



# Some Medicinal Plant Species of Asamagbe Stream Bank Vegetation, Forestry Research Institute of Nigeria, Ibadan

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## Research

### Abstract

A survey was conducted along Asamagbe stream bank of the Forestry Research Institute of Nigeria, Ibadan in order to assess the numerous medicinal plants present in the area. 98 species in 92 genera and 49 families were identified. Trees were most common (44%) among the plant life forms identified. Interviews were conducted with local people who reported medicinal uses. These uses are also supported from previous studies. We conclude that it is important to adopt conservation practices for sustainable plant use within and outside the study area in-view of the ecological function of the stream bank and the local therapeutic value of these plant resources.

### Introduction

There are more than 400,000 species of flowering plants with medicinal properties in the tropics (Akputu *et al.* 1994). The diversity of these plants has contributed to the practice of herbal/traditional medicine, making it cheaper and more readily available than orthodox medicine. Traditional medicinal plants are applied in preventive ways and to treat disease conditions. Therefore, these are being investigated for their possible beneficial effects with the aim of bringing adequate and affordable health care to mankind (WHO 2002). Studies have been conducted on the potential usefulness of medicinal plants in tackling several health problems such as snake bite, sickle cell disease, hemorrhoids, cancer and diabetes (Akinyuli & Akabue 1986, Odugbemi 2008, Sofowora 1993, Soladoye *et al.* 2005, 2010a,b, 2012). Herbal medicines are reported to be safe with few adverse effects (Sofowora 1993, WHO 2004) compared to synthetic drugs. Because of this there has been research on their use in many developing countries including Nigeria. In our earlier work (Ariwaodo *et al.* 2012), we recorded 159 species in 151 genera and 66 families found along Asamagbe stream bank at the

Forestry Research Institute of Nigeria (FRIN), Ibadan. Of these, 40 species (25%) were non-native to the region. The present study considers the species diversity of the stream bank, in light of its medicinal uses reported by previous authors and individuals residing close to the study area.

### Materials and Methods

The Asamagbe stream flows in an East-West direction for 2.13 km and then drains into the Ona river (Figure 1), a main drainage channel of Alalubosa Forest Reserve constituted in 1916 by the colonial Administration. The rainfall pattern is bimodal, with peaks around June to July and September to October. Mean annual rainfall is about 420 mm in 109 days with mean maximum and minimum temperatures of about 34°C and 24°C respectively. Mean relative humidity ranges from about 82% between June and September, to approximately 60% between December and February (Adio *et al.* 2011, Halidu 2010). The vegetation on both sides of the stream functions as an important

### Correspondence

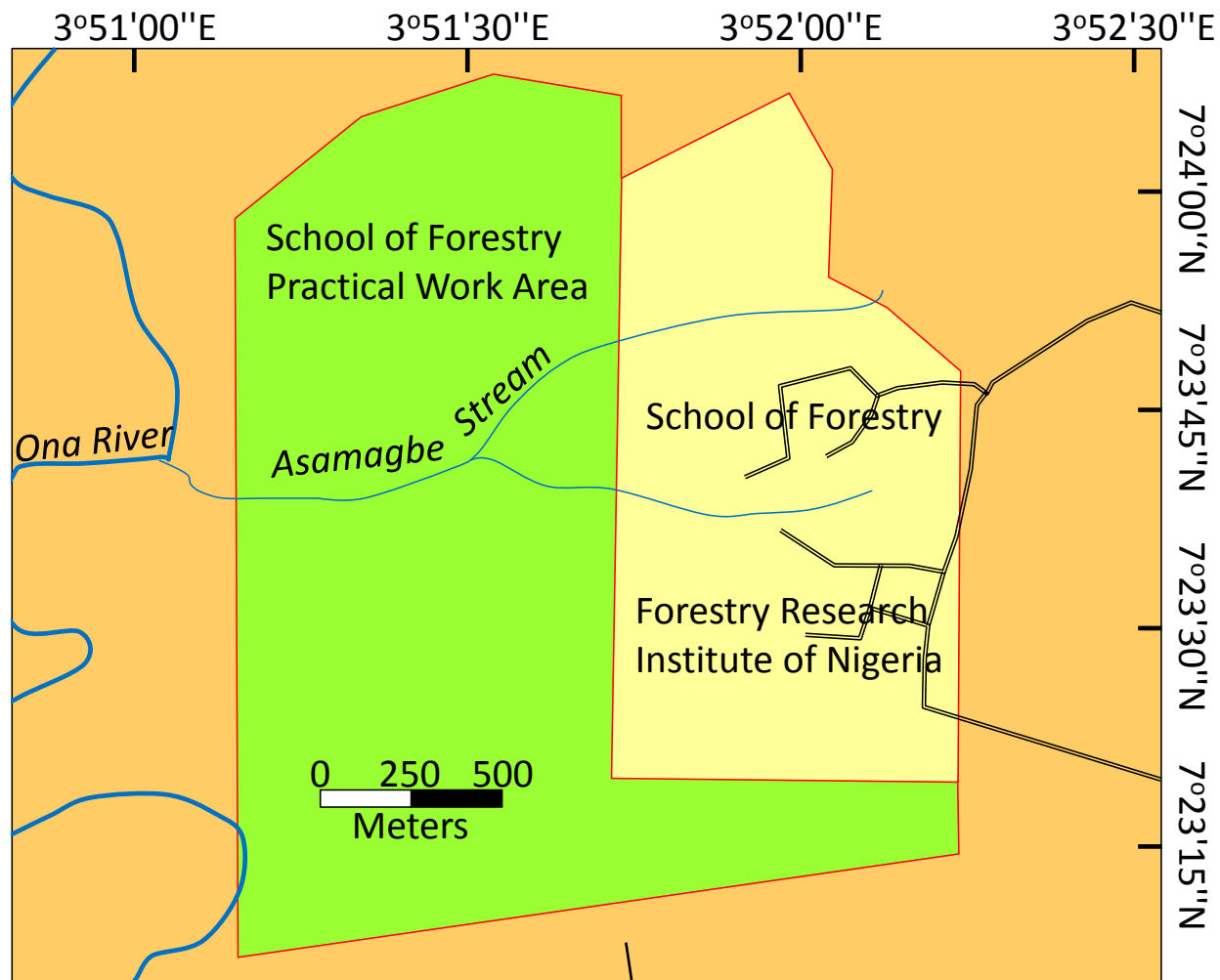
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Ethnobotany Research & Applications 10:541-549 (2012)

Published: November 23, 2012

[www.ethnobotanyjournal.org/vol10/i1547-3465-10-541.pdf](http://www.ethnobotanyjournal.org/vol10/i1547-3465-10-541.pdf)



**Figure 1.** Study area of the Asamagbe stream bank at the Forestry Research Institute of Nigeria (FRIN), Ibadan, Nigeria.

watershed and it can be described as a near-natural plant community with minimal record of anthropogenic disturbance.

A field survey was conducted along the banks of Asamagbe Stream located within the premises of FRIN identifying medicinal plants. The residents within the study area were also interviewed to gather information regarding these medicinal plants. These informants were selected based on their knowledge of the vegetation and uses of plants. Plants had been collected over time before the interviews.

Voucher specimens were prepared from fertile specimens that were available within the study site. Upon collection, specimens were taken to the Forest Herbarium Ibadan (FHI) for scientific identification. Initial identification was made through comparison with previously collected specimens deposited in the same herbarium. The



Flora of West Tropical Africa (Hutchinson *et al.* 1954-1972) and Trees of Nigeria (Keay 1989) were used in the identification of taxa.

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The uses of the plants were recorded based on the interviews and supporting previous studies.

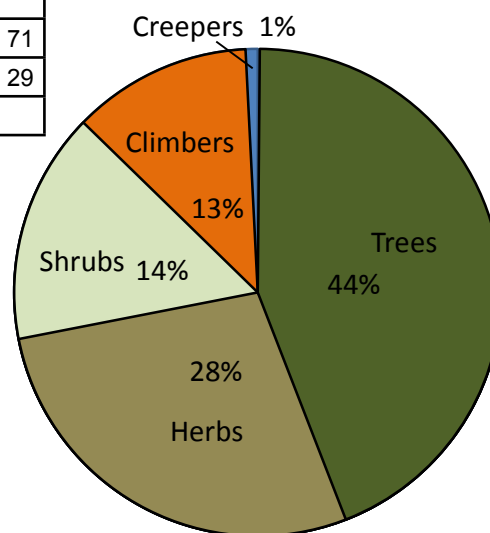
98 species belonging to 92 genera and 49 families were identified as used medicinally (Table 1). Fabaceae and Moraceae included the most species (nine each) closely followed by Asteraceae and Malvaceae (six each). Figure 2 presents the relative distribution of life forms of the plants identified. Trees are the most common life form.

### Results

In all, a total of 45 respondents were interviewed. Table 1 indicates the demographic information of the respondents.

**Table 1.** Demographics of 45 interviewed respondents asked about medicinal plants from the Asamagbe stream bank at the Forestry Research Institute of Nigeria, Ibadan, Nigeria.

Characteristic	Frequency	%	Characteristic	Frequency	%	Characteristics	Frequency	%
Marital status			Occupation			Educational level		
Single	8	18	Farmers	16	36	No formal education	9	20
Married	32	71	Civil servants	6	13	Primary school	12	27
Divorced	4	9	Traders	12	27	Secondary school	16	36
Widow	1	2	Unemployed	11	24	Tertiary institution	8	18
Total	45		Total	45		Total	45	
Characteristic	Frequency	%	Characteristic	Frequency	%			
Age distribution			Gender					
<25	2	4	Male	32	71			
25-35	9	20	Female	13	29			
36-45	11	24	Total	45				
46-55	17	38						
56-65	6	13						
Total	45							



**Figure 2.** Relative distribution of life forms of the plants identified from the Asamagbe stream bank at the Forestry Research Institute of Nigeria, Ibadan, Nigeria.

**Table 2.** Ethnomedicinal plants identified from the Asamagbe stream bank at the Forestry Research Institute of Nigeria, Ibadan, Nigeria. Parts used (B: bark; E: exudates; F: fruit; L: leaves; La: latex; O: oil; R: roots; Se: seeds; S: stems; Sb: stem bark; T: tubers; Wp: whole plants). Medicinal uses reported by informants in this study is in red. Medicinal uses reported in literature (Odugbemi 2008, Soladoye *et al.* 2010a&b, 2012, Ugboju *et al.* 2010) are underlined.

Scientific Name	Family	Voucher	Habit	Parts used	Medicinal uses
<i>Albizia ferruginea</i> (Guill. & Perr.) Benth.	Fabaceae	FHI62253	Tree	B, L, R, S	Dysentery, constipation
<i>Albizia zygia</i> (DC.) J.F. Macbr.	Fabaceae	FHI104826	Tree	B, L, S	Astringent
<i>Alchornea cordifolia</i> (Schumach. & Thonn.) Müll. Arg.	Euphorbiaceae	FHI109543	Shrub	B, L, S	Fever, antimicrobial
<i>Alchornea laxiflora</i> (Benth.) Pax & K. Hoffm.	Euphorbiaceae	FHI108333	Shrub	L, R	Typhoid fever, antioxidant

Scientific Name	Family	Voucher	Habit	Parts used	Medicinal uses
<i>Alstonia boonei</i> De Wild.	Apocynaceae	FHI109449	Tree	L, R	Astringent, fever
<i>Alternanthera sessilis</i> (L.) R. Br. ex DC.	Amaranthaceae	FHI107166	Herb	L, Wp	Antibacterial, astringent, headache
<i>Anacardium occidentale</i> L.	Anacardiaceae	FHI109445	Tree	F, L, Sb	Typhoid fever, malaria, Cough
<i>Ananas comosus</i> (L.) Merr.	Bromeliaceae	FHI27892	Herb	Wp	Expectorant, purgative, emmenagogue
<i>Aneilema beniniense</i> (P. Beauv.) Kunth	Commelinaceae	FHI78692	Herb	L, Wp	Laxative, skin troubles
<i>Anthocleista vogelii</i> Planch.	Gentianaceae	FHI107911	Tree	B, S	Purgative
<i>Antiaris toxicaria</i> Lesch.	Moraceae	FHI109519	Tree	R, Sb	Purgative, skin diseases
<i>Aspilia africana</i> (Pers.) C.D. Adams	Asteraceae	FHI109546	Herb	L, Wp	Stomach disorders, Skin diseases, hemorrhoids
<i>Asystasia gangetica</i> (L.) T. Anderson	Acanthaceae	FHI109101	Herb	Wp	Pile, astringent
<i>Azadirachta indica</i> A. Juss.	Meliaceae	FHI109537	Tree	L, Sb	Malaria, laxative
<i>Bambusa vulgaris</i> Schrad. ex J.C. Wendl.	Poaceae	FHI109550	Herb	L, young shoots	Hemorrhoids, gonor- rhea, anthelmintics
<i>Baphia nitida</i> Lodd.	Fabaceae	FHI109535	Tree	B, L, Rs	Skin diseases, constipa- tion, small pox
<i>Bombax buonopozense</i> P. Beauv.	Malvaceae	FHI108415	Tree	L, Sb	Skin infections, stom- achache
<i>Bridelia micrantha</i> (Hochst.) Baill.	Phyllanthaceae	FHI108240	Tree	B, L, Rs	Headache, migraine
<i>Byrsocarpus coccineus</i> Schumach. & Thonn.	Connaraceae	FHI108801	Shrub	L, Rs	Pile, dysentery, gonor- rhea, tumors, jaundice, cancer, hemorrhoids
<i>Carica papaya</i> L.	Caricaceae	FHI109479	Tree	F, L	Malaria, purgative, hem- orrhoids
<i>Carpolobia lutea</i> G. Don	Polygalaceae	FHI109311	Shrub	B, L	Aphrodisiac
<i>Ceiba pentandra</i> (L.) Gaertn.	Malvaceae	FHI88517	Tree	L, O	Laxative, sores, rheuma- tism
<i>Celosia argentea</i> L.	Amaranthaceae	FHI108900	Herb	L, Rs, S	Diuretic, gonorrhoea, diar- rhea
<i>Centrosema pubescens</i> Benth.	Fabaceae	FHI107892	Climber	L	Skin diseases
<i>Chasmanthera dependens</i> Hochst.	Menispermaceae	FHI104942	Climber	Rs	Hemorrhoids, diuretics,
<i>Chromolaena odorata</i> (L.) R.M. King & H. Rob.	Asteraceae	FHI108947	Herb	L	Antimicrobial, malaria, headache, dysentery, hemorrhoids
<i>Chrysophyllum albidum</i> G. Don	Sapotaceae	FHI108463	Tree	B, L	Hemorrhoids, stomach- ache, fever
<i>Citrus sinensis</i> (L.) Osbeck.	Rutaceae	FHI89525	Tree	F, L, Sb	Dysentery, headache, fever, toothache, anthel- mintics
<i>Cnestis ferruginea</i> DC.	Connaraceae	FHI108219	Shrub	L, Rs	Laxative, fever, tooth- ache, hemorrhoids

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Scientific Name	Family	Voucher	Habit	Parts used	Medicinal uses
<i>Coccinia barteri</i> (Hook. f.) Keay	Cucurbitaceae	FHI100841	Climber	Wp	Venereal diseases
<i>Cocos nucifera</i> L.	Areaceae	FHI107825	Tree	B, nuts, R	Liver ailments, migraine, dysentery, toothache
<i>Combretum platypterum</i> (Welw.) Hutch. & Dalziel	Combretaceae	FHI72161	Climber	L	Febrifuge
<i>Corchorus olitorius</i> L.	Malvaceae	FHI109017	Herb	L, Rs, Se	Diarrhea, fever, asthma
<i>Costus afer</i> Ker Gawl.	Costaceae	FHI108001	Herb	Rs, S	Nausea, stomachache, aphrodisiac
<i>Crinum jagus</i> (Thompson) Dandy	Amaryllidaceae	FHI106250	Herb	bulbs, L	Anthelmintics, purgative
<i>Culcasia scandens</i> P. Beauv.	Araceae	FHI107170	Herb	L	Stomach-ache
<i>Dalbergiella welwitschii</i> (Baker) Baker f.	Fabaceae	FHI104908	Shrub	L, Rs, S	Purgative, anthelmintics, menstrual disorder.
<i>Dioscorea bulbifera</i> L.	Dioscoreaceae	FHI109547	Climber	F	Boils, fever
<i>Dioscorea dumetorum</i> (Kunth) Pax	Dioscoreaceae	FHI108956	Climber	L, T	Malaria, abdominal pain
<i>Elytraria marginata</i> Vahl	Acanthaceae	FHI107902	Herb	L	Stomachache, chest pain, wounds
<i>Euphorbia heterophylla</i> L.	Euphorbiaceae	FHI107235	Herb	L, Rs	Purgative, skin infections
<i>Ficus mucoso</i> Welw. ex Ficalho	Moraceae	FHI107714	Tree	Sb	Insomnia
<i>Ficus sur</i> Forssk.	Moraceae	FHI109540	Tree	Rs	Hemorrhoids
<i>Ficus sycomorus</i> L.	Moraceae	FHI109485	Tree	B, L, Rs	Skin irritations, gonor- rhoea, urinary ailments, hemorrhoids, bone frac- ture
<i>Flueggea virosa</i> (Roxb. ex Willd.) Royle	Phyllanthaceae	FHI109541	Shrub	L, Rs	Cancer, dysentery
<i>Funtumia elastica</i> (Preuss) Stapf	Apocynaceae	FHI106285	Tree	La, S	Pile, jaundice
<i>Glyphaea brevis</i> (Spreng.) Monach.	Malvaceae	FHI108898	Small tree	L, Sb	Fever, diarrhea, tooth- ache
<i>Heterotis buettneriana</i> (Cogn. ex Büttner) Jacq.-Fél.	Melastomataceae	FHI107817	Herb	Wp	Antimicrobial, venereal diseases, cough
<i>Holarrhena floribunda</i> T. Durand & Schinz	Apocynaceae	FHI197779	Tree	B, L, Wp	Anti-malaria, gonor- rhoea, dysentery, jaun- dice
<i>Icacina trichantha</i> Oliv	Icacinaceae	FHI108293	Shrub	E, L, Rs	Rheumatism, toothache, abortifacient, purgative
<i>Ipomoea involucreta</i> P. Beauv.	Convolvulaceae	FHI107886	Creeper	L	Asthma
<i>Irvingia gabonensis</i> (Aubry- Lecomte ex O'Rorke) Baill.	Irvingiaceae	FHI106894	Tree	L	Spleen infection
<i>Kalanchoe pinnata</i> (Lam.) Pers.	Crassulaceae	FHI107962	Herb	L sap	Diuretic
<i>Khaya grandifoliola</i> C. DC.	Meliaceae	FHI107951	Tree	B	Hemorrhoids, anti-can- cer

Scientific Name	Family	Voucher	Habit	Parts used	Medicinal uses
<i>Lagerstroemia indica</i> L.	Lythraceae	FHI106432	Tree	L, Ripe F	Anti-diabetic, stimulant
<i>Laportea aestuans</i> (L.) Chew	Urticaceae	FHI108894	Herb	Wp	Piles, burns, astringent
<i>Lecaniodiscus cupanioides</i> Planch. ex Benth.	Sapindaceae	FHI106940	Tree	L, Rs, Sb, Se	Fever, purgative, typhoid, jaundice, cough, malaria
<i>Leucaena leucocephala</i> (Lam.) de Wit	Fabaceae	FHI109536	Tree	L	Anti-microbial
<i>Mallotus oppositifolius</i> (Geiseler) Müll. Arg.	Euphorbiaceae	FHI109542	Shrub	L, Rs	Astringent, ringworm
<i>Mangifera indica</i> L.	Anacardiaceae	FHI108943	Tree	B, L	Malaria, diarrhea, astringent, sore-throat, dysentery
<i>Melanthera scandens</i> (Schumach. & Thonn.) Roberty	Asteraceae	FHI109544	Herb	L, Rs, S	Inflammation, skin irritations, purgative, cough
<i>Merremia tridentata</i> (L.) Hallier f.	Convolvulaceae	FHI106511	Climber	Wp	Gonorrhoea
<i>Microdesmis puberula</i> Hook. f. ex Planch.	Pandaceae	FHI107169	Shrub	B, L, Se	Dysentery, impotence, Diarrhea, wound
<i>Milicia excelsa</i> (Welw.) C.C. Berg	Moraceae	FHI58285	Tree	B, La, Rs	Nausea, malaria, abdominal pain, insomnia
<i>Momordica charantia</i> L.	Cucurbitaceae	FHI109534	Climber	F, L, Wp	Ulcers, burns, skin infections, diabetes, convulsion, anthelmintics
<i>Monodora myristica</i> (Gaertn.) Dunal	Annonaceae	FHI107259	Tree	Se	Constipation, arthritis
<i>Morus mesozygia</i> Stapf	Moraceae	FHI107677	Tree	L	Sedative
<i>Musa acuminata</i> X <i>balbisiana</i> Colla	Musaceae	FHI109552	Shrub	F, L, Rs	Hemorrhoids, diabetes, diarrhea, dysentery, epilepsy, goiter, gonorrhoea, anaemia
<i>Musanga cecropioides</i> R. Br. ex Tedlie	Moraceae	FHI108775	Tree	B, E, L, Rs	Dysentery, cough, anthelmintics
<i>Myrianthus arboreus</i> P. Beauv.	Moraceae	FHI104956	Tree	B	Dysentery, cough, anthelmintics
<i>Nauclea diderrichii</i> (De Wild.) Merr.	Rubiaceae	FHI107133	Tree	F, Rs, Sb	Gonorrhoea, malaria, dysentery, pile
<i>Newbouldia laevis</i> (P. Beauv.) Seem. ex Bureau	Bignoniaceae	FHI108287	Tree	B, L, Rs	Epilepsy, convulsions, wounds, migraine, skin infections
<i>Parquetina nigrescens</i> (Afzel.) Bullock	Apocynaceae	FHI109538	Climber	L, Rs	Anti-cancer, blood tonic, hemorrhoids
<i>Paullinia pinnata</i> L.	Sapindaceae	FHI109551	Climber	L, Rs, Se	Jaundice, leprosy, aphrodisiac, dysentery
<i>Peperomia pellucida</i> (L.) Kunth	Piperaceae	FHI109549	Herb	Wp	Hemorrhoids, hypertension, convulsion, bone fracture
<i>Pergularia daemia</i> (Forssk.) Chiov.	Apocynaceae	FHI107772	Climber	Wp	Fever

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Scientific Name	Family	Voucher	Habit	Parts used	Medicinal uses
<i>Phaulopsis ciliata</i> (Willd.) Hepper	Acanthaceae	FHI107975	Herb	Wp	Wounds, laxative
<i>Portulaca oleracea</i> L.	Portulacaceae	FHI108334	Herb	Wp	Fever, skin diseases, fever, astringent
<i>Psidium guajava</i> L.	Myrtaceae	FHI109533	Tree	L, Rs, Sb	Hemorrhoids, fever, dysentery, diarrhea, malaria, stomach ache
<i>Pterocarpus osun</i> W. G. Craib	Fabaceae	FHI108045	Tree	R, Sb	Eczema, asthma, skin infections
<i>Pycnanthus angolensis</i> (Welw.) Warb.	Myristicaceae	FHI106991	Tree	L, Sb	Black tongue, cough, fever, skin infections, anti-cancer
<i>Rauvolfia vomitoria</i> Afzel.	Apocynaceae	FHI109539	Tree	B, L sap, R	Convulsion, jaundice, measles, herpes, internal disorder
<i>Rhigiocarya racemifera</i> Miers	Menispermaceae	FHI93017	Climber	L, Se	Sedative, aphrodisiac
<i>Scleria depressa</i> (C.B. Clarke) Nelmes	Cyperaceae	FHI97967	Herb	L	Ointment
<i>Senna alata</i> (L.) Roxb.	Fabaceae	FHI92812	Shrub	L, Sb	Dysentery, skin diseases, anthelmintics
<i>Senna hirsuta</i> (L.) H.S. Irwin & Barneby	Fabaceae	FHI108127	Shrub	L, Rs	Antimicrobial, skin infection, purgative
<i>Solenostemon monostachyus</i> (P. Beauv.) Briq.	Lamiaceae	FHI109545	Herb	L	Convulsion, stomachache
<i>Sphenocentrum jollyanum</i> Pierre	Menispermaceae	FHI108283	Shrub	F, Rs	Cough, fever, jaundice, aphrodisiac
<i>Spondias mombin</i> L.	Anacardiaceae	FHI107897	Tree	B, F, L	Diuretic, fever, cold, gonorrhoea
<i>Sterculia tragacantha</i> Lindl.	Malvaceae	FHI96657	Tree	B, F, Se	Stomachache, diarrhea, dysentery
<i>Struchium sparganophorum</i> (L.) Kuntze	Asteraceae	FHI108346	Herb	L, S	Headache, gonorrhoea
<i>Synedrella nodiflora</i> (L.) Gaertn.	Asteraceae	FHI109532	Herb	L	Sores, skin infections
<i>Telfairia occidentalis</i> Hook. f.	Cucurbitaceae	FHI108785	Climber	L	Blood tonic, convulsion
<i>Thaumatococcus daniellii</i> (Benn.) Benth. & Hook. f.	Marantaceae	FHI106373	Herb	F	Diabetics
<i>Theobroma cacao</i> L.	Malvaceae	FHI108878	Tree	Rs, Se	Gingivitis, toothache, stimulant
<i>Treulia africana</i> Decne.	Moraceae	FHI108207	Tree	B, L, Rs	Hemorrhoids, ulcer, cough, venereal diseases, anaemia, malaria
<i>Trema orientalis</i> (L.) Blume	Ulmaceae	FHI107813	Tree	L, Sb	Hemorrhoids, fever, cough, dysentery, pneumonia, jaundice
<i>Tridax procumbens</i> L.	Asteraceae	FHI109548	Herb	Wp	Stomachache, backache

## Discussion

All informants interviewed claimed to have inherited the knowledge about uses of these plants from their parents or from various herb sellers who also visit the location to collect plants.

The plants identified in this research may contain important bio-active compounds which could be extracted for the synthesis of modern day drugs apart from their uses in traditional/herbal medicine. Generally, informants were of the opinion that many of these plants are frequently collected to treat minor ailments such as malaria, fever, stomach troubles, headache, and a few complicated ones such as cough, piles, dysentery, and diabetes. Apart from medicine, many of these plants have also been consumed as food in one way or the other. These include: *Anacardium occidentale* L., *Ananas comosus* (L.) Merr., *Carica papaya* L., *Carpolobia lutea* G. Don, *Chrysophyllum albidum* G. Don, *Corchorus olitorius* L., *Irvingia gabonensis* (Aubry-Lecomte ex O'Rorke) Baill., *Mangifera indica* L., *Monodora myristica* (Gaertn.) Dunal, *Musa acuminata* X *balbisiana* Colla, *Psidium guajava* L., *Spondias mombin* L., *Telfairia occidentalis* Hook. f., *Theobroma cacao* L. and *Treculia africana* Decne..

Recent studies by Soladoye *et al.* (2010a,b) and Soladoye *et al.* (2012) report that some of the plants identified in this work have been, and still are being, used to treat problems such as hemorrhoids, cancer, and diabetes mellitus. These have been highlighted in Table 2. Studies by Gills (1992), Adesina *et al.* (1995) Okoli *et al.* (2007) and Odugbemi (2008) to mention a few, have also highlighted the medicinal uses of these plants and many others in Nigeria.

## Conclusion

With the emerging need for herbal therapies in our society to combat life threatening ailments, it is important to conduct further studies to understand the potential of these plants as sources of compounds responsible for their actions. While the existence of forest reserves should be to protect and improve forest species, it is also important to establish farms and medicinal plant gardens at various local government areas as a way of protecting our medicinal plants.

## Literature Cited

Adesina, S.K., Z.O. Gbile, O.A. Odukoya, D.D. Akinwusi, H.C. Illloh & A.A. Yeola. 1995. Survey of indigenous useful plants of West Africa with special emphasis on medicinal plants and issue associated with their management. Pp. 84-85 in *The United Nations Program on Natural Resources in Africa*. Second edition. Institute for Natural Resources in Africa, Accra, Ghana.

Adio, A.F., C.A. Adebago, J.O. Gbadebo, A. Adedokun & I.O. Asinwa. 2011. Preliminary study on espacement trials of *Jatropha curcas* intercropped with maize and cassava. *Journal of Sustainable Environmental Management* 3:24-32.

Akinyuli, D.N. & P.I. Akabue. 1986. Schumannifoside, the antsnake venom principle from stem bark of *Schumanniphyton magnificum* Harms. *Journal of Ethnopharmacology* 18:167-172.

Akpulu, I.N., J.D. Dada, E.L. Odama & H. Galadima. 1994. Antibacterial activity of aqueous extracts of some Nigerian medicinal plants. *Nigerian Journal of Botany* 7:45-48.

Ariwaodo, J.O., K.A. Adeniji & O.D. Akinyemi. 2012. The vascular flora on Asamagbe stream bank, Forestry Research Institute of Nigeria (FRIN) premises, Ibadan, Nigeria. *Annals of Biological Research* 3(4):1757-1763.

Gills, L.S. 1992. *Ethnomedical Uses of Plants in Nigeria*. Uniben Press, Benin City, Nigeria.

Halidu, S.K. 2010. *Impact of Urbanization on Trees and Water Bodies in Watershed Areas of Alalubosa and Eleyele Reserves of Ibadan*. M. Phil Dissertation, Department of Forest Resources Management, University of Ibadan, Ibadan, Nigeria.

Hutchinson, J. J.M. Dalziel, R.W.J. Keay, F.N. Hepper & A.H.G. Alston. 1954-1972. *Flora of West Tropical Africa, the British West African Territories, Liberia, the French and Portuguese Territories South of Latitude 18 Degrees North to Lake Chad, and Fernando Po*. Second edition. Crown Agents for Oversea Governments, and Administrations, London.

Keay, R.W.J. 1989. *Trees of Nigeria*. Oxford University Press, New York, New York.

Odugbemi, T. 2008. *A Textbook of Medicinal Plants from Nigeria*. Unilag Press, Lagos, Nigeria.

Okoli, R.I., O. Aigbe, J.O. Ohaju-Obodo & J.K. Mensah. 2007. Medicinal herbs used for managing some common ailments among Esan people of Edo State, Nigeria. *Pakistan Journal of Nutrition* 6(5):490-496.

Sofowora, E.A. 1993. *Medicinal Plants and Traditional Medicine in Africa*. John Wiley and Sons Ltd, New York, New York.

Soladoye, M.O., E.C. Chukwuma & F.P. Owa. 2012. An 'avalanche' of plant species for the traditional cure of diabetes mellitus in South-Western Nigeria. *Journal of Natural Product and Plant Resources* 2(1):60-72.

Soladoye, M.O., M.O. Adetayo, E.C. Chukwuma & N.A. Amusa. 2010a. Ethnobotanical survey of plants used in



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the treatment of haemorrhoids in South-Western Nigeria. *Annals of Biological Research* 1(4):1-15.

Soladoye, M.O., N.A. Amusa, S.O. Raji-Esan, E.C. Chukwuma & A.T. Ayanbamiji. 2010b. Ethnobotanical survey of anti-cancer plants in Ogun State, Nigeria. *Annals of Biological Research* 1(4):261-273.

Soladoye, M.O., M.A. Sonibare, A.O. Nadi & D.A. Alabi. 2005. Indigenous angiosperm biodiversity of Olabisi Onabanjo University permanent site. *African Journal of Biotechnology* 4(5):554-562.

Ugbogu, A.O., J.O. Ariwaodo & K.A. Adeniji. 2010. An ethnomedicinal study of flora diversity in Osun sacred grove, Osun State, Nigeria. *International Journal of Agriculture and Rural Development* 1(4):186-196.

WHO. 2002. *WHO Traditional Medicine Strategy 2002-2005*. World Health Organization Secretariat. Geneva, Switzerland

WHO. 2004. *World Health Organization Guidelines on Safety Monitoring of Herbal Medicines in Pharmacovigilance Systems*. World Health Organization, Geneva, Switzerland.

