Prance et al., 1987; Cotton, 1996). This study revolves around the ethno-botanical approach which involves the documentation of plants through dialogue and collaboration between the researchers and the researched that concerning information on plant resources and their herbal uses.

MATERIALS AND METHOD

Study Area

ISSN-L: 2223-9553, ISSN: 2223-9944
Vol. 2, No. 3, May 2012

The Southwestern part of Nigeria is the abode of Yoruba people with a population of approximately 50 million (NPC, 2006). This figure constitutes about 35 per cent of the total population for the country. The major settlements are found in Lagos, Osun, Ogun, Oyo, Ondo and Ekiti. Yoruba land is bounded by the Atlantic Ocean, which according to Balogun (2000) serves as one of the major gate ways to the hinterlands. This geographical location has been very important in shaping the historical, cultural and demographic destinies of the region. Indeed, the region has contacts with the Western world earlier than other parts of the country. The area is characterized by Guinea savannah vegetation as well as patches of derived savannah arising basically from human activities like bush burning for agricultural and hunting purposes (Ogundele, 2007). The main occupation of the people particularly the rural folks (that constitute up to 70 per cent) of the total population includes farming, fishing, blacksmith, pottery making and indigenous medical practices.

Data Collection Procedure

Field trips were embarked upon to six popular and highly patronized traditional healing homes across the six states that constitute the region. This was followed by direct observation and collections of herbal plants from the wild. Identification of herbs as well as their uses was done with the aid of herbalists, while inventory of available herbs were recorded. Literature on medicinal plants was searched to back up the claims by the traditional practitioners. In addition, parts of medicinal plants not readily identifiable were taken to the herbarium at the Department of Botany and Microbiology, University of Ibadan (UIH) and School of Forestry, Jerricho Ibadan for proper identification. Plant parts mostly leaves were put in press for proper preservation.

RESULTS AND DISCUSSION

The result in table 1 gives vital information on the array of medicinal plants, parts used and places sourced from. It shows that a total of 33 herbal plant species were recorded. Out of which 27 representing 82 per cent of the plants were collected or sourced from the wild, while 6 representing 18 per cent were sourced from cultivated plots or gardens. It further revealed that 11 representing 33 per cent of the leaves of plants were used in the treatment of ailments, this was followed by fruit representing 12 per cent and then root and stem (9.1 per cent). In concise, the result in table 1 indicated that majority of the herbal plants used by traditional practitioners were not cultivated, but sourced from the wild and leaves as well as fruits constituted the parts mostly used.

Table 1.Showing plant names and their uses

S/no	*Scientific names*	*Common names*	*Source*	*Locality*	*Part used*	*Therapeutic uses*
1	*Ancanthus Montanus*	Thorny pigwood(E) Ahon Ekun (Y)	C	Omuran, Bacita, Ilorin, Igbo-Ora, Iseyin, Ijeba	Entire Part	Female Hormone Imbalance, Menstrual cramps, Arthritis, Asthma, Kidney, Liver, Lung problems and urinary disorder.
2.	*Ageratum Conyzoides*	Goat Weed (E) ImiEshu (Y)	W	Forestry HIll, Ibadan	Stem	Open wounds, veneral diseases and peptic ulcer.
3.	*Alliumcepa*	Onions (E) Alubosa (Y)	W	Ilorin, Gambari, Okene	Roots and stem	Cough, convulsion, diabetes, high blood pressure and insomania
4.	*AlliunSatium*	Garlic (E) Ayuu (Y)		Akure, OndoOgbomoso, Ilorin	Root and Stem	Cough, Asthma, High blood pressure.

ISSN-L: 2223-9553, ISSN: 2223-9944
Vol. 2, No. 3, May 2012

5.	*Aloe Barbadensis*	Aloe vera (E) Eti Erin (Y)	C	Ibadan, Osogbo, Ikire, Oyo Gbongan, Omu-Aran	Root	Cancer, Eczena, wounds, pile, Glaucoma, Acne, ulcer impotence, Ringworm Dandruff, burns, constipation, liver and kidney problems
6.	*Anaranthusspinosus*	DagunroTeteelegu n (Y)	W	Olokemejiowo, Imeko Igbo-ora, owenna	Leaf	Yellow fever, malaria fever
7	*AmonaSenegalensis*	Soursop (E)	W	Ibadan, Okeho, Ilesha		Blood purification
8.	*Ananas*	Pineapple (E) OpeOyinbo (Y)	W	Ilugun, Ago Are, Ibadan, Iddo, Ekiti, Osogbo	Fruit	Dental caries, Anaemia and skin infection
9.	*Aspilia Africana*	African Mangold (E) Yunriyun (Y)	W	Owo, Ilugun, Yewa	Roots and Seeds	Fresh wound and bleeding
10.	*AzadirachtaIndica*	Neem (E) Dongoyaro (Y)	W	Ibadan, Ijebu, Ife, Awe, Oyo, Erinkojaobe	Leaf	Malaria fever
11.	*BryophillumPinnatum*	African never die (E) Abamoda (Y)	W	Bacita, JebbaIseyin, Oloosa, Ode Omu, Aramako	Leaf	Convulsion stroke, fever and High Blood pressure.
12.	*Capsicum species*	Cayenepepper (E) Ata-Wewe (Y)	W	Ibadan, Ekiti, Oyo, Onodo, Kwa, Lagos Osun	Seeds	A catalyst for all herbs, high blood pressure, pheunatism
13	*Caricapapaya*	Pawpaw leaves (E) Ibepe (Y)	W	Oyo, Ogbomoso, Lagos, Ondo, Kwara, Ekiti, Kogi	Seeds	Digestive disorders parasites worm, gas and liver diseases.
14	*Cassia alata*	Eczena plant (E) AsunrunOyinbo (Y)	W	Ago-Are, Ilugun Mushin, IpetumoduAtakumos a	Leaf	Skin diseases, veneral diseases, Asthma and Bronchitis
15	*Ceibapentandra*	Silk cotton (E) Araba (Y)	W	Idanre, Ondo, Owo	Bark	Insomania, ulcer wounds, and cessation of menstruation
16	*Chrysophylliumalbidu m*	African star Apple (E) Agbalumo (Y)	W	Iddo, Lafia, Igbeti, OsuOgbomoso	Seed and Fruit	Stomach disorder, Nausea and vomiting
17	*Citrus aurantifidia*	Lime (E) OsanWewe (Y)	C	Ibadan, Ondo, Ejigbo, Iwo, OtanAyegbaju	Seed and Fruit	High blood pressure, stroke, low sperm count and cough
18	Citrus sinesis	Grape fruit (E) OsanOyinbo (Y)	C	Igboho, Ode-Olo, Eyenkorin, Mokwa	Fruit	Diabetes
19	*Curcumalonga*	Tumeric (E) Ata-Ile pupa (Y)	W	Asejire, Isoko, Ode-omu Ife-wara	Entir e part	Heart, Liver problems, Asthma, Arthritis, infection, Gall bladder,

ISSN-L: 2223-9553, ISSN: 2223-9944
Vol. 2, No. 3, May 2012

						infections, Regulation of menstruation digestive disorder
20	*Cola Acuminata*	Kola (E) Obi (Y)	W	Ondo, Oyo, Ilorin, Ibadan, Akure	Fruit	Low sperm count, poor erection
21	*Colocasiaantiquorum*	Cococyam (E) Isu-Koko (Y)	W		Leaf and fruit	Diabetes
22	*Cymbopogom*	Lemon grass (E) Ewe tea (Y)	C	Ondo, Ijebu-jesa, Ijebu and Eruwa	Leaf	Malaria, Rheumatism and nervous-disorder
23	*Euphorbia Hirta*	Asthma plant (E) Ewe Emile (Y)	W	Ile Oluji, Aramako, Oke-Imesi		Cough, Rheumatism constipation, Asthma scorpion sitting and dysentery
24	*Fisasperifolia*	Sand paper tree (E) Epin Y	W	Ibadan, Ikire, Igbo-ora	Bark	Hypertension, enlarged spleen and gonorrhea.
25	*Fleuryaovaliforlia*	Stingen Nettle Ewe Esinsin (Y)	W	Ode-Omu, Iddo, Egba	Leaf	Astham, Bleeding Kidney disorder and diarrhoea.
26	*Garcinia Cola*	Bitter Cola (E) Orogbo (Y)	C	Lafia, Igbeti, Olokoto, Oke-ho, Jebba, Saare		Cough, Jaundice impotence, anti poision, snake bites
27	*Lantana Camara*	Wild sage (E) Ewonagogo (Y)	W	Ibadan, Esa-Oke, Ilupeju, Iwo	Leaf	Epilepsy, Hypertension and nervous disorder
28	*Menthapiperita*	Scent leaves Effirin (Y)	W	Iddo, Ile-Ife, Ipetumodu, Ilesha	Leaf	Digestive disorder heartburn and depression
29	*Musa Sapientum*	Plantain (E) Ogedeagbagba (Y)	W	Osogbo, Owo, Ilorin, Omu-Aran, Ede, Owo	Leaf	Low sperm count, heart prolems convulsion, bleeding, itching and burns
30	*Stachitarphytaindica*	Vervian (E) Panle (Y)	W	Ilesha, Ile-Oluji, Owena, Ile-Odan	Leaf	Cough, malaria, fever, low blood pressure,epileps y, Gall bladder diseases, gum, dental and nervous problem
31	*SpondiasMombin*	Hogplum (E) Iyeye (Y)	W	Ayeye, Igbeti, Igboho, Okeho, Ibadan.	Leaf	Fibroid (seeds) cataract (Juice of leaves lime juice
32	*Vernoniaamygalina*	Bitter leaf (E) Ewuro (Y)	W	Idanre, OdogboIwere-Ile	Leaf	Pile, cough, arthritis, diabetes, insomania, liver,

ISSN-L: 2223-9553, ISSN: 2223-9944
Vol. 2, No. 3, May 2012

						and kidney problem
33	*Zingiberofficinale*	Ginger (E) Ata-ile (Y)	W	Ibadan, Ife Eruwa, AiyeteTede	Fruit	Hepatitis, Bronchial problem, cramps, digestive disorders, gas nervous disorder sinus congestion, toothache, vitality painful menstruation suppressed menstruation

E = English name; Y = Yoruba name; C = Cultivated and W = Wild

DISCUSSION

The documentation of available plants shows that majority of the plants are sourced from wild than cultivated regardless of how medicinally important they are to the people of Southwestern Nigeria. For those that are cultivated, the extent is still rudimentary as no large scale production is involved. The proportion of these plants obtained from wild and also cultivated obviously reflect how these plant genetic resources are managed unsustainably in this area. The assessment reveals that little or no conservation strategies are in place to safeguard these plants. This is attributed to the fact that most of the medicinal plants are harvested in the wild. The assertion above affirms the views of Narajo (1995), Obute (2002), Ivibijaro (2006) that though, medicinal plants are necessary in deciding a programme of action for primary health care, but most of the practioners have not imbibed conservation techniques as most of these genetic resources are for now largely undocumented and the indigenous knowledge of their relevance are steadily being lost.

The result further highlights the need to integrate traditional medical practice with the orthodox medical practice rather than the disregard with which the later considers the former mostly in this part of the globe. This is apparent as a greater number of people mostly in the rural and peripheral parts of the cities have it as their only available health care services. This is because orthodox medicine is far from them and where available, is above the reach of the poor masses that constitute a greater percentage of the populace (Okafor, 2008). Furthermore, traditional medicine sometimes treats cases that defile conventional medical practice. Our findings reveal that most patients are being referred to traditional medical practitioners from the orthodox care providers each time certain ailments defile their treatment. This is in line with the affirmation from one of the herbalist who disclosed that he has treated about sixteen (16) patients for the past two years who are referrers from orthodox care providers.

CONCLUSION AND RECOMMENDATIONS

From the foregoing, it is apparent that traditional medical practitioners' source herbs for the treatment of ailments from the wild, as a negligible number has gardens where these plants are planted. The study reveals that in Yoruba ethno-medicine, the difference and similarity between diseases (a result of biological disorder) and illness (a product of social, psychological and cultural factors) are equally appreciated; as the indigenous medical practitioner pays significant attention to the latter. This is at variance with "veterinary tendencies of the Western medicine despite its remarkable sophistication. Thus medicine needs to be harmonized as well, so that healing process can start with identification of the doctors with the socio-cultural experience of the patient. Apart from direct traditional utility of these genetic resources, allopathic medicine is now taking recourse to traditional medicine because of its cheapness and availability to a greater percent of the world population. However, in order to sustain the practice of traditional medicine as a subsystem of the health system, it is imperative to

encourage the cultivation of these fast disappearing and endangered plants by the rural farmers as a quick way of initiating short term conservation measures, while awaiting longer policies embedded in the realms of legislation.

REFERENCES

Adeniji, M.O. (2004).*Herbal Treatment of Human Diseases*. Ibadan. *YNX International (Nig) Ltd.*

Alcorn, J. B. (1995).“The Scope and Aims of Ethnobotany in a Developing World”, in Schultes, R. E & S. von Reis (eds)*Ethnobotany: Evolution of A Discipline*. Portland, OR: Dioscorides Press, pp. 23-40.

Arnold, J. E. & Perez, M. R. (2001). Can Non-timber Forest Products Match Tropical Forest Conservation and Development Objectives? *Ecological Economics* 39: 437-447.

Aumeerudy, Y. (1994).Local Representations and Management of Agroforests on the Periphery of KerinciSeblat National Park, Sumatra, Indonesia.*People and Plants Working Paper,* UNESCO, Paris

Ayodele A. E. (2006).The Medicinally Important Leafy Vegetables of South Western Nigeria.Conservation of Medicinally Important Leafy Vegetables in Nigeria. Department of Botany and Microbiology,University of Ibadan.Available on line http:/www.siv.edu.

Balogun, M. B. (2000).The Forest Zones of Southwestern Nigeria.*A paper Presented at University of Ilorin at the 4th Conference on Bio-diversity and Conservation techniques.* 11th August, 2000.

Cotton, C. M. (1996).*Ethnobotany: Principles and Applications*. Chichester, UK: John Wiley & Sons, Ltd.

Cunningham, A. B. (2001).*Applied Ethnobotany: Wild Plant Use and Conservation*. London, UK: Earthscan Publishers.

Fafioye, D.O. (2002).Plants with Piscicidal Activities in South Western Nigeria.*Turkish Journal of Fishers and Aquatic Sciences*, 5:91-99.

Gbile, Z. O. &Adesina, S. K. (1986).Nigerian flora and its Pharmaceutical Patients.*Journal of Ethnopharmacology*, 19: 1-6.

Ivijaro, C. (2006). Screening Nigerian plants for their medicinal Importance. *Ilorin Journal of Plant and Vegetation Studies,* 6 (1) 51-57.

Kalibo, H. W. (2004).*A Participatory Assessment of Forest Resource Use at Mt. Kasigau, Kenya.*M.Sc Thesis, Miami University: Oxford, Ohio

Martin, G. J., Barrow, S., Cunningham, A. B. &Shanley, P. (2001). Sources for Applying Ethnobotany to Conservation and Community Development: Managing Resources. *Peopleand Plants Handbook*, Issue 6, May 2001.

Narajo, T. K. (1995).“The Urgent need for the study of Medicinal Plant”, in.Schultes, R. E and Reis S Von (eds)*Ethnobotany: Evaluation of A Discipline*. London:Chapman and Hall.

Obute, G. C. &Osuji, L.C. (2002). Environmental Awareness and Dividends: A Scientific Discourse. *African Journal of Interdisciplinary Studies*, 3(1) 90-94.

Ogundele, S. O. (2007).Aspects of Indigenous Medicine in South Western Nigeria.*Ethno-Med*, 1(2): 127-133.

Ogundele S.A. (2006). Aspect of Indigenous Medicine in South Medicine in South *Western Nigeria.Ethno-Med*, 1(2);127-133.

Ogundele S.O. (2006).*Our Ancestors Speak: Cultural Heritage, Knowledge and Development Crises in Contemporary Nigeria.* Faculty of Science Public Lecture Series, University of Ibadan.

Okafor S.I. (2002).*Question of Location, Accessibility and distribution of justice*. An Innaugural lecture presented at the faculty of the social science, University of Ibadan. February 21, 2008. Department of Geography, University of Ibadan.

Okujagu, T.F. (2005). Welcome Address at the Zonal Training for Traditional Medicine Practitioners, Porth Harcourt. Nigeria Natural Medicine Development Agency, Federal Ministry of Service and Technology.

Prance, G. T., Balee, W. B., Boom, M. &Carneiro, R. L. (1987).Quantitative Ethnobotany and the Case of Conservation in Amazonia.*Conservation Biology,* 1(4): 296-309.