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## **Studies of Plants Used in Ethnomedicine in Ethiope Council Area of Delta State, Nigeria**

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**Abstract:** Studies were carried out to inventorize, assess and document plant species and plant products used in ethnomedicine by the indigenous people of Ethiope Council Area, Delta State Nigeria. The studies revealed that a total of 53 species spread into 31 angiosperm families were used traditionally for various medicinal purposes. The studies further revealed that the indigenous people have developed various ways of identifying, harvesting, processing, storing and administering preparations from these plants. It was also observed that the cultivation and conservation of these plants is receiving increased attention by the people. The relevance of these observations in the efforts towards documenting indigenous knowledge and use of plants especially in the area of traditional health care system is discussed.

**Key words:** Ethnomedicine, indigenous people, Ethiope Council

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### **Introduction**

The attempt by mankind to use plants and plant products to cure diseases and relieve physical suffering is as old as creation (Murne, 1973; Baker, 1976; Mirutse et al., 2003). Indigenous peoples in all ages had some knowledge of plants and through systematic trial and error approach applied them to various uses. Thus the earliest attempts at use of plants for medicines were based on speculation.

In fact most tribes believe that diseases were due to the presence of evil spirits in the body and could be driven out only by the use of poisonous or disagreeable substances calculated to make the body unpleasant place in which to remain (Mirutse et al., 2003). These authors reported that this primitive era was followed by the period of the herbalists and encyclopaedists, which propagated the doctrine of plant signatures as a means to cure illnesses.

African traditional healing system, also known as folk medicine, native medicine, herbal medicine and ethno medicine have received appreciable attention (Sofowora, 1982, 1984; Gbile, 1986; Gill, 1992; Idu and Olorunfemi, 2000; Louwi et al., 2002). The extensive literature on the subject indicates clearly that traditional medicine practice occupies a very prominent place in the treatment of diseases in the African culture.

The administration of the native or traditional drugs has been in the hands of native herbalists who are quite often old people in the rural settings. According to the history of Nigeria traditional medicine (Gill and Akinrurni, 1986), thousand of plant species have been used for centuries in the practice of herbalism and our herbalists for their presumed pharmacological properties know many of them.

There is palpable anxiety across the globe that with the passage of time, these old people die without transferring this vital knowledge to future generation who are mistakenly engrossed with modernity (Cunningham, 1994).

The present work is part of a response to seek ways of rapidly capturing information on ethnomedicinal practices and uses of plant species the indigenous people of Ethiope Council in Delta State of Nigeria.

## **Materials and Methods**

This study was based on interviews with local herbal practitioners based in five major villages namely Eku, Abraka, Ori, Okpara and Orerokpe, which make up Ethiope Council (Fig. 1).

Different categories of people were visited and interviewed on the types of medicinal plants used in the area. Also, their local names were noted. Herbalists, traditional healers and elderly people who had some knowledge of the medicinal values of plants were mostly interviewed.

Specific questions such as plant parts used, dosage, preparation of drug and ailment cured were asked and the information obtained and recorded.

The plants were identified using floras and books covering the area including those of Akobundu and Agyakwa (1987) and Gill (1988).

Voucher specimens of all the plant used were collected, processed and deposited in the University of Benin Herbarium.

## **Results**

The studies observed that a total of 53 plant species distributed into 31 angiosperm families were used for varying ethnomedicinal purposes in the study area. The record of information on the 53 species including their botanical names, family names, local names and parts used, dosage and biodynamic properties are further enumerated

<p>Botanical name: <i>Dracaena mannii</i> Baker</p> <p>Part used: Leaves</p> <p>Ailment treated and mode of administration: This is used to cure different kinds of ailment. Leaf is crushed in water; the juice extracted is cooked with rabbit or squirrel. The dose taken is usually different depending on the kind of ailment</p>	<p>Family: Dracaenaceae</p> <p>Local name: orie-erivwin</p>
<p>Botanical name: <i>Sansevieria liberica</i> Gérôme &amp; Labroy</p> <p>Common name: Bowstring hemp</p> <p>Part used: Leaves</p> <p>Ailment treated and mode of administration This plant is used to treat asthma and sexual weakness. The fresh leaf is boiled along with uririe (alligator pepper), allowed to cool and a cupful of the filtrate is taken twice daily.</p>	<p>Family: Dracaenaceae</p> <p>Local name: erevwen-eban</p>
<p>Botanical name: <i>Achyranthes aspera</i> L..</p> <p>Common name: Devil's horsewhip</p> <p>Part used: Leave</p> <p>Ailment cured and mode of administration: It is used to hasten delayed labour and stomach disorders. The leaf is washed with uririe (alligator pepper) and used to rub the tummy of the pregnant woman. This is every effective and almost immediately the baby comes out. This is taken once daily and used to treat stomach disorders. When taken too much it can cause abortion.</p>	<p>Family: Amaranthaceae</p> <p>Local name: irie</p>
<p>Botanical name: <i>Amaranthus spinosus</i> L.</p> <p>Common name: Prickly amaranthus</p> <p>Part used: Leaves</p> <p>Ailment cured and mode of administration: This is used to treat abdominal pains, throat and mouth ulcers. The decoction of the leaf is prepared with one tablespoon of salt. A glass of the mixture is taken three times daily for 3 days.</p>	<p>Family: Amaranthaceae</p> <p>Local name: iseruen</p>
<p>Botanical name: <i>Mangifera indica</i> L.</p> <p>Common name: Mango</p> <p>Part used: Stem bark, leaves</p> <p>Ailment treated and mode of administration This is used to treat malaria, diarrhoea and diabetes. The stern bark and leaves along with the bark of <i>Alstonia boonei</i>, fallen leaves of <i>Carica papaya</i> <i>Azardirachta indica</i> and <i>Morinda lucida</i> boiled and drank thrice daily for three to four days against malaria.. The powder of young leaves is used to treat diarrhoea and diabetes. The smoke from the burning leaves is inhaled for hiccup and throat disease. The ash from the leaf is used to treat burns.</p>	<p>Family: Anacardiaceae</p> <p>Local name: Imagolo</p>
<p>Botanical name: <i>Dennettia tripetala</i> Baker f.</p> <p>Common name: Pepper fruit</p> <p>Part used: Leaves</p> <p>Ailment treated and mode of administration This is used to treat fever. Fresh leaves are boiled along with the leaves of mango plants. It is taken twice daily for three days.</p>	<p>Family: Annonaceae</p> <p>Local name: Imako</p>

Botanical name: *Xylopi aethiopica* (Dunal) A. Rich. Family: Annonaceae  
Common name: Ethiopian Pepper Local name: Urheri  
Part used: Leaves, stem bark, fruit  
Ailment treated and mode of administration: This plant is used to treat eczema (skin diseases), cough. The leaf and stem bark are dried and made into powdered form. Palm oil is added to the powder, mixed and applied to the infected places. The opened dried fruit without seed is burnt, grounded into powder and mixed with palm oil. This is used to treat cough. One table spoon is recommended twice daily.

Botanical name: *Alstonia boonei* De Willd Family: Apocynaceae  
Local name: Ukpukuhu  
Part used: Root and stem bark  
Ailment cured and mode of administration: This is used to treat swollen foot. The bark of the root and stem is pounded, uhie (a dye) added and the mixture is rubbed on the swollen foot twice daily until the foot comes down.

Botanical name: *Aspilia africana* (Pers.) C.A. Adams Family: Asteraceae  
Common name: Haemorrhage plant Local name: Isahrasa  
Part used: Leaves  
Ailment cured and mode of administration: It is used to stop internal bleeding. The leaf is boiled, the leaf together with the decoction is put in a basin and a woman who is suffering from internal bleeding sit on it and this stops the bleeding. This is done in the morning and evening.

Botanical name: *Chromolaena odorata* (L.) R.M.King & H.Rob. Family: Asteraceae  
Common name: Siam weed; awolowo weed. Local name: Ishero  
Part used: Leaves  
Ailment treated and mode of administration :This is used to treat toothache. The leaf is chewed and this helps to relieve the pain and also treat the toothache. This is done for three days.

Botanical name: *Emilia sonchifolia* (L.) DC. Family: Asteraceae  
Common name: Yellow tassel flower Local name: Orho-Orua  
Part used; Leaves  
Ailment treated and mode of administration: This is used to treat throat infections, clear the eyes and help children walk. Juice from the fresh leaves is used to clear the eyes. The leaf with guinea corn and limejuice is used to treat sore throat. The leaf extract is rubbed on the limbs of children to make them walk.

Botanical name: *Synedrella nodiflora* Gaertn. Family: Asteraceae  
Local name: ogbugho  
Part used; Leaves  
Ailment treated and mode of administration: This plant is used to stop bleeding. The juice from the leaf is applied to fresh cuts and wounds to stop bleeding.



Botanical name: *Momordica charantia* L. Family: Cucurbitaceae  
Common name: African Cucumber Local name: Udjiro  
Part used: Whole plant  
Ailment treated and mode of administration: This plant is used to treat convulsion. The whole plant is cooked and two spoons given thrice daily, The water is used to bathe the patient and juice from the leaf is put in the eyes to relieve convulsion. The fresh leaf is tied around the neck of children to relieve convulsion

Botanical name: *Alchornea cordifolia* (Schum. & Thonn.) Müll. Arg. Family: Euphorbiaceae  
Local name: Osokpo  
Part used: Leaves  
Ailment cured and mode of administration: This is used to reawaken an unconscious person. The leaf is grounded and used to rub the body of an unconscious person to waken him up. The perceived stinging property of the leaf is believed to accomplish this waking up.

Botanical name: *Alchornea laxiflora* (Benth.) Pax & K.Hoffm. Family: Euphorbiaceae  
Local name: Urievwu  
Part used: Stem  
Ailment cured and mode of administration: This is used as chewing stick to keep the teeth healthy because of its antimicrobial properties

Botanical name: *Jatropha curcas* L. Family: Euphorbiaceae  
Common name: Boundary Stick Local name: Ishakpa  
Part used: Roots and leaves  
Ailment cured and mode of administration: It is used to cure chronic gonorrhoea and headache. The root plus native chalk, ogogoro (local gin) and tobacco leaf is used for the gonorrhoea. All these are put inside a bottle; the ogogoro helps to extract the active constituents from these materials. The patients are always advised to drink a glassful twice daily for 3 days.

Botanical name: *Manihot esculenta* Crantz. Family: Euphorbiaceae  
Common name: Cassava Local name: Imidaka  
Part used: Leaves.  
Ailment treated and mode of administration: This plant is used to prevent cutlass from entering someone (but the person must be an Indigene of the study area). The juice from the leaf is extracted and drunk over some incantation to prevent the entering of cutlass.

Botanical name: *Phyllanthus muellerianus* (Kuntze) Exell Family: Euphorbiaceae  
Local name: Obuko lyeke  
Part used: Leaves  
Ailment treated and mode of administration: This plant is used to treat back worm. The juice extract from the leaves is mixed with local dry gin and a half-cup is given for two days to expel worms.

Botanical name: *Ricinodendron heudelotii* (Baill.) Pierre ex Heckel      Family: Euphorbiaceae  
Common name: Water cane      Local name: Eke  
Part used: Stem bark  
Ailment treated and mode of administration: This plant is used to treat labour pain and elephantiasis. The bark is grounded and applied topically to relieve labour pains and elephantiasis.

Botanical name: *Baphia nitida* Lodd.      Family: Fabaceae  
Local name: Orhua  
Part used: Leaves  
Ailment treated and mode of administration: This is used to prevent miscarriage or abortion in women, The leaf is crushed and applied to the lower part of the abdomen twice daily for two days.

Botanical name: *Dialium guineense* Willd.      Family: Fabaceae  
Common name: Black or velvet tamarind      Local name: Ohiorama  
Part used: leaves  
Ailment treated and mode of administration: This is used to treat fever. Fresh leaves are boiled and the decoction is used to bath the patient suffering from fever. This is done twice daily for three days

Botanical name: *Hymenostegia afzelii* (Oliv.) Harms      Family: Fabaceae  
Local name: Upa  
Part used twigs  
Ailment treated and mode of administration: This is used to treat toothache and to clean teeth. The twigs are chewed for toothache

Botanical name: *Piptadeniastrum africanum* (Hook.f.) Brenan      Family: Fabaceae  
Local name: Owangan  
Part used: Stern and root barks.  
Ailment treated and mode of administration: This plant is used as snuff and stimulant of nervous system. The root and stem barks are grounded into powdered form and used.

Botanical name: *Mammea africana* Sabine      Family: Clusiaceae  
Local name: Urherame  
Part used: Root barks.  
Ailment treated and mode of administration: This plant is used to treat skin disease and syphilis. The root bark is cooked and the patients suffering from any skin disease and syphilis is bathed with decoction by the plant.

Botanical name: *Ocimum gratissimum* L.

Family: Lamiaceae

Local name: Ira

Part used: Leaves

Ailment treated and mode of administration: This plant is used to treat stroke. The liquid extracted from the leaf together with the white liquid from snail and the person's urine is used to treat stroke. Half a glass is taken twice daily. Awere (*Tridax procumbens*), the leaf and flower are pounded with black pepper and Ishasha (spice). It is used to wake the dead nerve cells of the patient. treat stroke. Half a glass is taken twice daily. Awere (*Tridax procumbens*), the leaf and flower are pounded with black pepper and Ishasha (spice). It is used to wake the dead nerve cells of the patient.

Botanical name: *Solenostemon monostachyus* (P.Beauv.) Briq. Family: Lamiaceae

Local name: Ariophe

Part used Leaves

Ailment treated and mode of administration: This plant is used to treat convulsion, tuberculosis, stomachache and to clear the eye. The juice from the leaf is put into the eye to clear it. The leaf is crushed and honey is added and used to treat tuberculosis. The leaf is boiled with a spice, black pepper (*Piper guinensis*), used to treat stomachache. This is taken thrice daily.

Botanical name: *Allium sativum* L.

Family: Alliaceae

Common name: Haemorrhage plant

Local name: Garlic

Part used: Bulb

Ailment cured and mode of administration: This is used to treat pile, appendicitis and hernia. Six to seven bulbs of the garlic are sliced inside a bottle with dry gin (ogogoro) and allowed for 3 days before use. One glass is taken twice daily for three days in the treatment of piles. The bulb is dug very early in morning and cut into smaller sizes and put into a bottle, an onion bulb, 7 seeds of egwoye and ogogoro are then added, A glassful is taken twice daily for three to four days to treat appendicitis and hernia

Botanical name: *Gossypium hirsutum* L;

Family: Malvaceae

Common name: Cotton

Local name: Orur

Part used: Leaves

Ailment cured and mode of administration: This is used to relieve menstrual pain. The leaf is ground with black pepper (uririe and boiled in water. A cupful is taken three times daily

Botanical name: *Dissotis rotundifolia* (Sm.) Triana

Family: Melastomataceae

Local name: Ukuero vwo

Part used: Leaves or whole plant

Ailment treated and mode of administration: This is used to treat stomachache and diarrhoea in children. The leaf is cooked with alligator pepper (*Aframomum meleguata*) and a cupful is taken once daily for two days. Half a glass is given to children.



<p>Botanical name: <i>Azadirachta indica</i> A. Juss..  Common name: Neem tree  Part used: Seed  Ailment treated and mode of administration: This plant is used to treat pile. The seed is usually bumed, powdered and mixed with sugar. A full tablespoon is taken twice daily. A glass of water is then latter drank to dilute the mixture. This is very effective for pile</p>	<p>Family: Meliaceae  Local name: Dongoyaro</p>
<p>Botanical name: <i>Bosqueia angolensis</i> Ficalho.  Part used: Leaf and stem bark  Ailment treated and mode of administration This is used to treat diarrhoea. The leaf and stern bark is boiled and a cupful ofthis decoction is taken once daily for 2 days.</p>	<p>Farnily: Moraceae  Local name: Otukhurhu</p>
<p>Botanical name: <i>Chlorophora excelsa</i> (Welw) Benth. &amp; Hook.  Common name: Iroko tree  Part used: Stem bark  Ailment treated and mode of administration: This is used to heal wounds, The bark of the plant is powdered and applied on the wound.</p>	<p>Family Moraceae  Local name: Uno</p>
<p>Botanical name: <i>Musanga cecropioides</i> R.Br.  Part used: Root barks  Aliment treated and mode of administration: This plant is used to treat tapeworm and dysentery. The root bark is cooked and the decoction is given to the patient suffering from dysentery and tapeworm.</p>	<p>Farnily Moraceae  Local name: Ukhorube</p>
<p>Botanical name: <i>Musa paradisiaca</i> L.  Common name: Plantain  Part used: Bark  Ailment treated and mode of administration: This is used to treat barrenness. The bark of the plantain and black pepper are pounded and cooked with electric fish A spoonful is taken morning and evening while the fish is licked and dried. This is done for seven days; on the seventh day the fish is eaten</p>	<p>Family: Musaceae  Local name: Orhe</p>
<p>Botanical name: <i>Psidium guajava</i> L.  Common name:Guava  Part used: Leaves.  Ailment treated and mode of administration: This plant is used to treat fever. Fresh leaves of Igobe and pawpaw are boiled and the water is used to bath the patient with fever</p>	<p>Family: Myrtaceae  Local name: Igobe</p>
<p>Botanical name: <i>Bambusa vulgaris</i> Schrad. ex J.C.Wendl.  Common name: Bambu  Part used: Young shoot  Ailment treated cured and mode of administration: This is used to treat gonorrhoea. The young shoot is sliced and cooked with local gin together with tobacco leaf and native salt. A glassful is taken twice daily for three-four days.</p>	<p>Farnily: Poaceae  Local name: Okpo</p>



Botanical name: *Hannoa klaineana* Pierre & Engl.

Family: Simaroubaceae

Local name: Ofor

Part used: Stem and root barks.

Ailment treated and mode of administration: This is used to treat hypertension and fever. The stem and root barks are cooked in water and the liquid extracted taken. A cupful is recommended twice daily for three days.

Botanical name: *Solanum nigrum* L..

Family: Solanaceae

Common name: Black Nightshade

Local name: Ebe-akpe

Part used: Leaves

Ailment treated and mode of administration: This plant is used to treat convulsion, redness of the eye, skin diseases, gonorrhoea and liver enlargement. The juice from the leaf is used to treat convulsion, clear the eye, cure gonorrhoea and liver enlargement. The leaf is crushed and used to treat skin disease.

Botanical name: *Cola nitida* (Vent.) Scott & Endl.

Family: Sterculiaceae

Common name: Kola

Local name: Evwe

Part used: Cotyledon

Ailment treated and mode of administration: This is used to prevent boil. Native cola, which is put in arua leaf, followed by some incantations and then chewed

Botanical name: *Fleurya aestuans* (L.) Gaudich.

Family: Urticaceae

Common name: Tropical nettle weed

Local name: Ovie risokpo

Part used: Leaves

Ailment treated and mode of administration: This plant is used to make the foetus develop well. The leaf is crushed with a mortar and native chalk. The paste is applied over the lower abdomen of the pregnant woman so that the foetus can be well developed

Botanical name: *Curcuma longa* L.

Family: Zingiberaceae

Local name: Iblue

Part used: Rhizome

Ailment treated and mode of administration: This is used to treat yellow fever, malaria and typhoid fever. The content of the rhizome is extracted with local gin and cupful of the extract is taken twice daily for three days

## Discussion

This study has once more shown the relevance of traditional medicines in the health care system of indigenous peoples. The work has demonstrated that traditional herbal medicines are still prominently used in the treatment of all kinds of diseases in the study area. Some of the species such as *Drancaena mannii* are used in the treatment and management of more than one ailment.

The use of most of the herbal preparations described in this work against malaria confirms the prevalence of this disease in tropical Africa. Nearly one third of the total number of herbs including: *Curcuma longa*, *Magnifera indica*, *Cymbopogon citratus*, *Demethia tripetala*, *Dialium guineense*, *Psidium guagava* ., *Blighia sapinda* konig, *Carica papaya*, *Citrus limon* are used in the treatment of the disease.

The Ethiopians use species such as *Newbouldia laevis*, *Musa paradisiaca* and *C. aurantifolia* to cure barrenness females and impotency in males. Also the leaves of *Achyranthes aspera* are used to hasten delayed labour. The leaves of *Fluerya aestuans* are used to make the foetus in the womb develop well.

Convulsion is a very common ailment especially in children below ten years, contributing significantly to infant mortality. Consequently the people have found some notable herbs such as *Momordica charantia* and *Solenostemon monostachys* very useful in handling this condition. Apparently due to its high astringency property, species of *Alchornea cordifolia*, is used extensively to revive unconscious persons. *Hannoa klainbana* stem and root barks have provided remedy to the dreaded conditions of hypertension and associated illnesses.

Plants have varying medicinal applications among different peoples. For instance Moody et al . (1998) had reported the use of *Alchornea laxiflora* for the cure of gingivitis and other inflammatory conditions in Ibadan. However this study observed that this species is used as chewing stick to maintain healthy teeth due to its perceived antimicrobial properties. Also, Osifo (1992) reported that the Benin people of Edo state use the leaves of *Phyllanthus amarus*, *Bryophyllum pinnatum* and *Portulaca oleracea* in the treatment of convulsion. This study observed that the neighbouring Ethiopians use species of *Momordica charantia* and *Solenostemon monostachys* to treat the same condition.

The study further revealed that the people of Ethiopia use species of *Bambusa vulgaris* and *Solanum nigrum* in treating gonorrhoea, which is a bacterial infection. This plant however is mostly used for staking and house construction in virtually all parts of Nigeria with little knowledge of its medicinal value. The report of the use of seeds of *Azadirachta indica* against malaria is new. The common knowledge of even in literature has been the use of the leaves of the species in the treatment of malaria (Okpanyi and Ezeukwe, 1981).

This study observed that the use of herbs and herbal preparations is a big business among the indigenous people. In view of this and the current global efforts at poverty alleviation the development of this huge trade could become a veritable instrument of wealth creation among the people.

The study also observed that the harvesting and use of these plants especially those in the wild are uncontrolled, This is already posing serious threats to many of the species. Thus the cultivation of these plants for drug production locally will not only reduce scarcity in the future but help in their

conservation. This will also reduce the efforts spent by traditional herbal practitioners to travel into

the bush to find their herbs (WRI, 1993).

Finally, this study has contributed in providing information on customary knowledge and use of plants by indigenous people. Moreover as mankind moves speedily away from the use of synthetic products to natural ones, data such as those provided by this study will become very invaluable in charting the new course.

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