

**CHECKLIST OF ETHNOMEDICINAL TREES AND SHRUBS IN  
FEDERAL COLLEGE OF FORESTRY, IBADAN, OYO STATE, NIGERIA.**

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**ABSTRACT**

The study investigated indigenous knowledge of medicinal use of some trees and shrubs in Federal College of Forestry, Ibadan. It surveyed plants of medicinal importance and interviewed people on their uses. For each species the information is provided regarding scientific names, English name, local name, family name, medicinal uses, part used and preparation/administration. Forty two species belonging to 34 genera in 19 families were reported. From this study, it is obvious that Federal College of Forestry, Ibadan is rich in plant biodiversity with medicinal values. Consequently, it is highly advisable that a representative sample of this vegetation is protected for posterity so that no medicinal plants of the study area may be lost to the developmental projects embarked upon by the College.

**Key words:** Medicinal plants, Ethnobotanical trees and shrubs, Indigenous knowledge, Federal College of Forestry Ibadan.

## **INTRODUCTON**

Throughout the ages, plants have provided man's needs including shelter, clothing, food, flavours, fragrance and medicines (Ameenah, 2006). For centuries, plants with medicinal properties have been utilized successfully in the treatment of ailments of varying degrees of severity (Qureshi *et al.*, 2007). Higher plants, many of which are threatened are used as source of pharmaceuticals and are of value in new drug discovery (Phillipson, 1994). Today, we continue to rely on plants as source of medicinal drugs (Phillipson, 2007). The World Health Organization (WHO) estimates that in Africa, up to 80% of the population use traditional medicine for primary health care (WHO, 2003). Many people in Nigeria live in rural areas, several kilometers from health centers and a large proportion of the population continues to rely on traditional methods of treatment. Several plants are being used successfully by traditional practitioners in the treatment of diseases (Sofowora, 1993). Farnsworth (1990) claimed that 119 characterized drugs are still being obtained commercially from higher plants and that 74% were found from ethnobotanical information. Nigeria has a varied climate and is quite rich in medicinal plants, though scattered over a large area. These medicinal plants have been used in traditional medicine (Gbile *et al.*, 1985). Federal College of Forestry (FCF), Ibadan is rich in indigenous plant resources thus, offers a great scope for ethnobotanical studies. Keeping in view the significance of indigenous knowledge of folk medicine and ethnobotanical studies in drug discovery, it is necessary to collect information about the medicinal plants found in Federal College of Forestry, Ibadan. This information will also help to conserve the indigenous knowledge of the plant genetic variability in the campus while the College vegetation is protected for posterity so that no medicinal plants of the study area may be lost to the developmental projects embarked upon by the College.

## **METHODOLOGY**

The study was carried out in the premises of Federal College of Forestry Ibadan, Oyo State. It has a lowland rainforest vegetation type with a mean annual rainfall of 1180mm and an evaporation rate of

1327 (Odofin, 2004). Researchers have used different methods to study the local knowledge of plant used by individuals or ethnic groups. Most of these research works relied on transect surveys, specimens identification (Hunn, 2002; Zarger and Stepp, 2004; Zent 2001), and answers to several types of interviews (Begossi 1996, Atran *et al.*, 2002, Reyes-García *et al.*, 2005). The present survey is based on the medicinal information of trees and shrubs in Federal College of Forestry Ibadan. The survey involved several visits to the site for collection of samples. Specimens were collected at random across the disturbed and undisturbed vegetation on the campus which reflects a true representation of Federal College of Forestry Ibadan. Oral interviews were conducted with some private individuals within the environment who have knowledge of medicinal plants; and herb sellers selected at random in Alesinloye, Oje and Bode markets in Ibadan metropolis, to confirm their uses. The choice of these markets is based on their proximity to FCF. The scientific names were determined using the Flora of West Tropical Africa (in 3 volumes) by Hutchinson & Dalziel (1954-1972) and the Forest Herbarium Ibadan (FHI) while the local names were obtained from Gbile and Soladoye (2002), Ugbogu *et al.*, (2012), Onyechusim *et al.*, (2012) and Gbile Z.O (1980). Various interviews were conducted with elderly persons and herbal doctors. The information gathered include: botanical names, families, medicinal uses, local names, English names, parts used and preparation/administration.

## **RESULTS AND DISCUSSION**

The medicinal values of some trees and shrubs were obtained from the people and were described; the parts such as leaf, stem, root, bark, seed and fruit are used for treatment in form of decoction or infusion (Table 1). A total of 41 plant species, belonging to 34 genera in 19 families are reported (Table 2). The predominant families are Mimosoideae, Moraceae and Rutaceae with five species each, followed by Anacardiaceae with three species. Table 3 is the demographic values of the respondents. The study reviewed that the female population, especially in the market, was higher than men, probably because women are more closely related to health caring issues, especially as it affects family members e.g.

children. From Table 4, private individuals (students and workers) constituted the largest group of respondents (38.37%). Most of the respondents are middle aged class (31-40). This is an indication that there is passage of indigenous knowledge on plant use from the elders to the younger ones as reported by Adekunle and Sam-wobo, (2004).

**Table 1: Ethnomedicinal values of plant species in Federal College of Forestry, Ibadan**

S/No	Botanical Names	Families	English Names	Local Names	Parts Used	Preparation & Administration
1	<i>Annona muricata</i> Linn.	Annonaceae	Sour sap	Yor: Sharp- sharp	Leaves	The leaves are squeezed in palm wine and taken twice daily with a short glass cup for the treatment of dysentery.
2	<i>Holarrhea floribunda</i> (G. Don) Syn <i>Durva horibunda</i>	Apocynaceae	False rubber tree	Yor: Irena Hausa: Bakin	Stem, Bark, Leaves, Root	All the parts mentioned are made into a decoction for the treatment of jaundice and diarrhoea. The dosage is twice daily with a short glass cup
3	<i>Plumeri alba</i> Linn.	Apocynaceae	Fragipani	Yor: Frangipani	Root, Leaves	The decoction of the leaves and roots are used as purgative. The dosage is 3 times daily, 30 mins after each meal.
4	<i>Cola nitida</i> (Vent) Schott endle	Sterculiaceae	Bitter cola	Yor: Obi gbanja	Bark	Pounded bark, when mixed with ginger and a little pepper is used to cure stomach ulcers
5	<i>Hildegardia barteri</i> (Mast) Kostro	Sterculiaceae	Hildegardia	Yor: Okurigbedu Hausa; Kariya	Leaves, Stem-bark, Root	A decoction of the parts mentioned is used to cure epilepsy. The dosage is thrice daily 30 mins after each meal with a short cup.
6	<i>Mangifera indica</i> Linn.	Anacardiaceae	Mango tree	Yor: Mangoro Hausa: Mangwaro	Root, Stem, Bark, Leaves	A decoction of root, stem- bark and leaves is used for the treatment of diabetes mellitus and insomnia. The dosage is twice daily with short glass cup.

7	<i>Spondia mombin</i> Linn.	Anacardiaceae	Hog plum	Yor: Akika iyeye	Bark	The decoction of the bark with the root of <i>M. indica</i> and leaves of <i>Ceiba pentandra</i> are used for the treatment of cough and gonorrhoea. The dosage is 2 times daily.
8	<i>Anacardium occidentale</i> Linn.	Anacardiaceae	Cashew nut	Yor: Kasu Hausa: Kanjuu	Stem- Bark, Root, Sap	A decoction of the stem -bark and root is used to treat typhoid, gastrol-intestinal disorder and asthma while the sap is used for the treatment of eczema.
9	<i>Tetrapleura tetraptera</i> Taub	Mimosoideae		Yor: Aidan Hausa: Dawo Igbo: Oshogisha Edo: Esegheseghe	Fruits, Leaves, Bark, Root	The fruit is used as spice when ground to make soup while the decoction of the leaves bark and root is used to treat rheumatism and infertility. Dosage is 3 times after each meal.
10	<i>Leucaena leucocephala</i> (Linn.) Benth	Mimosoideae	Jumpy bean, Lead tree		Leaves	An infusion of the leaves when mixed with milk is used as blood tonic. The dosage is twice daily with a short glass cup after meal
11	<i>Albizia zygia</i> Dc Macbride	Mimosoideae		Yor: Ayinre-weere, Ayunre	Root, Stem	A decoction of the root and stem together with the root of <i>Celtis milbraedii</i> and <i>Strophantus</i> bark is used for the treatment of arthritis. The dosage is thrice daily with a short glass cup 30 mins after meal.
12	<i>Albizia lebbeck</i> (Linn.) Benth	Mimosoideae	Woman's tongue	Yor: Igbagbo	Leaves	An infusion of the leaves of <i>A. lebbeck</i> and <i>Cassia fistula</i> serve as a astringent, mouthwash and gonorrhoea.
13	<i>Albizia ferruginea</i> Benth	Mimosoideae	False thorn	Yor: Ayinre Igo, Ayinre langara Hausa: Tsin, tsiyar- Kurmii	Stem bark, Root, Leaves	A decoction of the stem bark, root, leaves of the plant together with the leaves of <i>Annona muricata</i> and <i>Dacryodes edulis</i> is used to treat dysentery and constipation. The dosage is once daily with a short glass cup 30 mins before food.

14	<i>Gmelina arborea</i> Linn.	Verbeneceae	Parrot's beak	Yor: Igi Melina Hausa: Melaina	Leaves, Bark, Root	The pounded stem is applied externally on whitlow while a decoction of the leaves, bark and root is used to cure stomach disorders and also serves as antipyretic.
15	<i>Tectona grandis</i> Linn.	Verbeneceae	Teak	Yor: Igi tiki	Stem, Bark, Leaves, Root	A decoction of the Stem, Bark, Leaves, and Root together with the root of <i>Cocos nucifera</i> is used to cure toothache, skin infection and headache. It also serves as anthelmintic.
16	<i>Dacryodes edulis</i> (G. Don) H. J. Lam	Burseraceae	Coral tree, Parrot	Yor: Lakale ologbosere Hausa: jinjinriya Igbo: Ukwuani oko	Leaves, Flower	An infusion of the leaves and flower serves as anthelmintics and antipyretic
17	<i>Gliricidia sepium</i> (Jack) Walp	Papilionoideae		Yor: Agunmaniye	Leaves, Stem, Root	A decoction of the leaves, stem and root mixed with palm wine is used to cure dysentery, malaria fever and jaundice. The dosage is 2 times daily after meals.
18	<i>Milletia thonningii</i> Baker	Papilionoideae	Milletia	Yor: Ito Hausa: Turburku Igbo: Isara Edo: Gbagegede	Leaves	An infusion of the leaves of the plant together with <i>Citrus sinensis</i> and part of <i>Spondia mumbin</i> is used for the treatment of cough and fever. The dosage is twice daily with a short glass cup after each meal.
19	<i>Antiaris toxicaria</i> Lesch. ssp <i>welwitschii</i> (Engl) C.C. Berg.	Moraceae	False iroko, Black mulberry	Yor: Oriro Hausa: Farinloko Igbo: Ojinawu Edo: Ogiovu	Stem bark, Root bark	A decoction of the stem -bark and root bark is used to treat epilepsy, skin irritant, and also serves as a purgative. It is taken thrice daily with a short glass cup after each meal
20	<i>Ficus mucoso Welw</i> & <i>Ficato</i>	Moraceae	Fig	Yor: Odanafomo, Obobo Hausa: Jan-bauree;	Root, Stem	A decoction of the root and stem is used to treat insomnia. The dosage is twice daily 30 mins after each meal with a short glass cup.
21	<i>Ficus exasperata</i>	Moraceae	Sand paper	Yor: Ewe-ipin, Epin	Leaves, Bark,	A decoction of the Leaves, Bark, Root and Seed is used

	Vahl		tree	Igbo: Akpuli Edo: Amiemie	Root, Seed	to treat scabies, gonorrhoea and also serves as an abortifacient. The dosage is thrice daily, 30 mins before each meal with a short glass cup
22	<i>Treculia africana</i> Dechne	Moraceae	African breadfruit	Yor: Afon, Ifon Igbo: Mmiri Ukwa	Stem-Bark, Leaves, Root, Sap	A decoction of the Leaves, Bark and Root is used to treat convulsion, ulcer, anemia and malaria. The dosage is twice daily 30 mins before each meal with a short glass cup. A decoction of the bark, sap, and root is used to treat venereal disorders and nervous disorders.
23	<i>Citrus lemon</i> Linn.	Rutaceae	Lemon	Yor: Osan laimu Hausa: Kokua	Fruit, Leaves, Bark, Root	A decoction of the fruit, leaves, root and bark is used as an antipyretic, stomachic and also serves as a cold remedy. The dosage is twice daily 30 mins before food in the morning and 30 min at night with a short glass cup.
24	<i>Citrus paradisi</i> Macf.	Rutaceae	Grape fruit	Yor: Osan paya, Osan gerepu Igbo: Oromaoyibo	Seeds, Fruit Coat	A decoction of the fruit coat and Seed is used to treat malaria and diabetes The dosage is twice daily 30 mins before food in the morning and 30 min after food at night with a short glass cup.
25	<i>Citrus aurantifolia</i> Christm	Rutaceae	Lime Swing	Yor: Osan wewe Hausa: Dankabuga Igbo: Afufanta	Leaves, Stem, Root, Fruit	A decoction of the Leaves, Bark, Root and fruit is used to treat toothache and abdominal ulcer. The dosage is twice daily.
26	<i>Citrus sinensis</i> Linn.	Rutaceae	Sweet orange	Yor: Osan mimu, Orombo didun Hausa: Babanleema Igbo: Afufabekee	Stem-twigs, , Fruit	A decoction of the stem-twigs and fruit is used to treat fever, headache and toothache. The dosage is twice daily 30 mins after each meal with a short glass cup.
27	<i>Citrus medica</i>	Rutaceae	Native orange	Yor: Jaganyin, Osan Lakuregbe Hausa: Leemam	Fruit, Root	A decoction of the fruit and root is used to treat rheumatism, arthritis and peptic ulcer. The dosage is twice daily with a short glass cup.
28	<i>Psidium guajava</i> Linn.	Myrtaceae	Guava	Yor: Gilofa Hausa: Goobaa Igbo: Gova	Leaves, Stem- bark, Fruit	A decoction of the Leaves, stem- Bark, Root and fruit is used to treat irregular menstrual period and also serves as laxative. The dosage is twice daily, with a short glass



						cup.
29	<i>Eucalyptus spp</i>	Myrtaceae	River red gum	Yor: Eucalyptus Igbo: Aku-ishi	Leaves, Root, Stem	A decoction of the leaves, root and stem is used to treat pharyngeal inflammation and stomach ache. The dosage is twice daily with a short glass cup
30	<i>Chrysophyllum albidum</i> G. Don	Sapotaceae	African star apple	Yor: Agbalumo Igbo: Odala	Bark, Leaves	A decoction of the bark and leaves is used to treat fever, stomachache. The dosage is twice daily 30 mins before food in the morning and at night with a short glass cup.
31	<i>Irvingia gabonensis</i> var. <i>gabonensis</i> Bell.	Irvingiaceae	Wild mango, Bread tree	Yor: Oro, Ogbongbo Hausa: Goron ruwa Igbo: Ugili Edo: Okeri	Leaves	An infusion of the leaves is used to treat spleen infection. The dosage is thrice daily 30 mins after each meal with short glass cup.
32	<i>Morinda lucida</i> Benth.	Rubiaceae	Brimstone tree	Yor: Oruwo Igbo: Nuke	Leaves, Stem, bark, Root	A decoction of the parts mentioned is used to treat malaria, and also serve as an anticancer. The dosage is twice daily with a short glass cup each meal.
33	<i>Persea americana</i> Mill.	Lauraceae	Avocado pear	Yor: Pia	Leaves, Fruits, Seeds	A decoction of the leaves, seeds and fruits is used to treat hypertension, insomnia and skin infection. The dosage is twice daily 30 mins after each meal with a short glass cup.
34	<i>Etandrophragma angolense</i> (Welw.) C.DC	Meliaceae	Cedar mahogany	Yor: Ijebo Igbo: Owura Edo: Ogiekpogo	Stem bark	A decoction of the stem bark is used to treat gastrointestinal disorder and also serves as a stimulant. The dosage is twice daily 30 mins before food in the morning and at night with short glass cup.
35	<i>Khaya senegalensis</i> A. Juss	Meliaceae	African Mahogany	Yor: Oganwo Hausa: Madaacii, madoaci Igbo: Abubo Edo: Oganwo	Leaves	An infusion of the leaves is used to treat syphilis and ulcer. The dosage is once daily 30 mins before food with a short glass cup.

36	<i>Terminalia catappa</i> Linn.	Combretaceae	Almond tree	Yor: Furutu	Kernel, Stem bark	A decoction of the kernel and stem bark is used to treat cardiac ailment and catarrh. The medicine dosage is twice daily 30 mins after each meal with short glass cup.
37	<i>Senna fistula</i> Linn.	Caesalpinoideae	Indian laburnum	Yor: Aidantoro Igbo: Ogaala Edo: Akoria	Leaves, Pod	An infusion of the leaves and pod is used to treat liver disorder, diabetes and also serves as purgative. The dosage is thrice daily 30 mins after each meal with a short glass cup.
38	<i>Cocos nucifera</i> (Linn) Schum & Thonn.	Palmae	Coconut palm	Yor: Agbon	Bark, Root	A decoction of the root and bark is used to treat liver ailment and also serves as laxatives.
39	<i>Delonix regia</i> Hook.f. Raf	Papilionoideae	Flame of the forest	Yor: Sekeseke	Leaves, Bark, Seed	A decoction of the leaves, bark and seed serves as diuretic, anthelmintics and astringent.
40	<i>Elaeis guineensis</i> Jacq	Palmae	Red oil palm	Yor: Ope, igi-ope	Root, Bark, Kernels	A decoction of the root, bark and kernels is used to treat malaria, mental-disorders and diarrhea.
41	<i>Bauhinia monandra</i> Kurz.	Caesalpinoideae	Mountain ebony		Stem, Bark, Flower,	The stem, bark and flowers are used to treat worm infection and leprosy.

Key: Yor = Yoruba

**Table 2:** Species distribution according to families

S/N	Family	Number of species
1	Anacardiaceae	3
2	Annonaceae	1
3	Apocynaceae	2
4	Burseraceae	1
5	Caesalpionoideae	2
6	Combretaceae	1
7	Irvingiaceae	1
8	Lauraceae	1
9	Meliaceae	2
10	Mimosoideae	5
11	Moraceae	4
12	Myrtaceae	2
13	Palmae	2
14	Papilionoideae	3
15	Rubiaceae	1
16	Rutaceae	5
17	Sapotaceae	1
18	Sterculiaceae	2
19	Verbeneceae	2
	<b>TOTAL</b>	<b>41</b>

**TABLE 3: DEMOGRAPHIC DATA OF THE RESPONDENTS**

<b>AGE GROUPS</b>	<b>FREQUENCY</b>	<b>PERCENTAGE</b>
10-20	7	8.14
21-30	22	25.58
31-40	25	29.07
41-50	15	17.44
51-60	17	19.77
TOTAL	86	100%

MALE= 34 (39.53%), FEMALE= 52 (60.47%)

**TABLE 4: OCCUPATION STATUS OF THE RESPONDENTS**

<b>OCCUPATION STATUS</b>	<b>FREQUENCY</b>	<b>PERCENTAGE (%)</b>
Traditionalists	25	29.07
Herb seller	28	32.56
Private individuals (Students, workers etc)	33	38.37
TOTAL	86	100%

Since earliest times, man has used plants to treat common infectious diseases and some of these traditional medicines are still included as part of the habitual treatment of various maladies. Surprisingly, some of the students of the Federal College of Forestry, Ibadan, are very familiar with the uses of some of the plants. The results of the present study revealed that plants and their parts are widely used for the treatment of diarrhea, dysentery, jaundice, malaria, diabetes, insomnia, leprosy, hypertension, nervous disorder, inflammation, ulcer, epilepsy, rheumatism and cough.

Epilepsy is a common chronic neurological disorder characterized by seizures (Blume *et al.*, 2001). About 50 million people worldwide have epilepsy, and nearly two out of every three new cases are discovered in developing countries (WHO, 2001). Epilepsy is more likely to occur in young children or people over the age of 65 years; however, it can occur to anyone at any time (The National Society for Epilepsy, 2009). Epilepsy is usually controlled, but not cured, with medication. From this study, epilepsy can be controlled with *Hildegardia barteri* and *Antiaris toxicaria*.

Malaria is the oldest recorded disease; it remains one of the world's most deadly diseases and arguably, the greatest menace to modern society in terms of morbidity and mortality (Iwu, 1993). In Nigeria, people employ possibilities of herbal remedy in malaria treatment (Ogundipe and Obinna, 2010). Our findings attest to this fact, listing *Morinda lucida*, *Gliricidia sepium* and *Citrus paradisi* among other plants used in the preparation of decoction for malaria treatment.

Insomnia is a condition which is highly prevalence (Janson *et al.*, 1995; Janson *et al.*, 2001; Ohayon and Partinen, 2002) and a great impact on quality of life (Roth and Ancoli-Isreal,

1999). The main finding in this study is that insomnia related symptoms are treated with leaves of *Mangifera indica*, *Ficus mucoso* and *Persea americana*.

Since time immemorial, patients with non-insulin dependent diabetes mellitus have been treated orally with a variety of plant extracts (Roa, 2006). *Senna fistula*, *Mangifera indica* and *Citrus paradisi* have been shown from the results of this study as examples of plants used for the management of diabetes mellitus.

According to official reports received during 2010 from 141 countries and territories, the global registered prevalence of leprosy at the beginning of 2010 stood at 211,903 cases, while the number of new cases detected during 2009 was 244,796. It was reported that *Aristolochia bracteolate* Retz. (Family: Aristolochiaceae) is important constituent among 22 plants used in the preparation of an anti-leprosy drug “*sulak*”. From our study, *Bauhinia monandra* (bark, stem and flower) is also used as leprosy recipe.

### **CONCLUSION AND RECOMMENDATION**

Local people have remarkable detailed knowledge of species identification and characteristics. As a result, traditional healthcare system is highly accessible and offers a cheaper, individualized and culturally acceptable alternative to the costly allopathic system. The medicinal plants in the College have been very useful in teaching and research, both within and outside the College, e.g Students on Industrial Work Experience Scheme (SIWES) and Herbarium management/Techniques training programme, are being taught on the usefulness, identification and conservation of these plants, while staff in the Taxonomy section of the Forestry Research Institute of Nigeria carry out botanical ramblings using these plants. Information from the College’s staff and students revealed that they found these plants very

useful for their domestic health care. The entire dependence of man on plants and plant products directly for basic needs such as food, clothing and shelter and indirectly for their beneficial influence on the climate and maintenance of his immediate and remote environment makes plants vital to his survival. The overwhelming use of traditional medicine over the last decade has continued to expand and gain global popularity. Hence, priority should be given to the following three measures:

- 1) Investigation related to taxonomy, phytochemical screening and documentation of the useful species and their habitats;
- 2) Initiation of conservation actions with appropriate measures involving the local community; workers and students inclusive.
- 3) Caution against indiscriminate destruction of the local flora even as the infrastructural development within the College is on the increase.

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