

**ETHNOMEDICAL UTILIZATION OF *ALCHORNEA LAXIFLORA* (BENTH) PAX & K HOFFM IN IREPODUN/IFELODUN LOCAL GOVERNMENT AREA OF EKITI STATE, SOUTHWEST, NIGERIA**

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**ABSTRACT**

*Ethnomedical utilization of Alchornea laxiflora in Irepodun Local Government Area of Ekiti State, Southwest, Nigeria was surveyed using structured questionnaire and personal interviews. Out of fourteen communities in Irepodun/Ifelodun Local Government Area, eight communities were randomly selected for data collection. A set of questionnaire were administered to adults who are either plant collectors, herbalists or herb sellers. In-depth interviews with members of the community who are knowledgeable about the plant were conducted. Herbalists were also interviewed on part of plant used and disease treated. Results showed that 55.8% of the respondents were males while 44.2% were females. Age range of respondents was 41-50 years (50.0%), 31-40 years (23.3%) and 51-60 years (13.9%). About 44.2 %, 39.5% and 16.3% of the respondents were herb sellers, herbalists and herb collectors respectively. All plants of A. laxiflora is used for medicinal purpose (24.4% of respondents), while use of leaves, root and bark had values of 44.2%, 23.3 and 8.11% of respondents respectively. The plant is mostly sourced from forest (74.6% of respondents) during rainy season (86.1% of respondents) Alchornea laxiflora is used for treating many diseases such as pile (38.4% of respondents), Dysentery (10.5% of respondents), Malaria (9.3% of respondents), Eczema (9.3% of respondents), Cough (8.1% of respondents) and High fever (6.9% of respondents). The plant is abundant in Irepodun/Ifelodun Local Government Area of Ekiti State, Southwest, Nigeria. However, it could be threatened by use pressure as attempts have not been made to domesticate it.*

**Keywords:** Medicinal Plant, Indigenous Knowledge, *Alchornea laxiflora*, Local utilization

**INTRODUCTION**

Biodiversity comprises countless plants and animals that feed and heal people. Edible plants, plant products and medicinal plants are considered among the most important non-wood forest products. This necessitated the adoption of a number of resolutions by the World Health Assembly drawing attention from the fact that most of the population in various developing countries around the world depend on traditional medicine for primary health care and that medicinal plants are of great importance to the health of individuals and community (Conservation African Foundation, 2004).

Although the value of these medicinal plants is widely recognized by both rural and urban dwellers in Africa, introduction of appropriate strategies, which may lead to the efficient utilization and management of the medicinal plants that are commonly used by the community has not been properly researched on (Conservation African Foundation, 2004). There is no knowing of which plant thought to be useless today will provide the cure for cancer, Acquired Immune Deficiency Syndrome (AIDS), leprosy or some other unknown diseases. The rosy periwinkle (*Catharanthus roseus*), a plant that grows wild in the forest of Madagascar, and cultivated as ornamental plant in Nigeria is a fascinating example of how a “useless” plant can become a healer of nations. Nason (1992) reported that two drugs

Vincristine and Vinblastine derived from this plant are today used in the treatment of childhood leukemia, while the leaves of this plant in an aqueous infusion has been recommended as a cure for diabetes (Shittu, 2003)

Some of the medicinal plants have even served as important source of innovation for the pharmaceutical industry. The World Health Organization reported that 20,000 species of medicinal plants have been identified and over 20 have become raw materials for the manufacture of drugs (Shittu, 2003). Also, the 1985 survey conducted for the World Health Organization (WHO) revealed that in developed countries, approximately 74% of the pharmaceuticals derived from higher plant were developed by chemists researching on ethno medical uses of locally used medicinal plant. *Alchornea laxiflora* is one of such species of great medicinal importance, which has not been fully domesticated.

It is an indigenous plant belonging to the family of Euphorbiaceae. It grows in the tropical rain forest from Nigeria to Ethiopia and down to Mpumalanga, South Africa. The plant is locally known in Nigerian languages as “Uwenuwen” (Edo), “Ububo” (*Igbo*) and “Ewe ijàn” (Yoruba). (Burkill, 1985). *Alchornea laxiflora* is a deciduous shrub or small tree, with smooth bark, pale grey and flaking. Leaves are alternate, elliptic-lanceolate to oblong-oblongate, up to 17 × 8 cm, acuminate, 3-veined from the base, thinly textured, light green, turning an attractive yellow or red in dry season; margin is shallowly crenate-serrate. Flowers are in axillary spikes, unisexual on the same plant. (Figure 1) The reddish bracts are more conspicuous than the small flowers. Fruit is a 2-4-lobed capsule, 5-7 mm in diameter, thinly woody, blackish-brown (Zimbabwe Flora, 2006). In spite of its large proportional usage in the preparation of local medicine, attempts have not been made (towards sustaining its supply) to domesticate it. This may be due to its localized market and inadequate documentation on the uses and efficacy of the plant. The study therefore surveyed the ethnomedicinal potentials of *Alchornea laxiflora* in Irepodum/Ifelodun Local Government Area of Ekiti State, Southwest, Nigeria.



**Figure 1.** *Alchornea laxiflora* (Benth.) Pax & K Hoffm (Zimbabwe Flora, 2006)

## METHODOLOGY

### Study Area

The study was conducted in Irepodun/Ifelodun Local Government Area of Ekiti State, Southwest Nigeria.. Ekiti has a land area of about 7000km<sup>2</sup>, and is situated between latitude 7<sup>0</sup>25' and 8<sup>0</sup>20' North and longitude 5<sup>0</sup>00' and 6<sup>0</sup>00' East (Ekiti State Government (KSG, 1997). Ekiti State was selected based on easy accessibility to information and also on the fact that it is the only state in Nigeria that speaks one dialect. In essence, it is a “cultural village” as all the Local Government Areas has similar culture – language transmits culture. Out of the fourteen (14) communities in Irepodun/Ifelodun Local Government Area eight (8) were randomly selected for data collection.

Information for the study were gathered through questionnaire and complemented with personal interview. A set of questionnaire were administered to 15 respondents in each community, 120 questionnaires were administered in the eight communities. However, only 86 questionnaires were successfully completed. The target persons were adults who know the plant and are plant collectors, herbalists, or herb sellers. In-depth interviews with members of the community who are knowledgeable about the plant were also conducted. Herbalists were also interviewed on part of the plant used for medicine. All the respondents were presented with the fresh sample of the *Alchornea laxiflora* for identification before they were interviewed.

## RESULTS AND DISCUSSION

Demographic and social characteristics of the respondents were analyzed with regard to gender, age and occupation as presented in Table 1. Result showed that 55.8% of the respondents were males while 44.2% were females. This indicates that *Alchornea laxiflora* is known and actively used by both males and females and that the information obtained on the medicinal forms and uses of *Alchornea laxiflora* in the site is not gender bias but complete.

The study shows that age range of 41-50 years (50.0%) topped the lists of respondents. This was followed by age range of 31-40 years (23.3%) and 51-60 years (13.9%). This implies that the species is used by various ranges of adults who may have observed closely how their fore fathers used them and may have in the process ascertained its efficacy. Besides, elderly people are relatively more interested in the use of medicinal plants for treatment of diseases than young people who are either inexperienced or less experienced. It can also be attributed to the fact that most herbalists in rural communities of Africa are above 40 years. This agrees with the findings of Gurib-Fakim (2004) that knowledge of traditional medicine has been weakened by colonization and abandoned by younger westernized generations. Occupational distribution of respondents showed that 44.2%, 39.5% and 16.3% of the respondents were herb sellers, herbalist, and herb collectors respectively. This implies that the respondents have good knowledge of the medicinal value of the plant species: Herb sellers should know much about *Alchornea laxoflora* to have been convincing buyers to purchase it based on its medicinal values. The herbalists should have known the values they put them to while herb collectors should have medicinal reasons for collecting them. This is in line with Gurib-Fakim (2004) that knowledge of how to use plant medicinally is carefully guarded by respective healers trained in plant identification and use.

**Table 1.** Demographic and social characteristics of the respondents

Gender	Frequency	Percentage
Female	38	44.2
Male	48	55.8

<b>Total</b>	<b>86</b>	<b>100</b>
<b>Age Distribution</b>		
20 - 30	5	5.8
31 - 40	20	23.3
41 - 50	43	50
51 – 60	12	13.9
61 – 70	6	6.9
71 and above	-	-
<b>Total</b>	<b>86</b>	<b>100</b>
<b>Occupation</b>		
Herb seller	38	44.2
Plant Collector	14	16.3
Herbalist	34	39.5
<b>Total</b>	<b>86</b>	<b>100</b>

Table 2 shows that 44.2% of the respondents indicated the leaves of *Alchornea laxiflora* as the medicinal part for treatment of different ailments while 23.3% and 8.1% indicated root and bark respectively. This shows that every part of the species has medicinal value as indicated by 24.4% of the respondents. Similarly the Manual for Propagation and Cultivation in Ghana (2002) reported that the bark, leave and root of *Croton membranaceous*, *Clausena amisata*, *Bryophyllum calycinum*, *Mormordica charantia* are used in medicine. Also, fruits, roots, seeds, and whole plant of *Apromomum melengueta* are used for treatment of boils, rheumatism, bone fractures, chest pains and wounds. In Ghana all parts of *Azardirecta indica* are used for medicinal purposes – the leaves are used for treating worm, boils, fever and hepatitis. The stem-bark is used to treat malaria; seeds and root-bark are used to treat intestinal helminthiasis and wounds, while the bark is used to treat pharyngitis.

**Table 2. Parts of *Alchornea laxiflora* mostly used by the respondents for medicinal Purpose**

<b>Part of Plant</b>	<b>Frequency</b>	<b>Percentage</b>
Leaves	38	44.2
Root	20	23.3
Bark	7	8.1
All	21	24.4
<b>Total</b>	<b>86</b>	<b>100</b>

The study revealed that 67.4% (Table 3) of the respondents obtained *Alchornea laxiflora* from the forest while 32.6% source it from farmland. This implies that *Alchornea laxiflora*, though not yet domesticated, is common in the study area. However, it could be threatened due to high rate of deforestation and therefore need to be domesticated

**Table 3. Sources of supply of *Alchornea laxiflora* to respondents**

<b>Part of Plant</b>	<b>Frequency</b>	<b>Percentage</b>
Forest	58	67.4
Farmland	28	32.6
<b>Total</b>	<b>86</b>	<b>100</b>

According to Table 4, the highest supply of *Alchornea laxiflora* is obtained during rainy season (86.1%), which coincided with the peak of plant growth. This could be attributed to the reason behind collection and preservation of the plant species in large quantities (by many herb collectors) during the rainy reason for use in the dry season.

**Table 4. Seasonal Availability of *Alchornea laxiflora* to respondents**

Season	Frequency	Percentage
Wet	74	86.1
Dry	2	2.3
All season	10	11.6
<b>Total</b>	<b>86</b>	<b>100</b>

Table 5 shows that *Alchornea laxiflora* is widely used for curing many ailments. However, pile (38.4%) topped the list followed by dysentery (10.5%) while eczema and malaria were indicated. This can be attributed to the fact that pile, dysentery, malaria and eczema are among the prevalent diseases in rural areas, the study area inclusive.

**Table 5. Medicinal uses of *Alchornea laxiflora* by Respondents**

Disease Ailment	Frequency	Percentage
Pile	33	38.4
Dysentery	9	10.5
Malaria	8	9.3
Eczema	8	9.3
Cough	7	8.1
High fever	6	6.9
Measles	3	3.5
Ring worm	3	3.5
Antibiotics	2	2.3
Blood building	2	2.3
Fungi attack	1	1.2
Dizziness	1	1.2
Typhoid	1	1.2
Menstrual Problem	1	1.2
Rheumatism	1	1.2
Indigestion	-	-
<b>Total</b>	<b>86</b>	<b>100</b>

## CONCLUSION AND RECOMMENDATIONS

The solution of most ailments is in the forest. Based on indigenous knowledge, the use of herbs remains indispensable in maintaining a healthy rural community in Ekiti State. *Alchornea laxiflora* is used in preparation of many local medicines in Ekiti State.

There is need to investigate the active ingredients in *Alchornea laxiflora* which if extracted by pharmaceutical industries can be quite useful in manufacturing drugs for curing many ailments. Though *Alchornea laxiflora* is known and used by many inhabitants of Ekiti, effort have not been made towards domestication of the plant. To sustain the supply of *Alchornea laxiflora* at all season, the plant, should be integrated into the farming system. The pharmaceutical industries in conjunction with herbalists should work on the extraction of the active ingredients in *Alchornea laxiflora* to enable them test its efficacy, for further

production of more active drugs. Research should be conducted on how to standardize the dose of *Alchornea laxiflora* required for different ailments.

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