# ETHNOBOTANICAL SURVEY OF THE TAKAMANDA FOREST RESERVE

**Consultancy Report Submitted to:**
**PROFA (MINEF-GTZ)**
**MAMFE**
**S. W. PROVINCE**
**CAMEROON**

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TABLE OF CONTENTS PAGE

## ABSTRACT

An ethnobotanical survey of the Takamanda Forest Reserve was carried out during mid-rainy season through semi-structured interviews of village resource persons with detailed knowledge of the forest, and traditional users of the plant resources.

The five villages chosen for the survey represented the five main tribes within the forest reserve and its border zones.

During the survey 328 usefull plant species belonging to 243 genera and 91 families were identified. The most important families (with numbers of species) were: Leguminosae-Papilionoideae (40), Rubiaceae (39), Euphorbiaceae (36), Palmae (27), Acanthaceae (23), Annonaceae (21), Compositae (21), Guttiferae (19), Irvingiaceae (19), Piperaceae (19), Leguminosae-Mimosoideae (16), Burseraceae (15), Apocynaceae (14), Marantaceae (13), Moraceae (13), Sterculiaceae (13), Zingiberaceae (12), Gramineae (11), Cecropiaceae (10), Combretaceae (10), Labiatae (10) and Urticaceae (10).

The decreasing order of importance by numbers of species per genera is as follows: *Piper, Irvingia, Pterocarpus*, *Massularia*, *Asystasia*, *Aframomum*, *Cola* and *Garcinia.*

Mushrooms, *Irvingia* sp*, Ricinodendron heudelotii, Garcinia kola, Cola accuminata* and *Dioscorea* sp. were top ranking in importance among the non-timber forest products (NTFPs). They were recorded in almost all the studied villages of the reserve area.

About 328 plant species have medicinal use. They are known to cure some 103 diseases.
Also, 35 plants belonging to 17 families are used as vegetable, 9 used as fish poisons, 27 species are used in construction, and 15 are eaten as fruits.

The distribution of the different useful plant species is neither uniform throughout the study area nor are most of the uses to which the products are put similar to records from elsewhere in Cameroon. Hence there is high potential to export the plants and their uses beyond the immediate vicinity of the reserve.


## 1. INTRODUCTION

### 1.1 Background

Extensive areas of tropical rainforest are being cleared every year. The Food and Agricultural Organsation of the United Nations (FAO) estimated the area of forest lost between 1986-1990 at about 11 million hectares of which 5 million hectares become fallow annually (Wolter( )In: Sonke and Lejoly, 1998).

This deforestation process is a serious threat to biodiversity conservation in the tropics. If no action is taken to remedy the trend, a considerable number of plant and animal species are likely to become extinct even before they are known to science.

There is urgent need to develop land use systems and forest management schemes and practices that maximise the diversity of products while at the same time ensuring the maintenance of the land's capacity to continue undiminished production of these benefits (Guard ( )In: Doolan,1997).

Given the number of forest products used by humans, wood or non-wood, given the enormous range of domestic and commercial uses of these products and the complexity of the pathways along which forest products travel from producers to consumers, the knowledge of sustainable

management and assessment of these resources is of utmost importance (Wilkie ( ) In: Sunderland et al., 1999).

Whenever human-beings use natural resources for domestic consumption and/or as a source of income, the question of sustainability of these resources arises.

The tropical rain forest has for long been associated with commercial hardwood production. Because the bulk of forest-based income was generated from domestic sale and export of timber other forest products were variously termed 'minor' or 'secondary' sources of revenue. This subsidiary consideration given to the non-timber is responsible today for the absence of detailed management plans to regulate the offtake levels of the secondary/minor forest products.
However, the utilisation of non-timber forest products is probably the most important sector of the rural village economy, both for subsistence and for cash.

Thanks to the declining revenue from over exploited tropical rain forest throughout the world there is now widespread recognition by politicians, media and the public alike of the importance of the non-timber forest products.

In the TFR area about FCFA 500 million is generated annually in 31 villages of about 15,000 inhabitants; 59% and 23 % respectively of the income is derived from collecting bush mangoes (*Irvingia gabonensis*) and Eru (*Gnetum africana*).

The greater proportion of income of the villagers is expended on health; more than the proportion spent on either education or other family provisions (Schmidt-Soltau, 2001).

Since modern health facilites are everywhere far away from the rural dwellers, they mostly consult the traditional healers who rely on local medicines obtained from the local plants.

PROFA recognising the importance of useful forest species of the TFR areas in providing food, medicines, materials for crafts etc, commissioned an ethnobotonical study that is the subject of the present publication.

Tentatively about 857 species of plants from 130 families have been identified within the TFR. Addition to this species list are expected when samples collected from the savanna region of the reserve are identified. Of those species already identified 502 are trees, 200 are herbs, 80 shrubs, 25 palms and 50 monocots.

Since ethnobotany is that area of human ecology that defines the interface between the people and their forests the present ethnobotanical survey is intended to determine the ways in which these species are utilized and to suggest how they can be mannged in a sustainable way.

### 1.2 Terms of Reference (ToR)

The following are ToR for the ethnobotanical survey of the TFR:

- Identify important medicinal plants, their uses and their local names in the Anyang, Basho, Boki, Becheve and Ovande tribes;
- Identify wild food plants including mushrooms, their local names in the different tribes;
- Identify trees, shrubs and grasses, their local names, their uses e.g. traditional method of soil improvement, supplementation of livestock feed in the villages, erosion control, and provide information needed for their management;
- List local and scientific names of crop varieties in subsistence agriculture, and describe their processing for human consumption or livestock feeding;
- Identify the plants used in craft and construction, give their local names and list the major products in the village economy;

- Record the presence of wild flowering plants including epiphytes, ferns and orchids, identify present uses, local names as well as potential for flori-culture or ornamental uses.

### 1.3 Cameroonian (MINEF)-German (GTZ) Project for the Protection of Forest around Akwaya (PROFA)

The overall goal of the Project for the Protection of Forests around Akwaya (PROFA) is to maintain the bio-diversity of the TFR as well as improve the living condition of people within its border zones.

The following are the anticipated outputs of the first 3 project years that have orientation character:

- A draft forest management plan for the TFR is prepared and partly tested
- The participatory forest management capacity of local population and MINEF Divisional Delegation is strengthened in cooperation with all parties concerned
- Traditional income generating activities and self-help initiatives of local population are identified and a gender sensitive strategy, contributing to sustainable resource management is developed and tested

The executing agency of PROFA is the Cameroonian Ministry of the Environment and Forestry in Yaoundé, but the Divisional Delegation for Environment and Forestry for Manyu Division at Mamfe is responsible for project steering and therefore the main implementing agency.

The first phase of PROFA is from 2000 – 2003. Dependend on the outcome the scope of the project will be expanded to cover the near-by Mone Forest Reserve and the duration of the project extended to twelve years including an implementation and a handing over phase.

To attain the project purpose, the appreciation and documentation of the relationship between man and plants within the TFR areas becomes imperative.

## 2. MATERIALS AND METHODS

### 2.1 The Survey Team

The ethnobotanical survey team comprised of an Ethnobotanist/Botanist, a Forester, a local Parataxonomist, two Village guides, and two Herbal Practitioners. The composition of the team made the local identification of the useful plants easier, making the process of scientific identification and/or collection of voucher specimens faster. The contribution of women in the supply of specimens of plants used as vegetables, mushrooms, and condiments was invaluable. Information on medicinal plants was recorded through the assistance of the herbal practitioners.

### 2.2 Vernacular Names

One main expectation of the study is to record the names of useful plant species in the languages of the five ethnic groups selected. Slight similarities exist between the local languages Anyang and Boki, Ovande, Becheve and Basho. A drawback in the use of local nomenclature is that in some cases it not does distinguish between separate species e.g. *Asystesia* sp and *Angylocalyx* sp in the Deyang language. However, vernacular names often give information on specific characteristics and/or uses of the species and their habitat preferences.

The English alphabet was adapted for spelling of the vernacular names because alphabets of the local languages are not documented.

## 2.3 Semi-structure Interviews

Prior to the survey, notification was sent to the Chiefs of the 5 villages. On arrival of the research team a general meeting was convened during which issues such as purpose of the survey, approach to be adopted and local participation were discussed.

Semi-structured interviews were held during which informants were asked to name in their local languages the plants used for craft, local construction, as well as wild fruits, wild vegetables, preferred fuelwood species, mushrooms etc. The information were used to prepare a comprehensive list of plant species used for particular purposes.

During interviews with traditional herbalists, questions were asked to appraise their perceptions of orthodox medicine, dosage determination, methods of disease identification, ability to discover over dosage of a particular preparation etc.

## 2.4 Household Visits

About 70% of the houses in each site were visited and the local names of plants used for various purposes like kitchen utensils and tools, condiments, preferred feulwood species etc were recorded. Also local artists and craftsmen were visited to have an on-the-spot record of the materials used. All activities listed above were carried out with the help of village guides who acted as facilitators.

## 2.5 Walk in the Woods

The aim of the the 'walk in the woods' was to identify in the field all plants species hitherto indicated to have particular uses: vegetables, condiments, fruits, foods, local construction material, medicinal plants etc. Then the scientific names of these species were recorded. Some voucher plant specimens were collected for further identification in the Herbarium.

## 2.6 Herbarium Specimens

To supplement information collected from the forest walks, 127 herbarium specimens of plants with noted medicinal values collected within the Takamanda Forest Reserve were presented to the herbal practitioners in each site and the diseases they treat recorded.

There was however a minor problem of recognising pressed specimens by the villagers. The problem was overcome by contacting at least two informants to confirm the identification.

The field identification was done using White and Kate (1996); Hawthorne (1990); Le Bourgois (1995); Okezie, Akobundu and Agyskwa (1987) and Souane (1983).

## 2.7 Possible Bias

The collection of culture-based data as is often the case during an ethnobotanical survey is subjected to bias (Miguel, 1996) such as Reactivity. Reactivity means that informants filter the information they provide in a conscious or unconscious reaction to the researcher's appearance and behaviour (Bernard, 1988.). This happens especially when informants suspect hidden motives for data collection.

During the survey this was observed when data on medicinal plants were collected especially as interpreters had to be used since most of the local practitioners could only speak their local language.

Initially some of the local practitioners erroneously took the field workers as prospective herbal practitioners even after the sensitization meeting was held, where reasons were given as to why detailed information on medicinal plants were being sort.

To minimize this possible bias it was explained that the data were collected design appropriate measures for conservation of the medicinal plants in the forest. Also, where the informants were reluctant to release detailed information this was respected and taken in good faith.

### 2.8 Preliminary Assessment of Orchids

In the protected area orchids were collected from fallen trees or branches, in the nearest old fallow fields which were about to be cultivated by slash-and-burn farmers. A small proportion of epiphytic orchids on standing trees were collected by climbing. Terrestrial orchids were plugged from the understorey or in the fallow. They were dried and conserved as herbarium specimens.

### 2.9 Data Analysis

The data were compiled and anaylised with BRAHMS (Botanical Research And Herbarium Management System) and Microsoft Excel software.

## 3. STUDY AREA

### 3.1 General Description

Figure 1 is a topographic map of the Takamanda Forest Reserve showing the locations of villages within and immediately outside the reserve. The TFR was constituted as the Takamanda Native Administration Forest Reserve since 1934. Presently the reserve is managed by the Cameroon Government Ministry for Environment and Forestry through the Divisional Forest Office in Mamfe, Manyu Division.

The TFR lies between longitudes $05^0$ 55′– $06^0$ 22'N and latitudes $09^0$ 10′– $09^0$ 35′E appr and is situated at the northern-most corner of the Southwest Province, Cameroon.

The Reserve is about 675.99$km^2$ in extent. In its original form the TFR contained 65$km^2$ of village enclaves consisting: Obonyi I, Obonyi III, Kekpani, and Matene.

The TFR is situated north of the Cross River Basin. The Cameroon-Nigeria international boundary separates the reserve from the southeast section of the Okwangwo Division of the Cross River National Park (CRNP), Nigeria. Matene settlements are sandwiched between the CRNP on the Nigerian side of the international border and the TFR.

The most prominent water body in the region, the Cross river and its multitude of headstream waters drain the southwestern Cameroon and southeastern Nigeria.

The Oyi river, a tributary of the Cross river, forms the greater part of the western border of the TFR. The east and south of the reserve borders follow small rivulets of streams and footpaths.

#### 3.1.1 Hydrology

The project area runs through a watershed from where most rivers take their sources in the high plateau. The principal rivers are the Mone, Baya, Makone, Manfi, Mabe, Ebe, and Oyi that are tributaries of the Cross river and the rivers Nkoman and Ameli, which are tributaries of the Katsina Ala river.

Most of these streams and rivers empty into the Manyu river around Mamfe which finally develops into the Cross river as it enters Nigeria. People move across these rivers in canoes or in a few cases via locally constructed bridges (Hammock).

Because of the erosive nature of the underlying soils, the fast flowing streams from the steep hills wash off a lot of nutritive topsoil from the forests annually.

### 3.1.2 Topography

The southern and mid central parts of the reserve is relatively flat with altitudes generally below 300m asl. However, within this area, pockets of highlands exist around Takpe, Obonyi I and Mfakwe.

Midway within the reserve, the terrain is conspicuously hilly especially towards the east around BashoI , Basho II, and Mbilishi with altitudes of up to 700m asl. The northern part of the reserve is very hilly. The terrain is generally undulating with steep hills and valleys as a common characteristic. Here altitudes range from about 600-1500m asl.

### 3.1.3 Geomorphology

The TRF region is underlain by undifferentiated basement complex which give rise to steep but shallow sedimentary soils derived from underlying acid crystalline rocks of granite, gneisses, schist and quartzites. During the Precambrian period the zone was made up of marine fossils on which considerable sediment especially of clay resulted.

The sedimentary rocks have metamorphosed to include Gneiss and migmatites, Granite-diorites, Phagioclastic gneiss and Calco-alkaline gneiss. The soils have a clayey to sandy texture.

They are shallow on the hill- tops and steep slopes of the Akwaya plateau and relatively deep on the plains around Mamfe. Undercover, the soils are clothed by a thin layer of organic matter that is readily leashed by rains as the area is cleared for agricultural and other land-uses.

### 3.1.4 Climate

Rainfall has a single peak pattern and the dry and the wet seasons stand out clearly. Rain starts from mid-March and spreads to mid-November. The dry season starts from mid-November and ends in mid-March.

The average yearly rainfall ranges from 2,500 to 3,900mm spread over 210 days.

The mean annual relative humidity at Besong-Abang wheater station near Mamfe ranges between 76% and 89%.

The hottest months are from December to February. The mean annual temperature is $23^0$C with an average maximum of $32^0$C and a minimum of $21^0$C. Temperatures decrease with altitudes and Mamfe at an altitude 152m records a maximum of $34^0$C in the month of March compared with a minimum of 18.6-18.$7^0$C between December and January. Akwaya at altitude 1,500m in the northern extremity of the study area is much cooler and receives more rainfall due to effect of the highlands.

### 3.1.5 Vegetation

Four main vegetation types exist within the Takamanda Forest Reserve: Lowland Rainforest, Midaltitude Forest, Montane Forest, and Savanna (Figure 2).

Lowland rainforest
This is the predominant vegetation occupying the southern part of the reserve with altitudes generally below 500m asl. It occurs around Takamanda, Assam, Obonyi I, Obonyi II and Takpe.

Within this type is also found reverine forest along Rivers Makone and Magbe. Floristically, this vegetation type is composed of species which are associated with Atlantic coastal forest.

Common here are species like *Irvingia gabunensis, Desbordesia glaucusense, Gilbertiodendron dewevrei, Pterocarpus sauyauxii, P. osun, Poga oleosa, Cola* sp*, Cylicodiscus gabunensis Treculia obovoidea*, and other members of the Euphorbiaceae.

Mid-altitude Forest
This formation covers a stretch about 9km from Obonyi III towards Matene and about 4km from Kekpani towards Basho. It extends to the southern part of Matene. Topographically, this area is generally flat with pockets of high altitude areas.

Common species here include; *Dactyladania mannii, Annonidium mannii, Citropsis sp, Penianthus longifolius,Crotonogyne argentea* and *Mareyopsis longifolia.*

Montane Forest
This occurs above 800m asl. The topography is conspicuously hilly often associated with large boulders. It occupies the stretch between Matene and Mendi extending towards the northeastern part of the reserve. The herb layer is dominated by members of the families Acanthaceae, Costaceae, Selaginellaceae, and Graminae. Common tree species are *Xylopia staudtia, Santira trimera, Anthonotha cladanta, Vernonia frondosa*, and *Gaertnera paniculata*. Orchids are also present.

Savanna
This is found at the northernmost part of the reserve with altitudes greater than 1500m asl. The vegetation is conspicuously grassland type with trees spotted. It extends to the Obudu Cattle Ranch through Oshenukpa. Common tree species are *Uapaca togoensis* and *Aniogeissus leiocarpus*. Also, stretches of gallery forests are found in valleys where streams flow.

### 3.1.6 Cultural Background

The Project Area is culturally diverse, made up of six main ethnic groups: Boki, Anyang, Ovande, Becheve, Asumbo and Basho.

Boki villages share boundary with the southern section of the reserve, Anyang villages with the south western and south eastern sections, Ovande villages with the north western and north east, Becheve villages with the northern section, Asumbo villages with the north east while the Basho villages share with the eastern section of the reserve.

All communities are predominantly agricultural with varied preferences for food and cash crops. The forest is cleared, trees burnt after drying, before planting. The common food crops are maize, yams, coco yams, cassava, plantains, bananas and groundnuts, for home consumption as well as for sale. Common cash crops are oil palms, ground nuts, cocoa and coffee.

Hunting is a common activity of the male folk while gathering of non-timber forest products (NTFP's) is practised by both sexes except for cases like Eru (Gnetum africanum), which is done mainly by the females. Consciously or not the cultural setting of all the groups encourage forest conservation as secret forests are established for the worship of various gods and as meeting grounds for some traditional societies. For example, the Ekpe forest, Makwo Forest etc.

### 3.2 Study Villages

From each of the five main tribes in the study region, one village was selected as a representative sample site for the tribe. The selection of the studied village sites (Fig. 2) was guided by:

- the cultural representativeness of the tribe. This was judged simple from the location of the village vis-à-vis their neighbours, since intertribal influence might be lower in villages surrounded by neighbours of same tribe than otherwise.
- the location of the village with respect to the forest paths. This was considered to reduce time spent in trekking between sample sites.

#### 3.2.1 General Information about Surveyed Villages

Kekukesem I

| | |
|---|---|
| Location: | N 05°59' 44.7" E 009° 11' 13.8". |
| Altitude: | 97m asl. |
| Tribe: | Boki |
| Vegetation type: | Lowland Rainforest. |
| Nearest health center: | Kajifu, about 4km away |

Obonyi III

| | |
|---|---|
| Location: | N 06° 7' 47.7" E 009° 17' 13.9". |
| Altitude: | 117m asl. |
| Tribe: | Anyang |
| Vegetation types: | Lowland Rainforest and Midaltitude Forest. |
| Nearest health center: | Kajifu, about 25km away |

Matene

| | |
|---|---|
| Location: | N 06° 16' 9.1" E 009° 21' 25.3" |
| Altitude: | 199m asl |
| Tribe: | Ovande |
| Vegetation types: | Midaltitude Forest and Montane Forest |
| Nearest health center: | Obudu, Nigeria, about 70km away |

Ingini

| | |
|---|---|
| Location: | N 06° 17' 50.2" E 009° 24' 18.8" |
| Altitude: | 712m asl |
| Tribe: | Becheve |
| Vegetation types: | Montane Forest and Savanna |
| Nearest health center: | Obudu, Nigeria, about 65km away. |

Basho II

| | |
|---|---|
| Location: | N 06° 9' 14.1" E 009° 26' 33.6" |
| Altitude: | 150m asl |
| Tribe: | Basho |
| Vegetation type: | Midaltitude Forest |
| Nearest health centers: | Obudu, Nigeria about 100km away or Mamfe, about 70km away |

Table 1: Population Structure of the Sampled Village and Age Groups (yrs)

| Sample site | 0-15yr | 16-30yr | 31-45yr | 46-60yr | >60yr | Total | HH* |
|---|---|---|---|---|---|---|---|
| Kekukesim I | 201 | 122 | 48 | 30 | 22 | 423 | 94 |
| Obonyi III | 170 | 102 | 46 | 30 | 22 | 372 | 85 |
| Matene | 382 | 206 | 79 | 38 | 20 | 725 | 129 |
| Ingini | na | na | na | Na | Na | 250** | |
| Basho | 122 | 43 | 25 | 14 | 10 | 214 | 40 |

HH* = Number of households, ** = Approximate total population
Source: Schmidt-Soltau, 2001.

## 4. RESULTS AND DISCUSSION

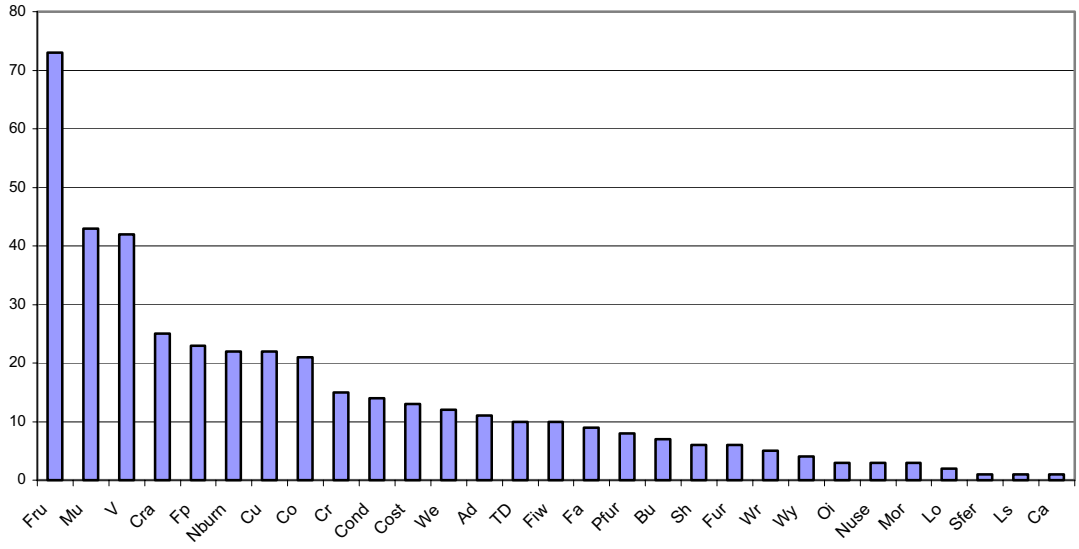
### 4.1 Ethnobotanical Flora of the Takamanda Forest Reserve

Some 328 plant species belonging to 243 genus and 91 families were recorded to be important in the five ethnic groups surveyed. Species such as *Irvingia* sp.*, Ricinodendron heudelotii, Cola accuminata* and *Dioscorea* sp. were top ranking important non-timber forest products identified. These species were found and enumerated in great numbers.

The most important families were: Leguminosae-Papilionoideae (40 times mentioned); Rubiaceae (39) ; Euphorbiaceae (36) ; Palmae (27) ; Acanthaceae (23) ; Annonaceae (21) ; Compositae (21) ; Guttiferae (19) ; Irvingiaceae (19) ; Piperaceae (19) ; Leguminosae-Mimosoideae (16) ; Burseraceae (15) ; Apocynaceae (14) ; Marantaceae (13) ; Moraceae (13) ; Sterculiaceae (13) ; Zingiberaceae (12) ; Gramineae (11) ; Cecropiaceae (10) ; Combretaceae (10) ; Labiatae (10) and Urticaceae (10). Among the genera *Piper* and *Irvingia* were most used with a record of 19 times mentioned. They are followed by *Pterocarpus* (13), *Massularia* (13), *Asystasia* (13), *Aframomum* (12), *Cola* (11) and *Garcinia* (10) (Appendix 1).

Figure 3 shows the numbers of non-medicinal plant species recognised for various categories of uses in the villages studied.

**Figure 3: Number of Non-medicinal Plant Species Used in the Takamanda Forest Reserve**




Ad=Additive; Bu=Boundary marker; Ca=Canoe making; Co=Construction; Cond=Condiment; Cra=Craft; Cu=Cultural value; Fa=Fallow; Fiw=Fuelwood; Fp=Fish poison; Fru=Fruit; Fur=Furniture; Lo=Local roofing; Ls=Local sponge; Mor=Mortar; Mu=Mushroom; Nburn=Not burnt after clearing; Nuse=Not used as Fuel wood; Oi=Oil; Pfur=Prefered for furniture; Sfer=Soil fertility; Sh=Shading for cocoa; TD=Traditional dyes; V=Vegetable; We=Weaving; Wr=Wrapping material; WY=Wild Yam

## 4.2 Medicinal Plants

Among the plant species of the TFR, medicinal plants constitute a sector of great importance. The rural population depends solely on this. There is a strong believe of the population in plant medicines reflecting their reliance on this type of treatment. Local knowledge on medicinal plants is not wide because the local herbalists and tradi-practitioners usually inherite it.

### 4.2.1 Preparation of Medicine

Several methods are used in the preparation of traditional remedies. These include squeezing, grinding/crushing, boiling (hot infusion), decoction and paste.

Squeezing

This is one of the most common method of preparing concoctions within the Project Area. This is especially the case when plant leaves are the main parts to be used. This is done by placing the leaves in between both hands and rubing them strongly thereby extracting the liquid from the leaves. Preparation by squeezing is mainly used in preparing remedies to treat diseases like diarrhoea, dysentery, cough, earache and eye problems.

Hot Infusion

Here, boiling water is poured over the plant parts and the preparation left to steep. Preparation by infusion is commonly used for leaves or non-woody tissues of medicinal plants.

Decoction

Decoction is the boiling of mostly woody plant parts (barks, roots) in water. The resulting solution is either taken orally or as enema e.g. to treat menstrual complications, abdominal pains, to avoid miscarriage, and to treat pancreatic complications, yellow fever and stomach problems of children.

This type of preparation is very common as most traditional medicines are taken in form of enemas. Children remedies are also prepared in this way e.g.,

Grinding/Crushing
This common preparation method is done by placing the plant parts, leaves, roots, bark etc on a stone and with another stone, the parts are crushed through the abrasive action of the two stones as they are rubed against each other. It is used in the preparation of remedies for sprains, abscesses, swollen parts and wedlors among others.

Ointment
Preparations as ointment are not common within the Project Area. Normally oils mostly palm oil and njabe oil are added to preparations to make them palatable for those to be taken orally, or to increase their viscosity for those that are to by applied by placing on the affected parts. This is especially the case in the treatment of sprains and abscesses.

### 4.2.2 Methods of Application

Preparations from medicinal plants are either administered internally or externally.

Internal
Internal application is either oral or inhaling vapour from decoction, infusion or smoke. This form of administration is common for remedies for malaria, yellow fever, diarrhoea, dysentery, cough, anti-poison etc. The main disadvantage is the possible over-dosage especially as dosage is determined subjectively.

External
This mode of administration involves chewing and spitting, steam baths, compressing (plant part is crushed and applied directly to the skin), rubing (plant parts are crushed and mixed with water or oil and rubed on the body).

This mode of application is commonly used in the treatment of sprains, swollen, fractures, abscesses, skin diseases, wedlors, eye complications and earache among others.

## 4.3 Diseases, Ailments and Perception of Local People about Traditional Medicine

A total of 101 diseases treated through the use of medicinal plants were recorded during the survey. Out of them 30 were important in at least three of the five tribes. They were used in treatments of abscess, chest pains, convulsion, cough, dental problems, diarrhoea, dysentery, eye ache, fever, gastric ulcer, gonorrhoea, headache, impotence, menstrual complications, mental problem, pancreatic problem, poison, pregnancy, protection, purge, rheumatism, ring worms, side pains, snake bites, sprains, stomach, vomiting, worms, witchcraft, wounds and yellow fever.

Magical practices are an important part of folk medicine. Diagnosis of the cause(s) of some illnesses especially those believed to be through witchcraft is ascertained through magical spells. The administration of certain treatments is believed to be done through spirits.

The number of species used in major ailment or symptoms surveyed per tribe in the Takamanda forest reserve is recording on figure 4

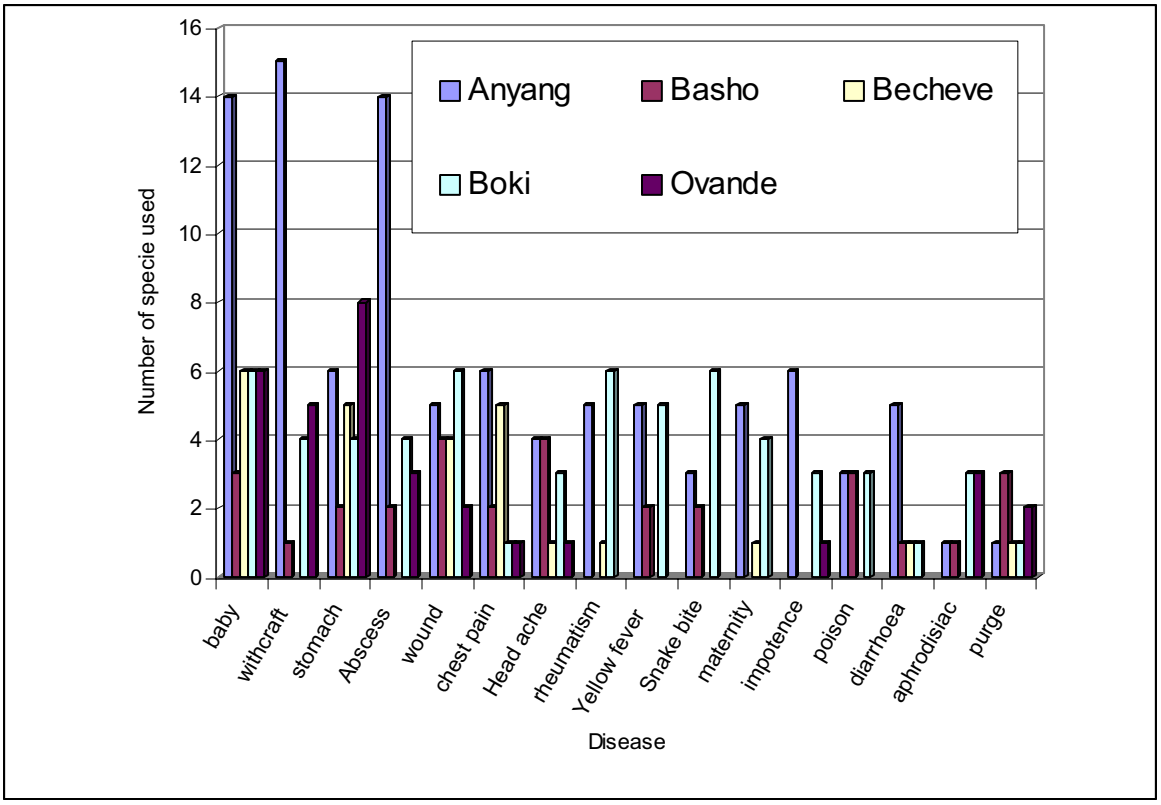



**Figure 4: Incidence of Some Health Conditions Reportedly Treated With Herbal Medicine**

For most treatments, the number of medicinal plants used is greater in Obonyi III (Anyang Tribe) than in any other village or tribe. In fact villages like Takamanda, Obonyi III, Obonyi I and Kekpani (all Anyang) are known throughout the Project Area for their knowledge of traditional medicine. Their reliance on traditional medicine can be partly attributed to their culture as well as the distance to affordable health facilities.

Appendix 1 summarises plants used to treat various diseases within the Project Area; the scientific and local names, the parts used as well as the uses. The table shows that the treatments for diseases vary from one tribe to the other. The survey revealed that even if the ailments treated were the same, the plant species used vary between tribes. Similarities in the use of plants for medicine were observed in the treatments of malaria and yellow fever, where in more than one site *Annickia chlorantha* is prominently used.

Also, to protect farms from thieves, *Costus afer* and *Solenostemon monostachyus* are commonly used. Also the use of *Acanthus montanus* to treat abscess is common to both the Bokis and the Bashos.

The differences in the use of plant species for medicines show that there is great diversity in the use of medicinal plants within the Project Area. This is an indication that medicinal plants are sufficiently exploited. Use of medicinal plants can therefore be encouraged through exchange of information on medicinal plants among tribes.

Abscesses and Boils

About 23 species were reported used, to treat abscesses and boils. Young leaves, roots or the entire plant are grind and rub on abscesses and swollen parts. They can also be warmed, squeezed and taken orally or use as enema.

The most frequently species used are: *Acanthus montanus, Piper umbellatum, Desmodium adscendens, Costus afer, Palisota hirsuta, Drymaria cordata, Mimosa pudica and Urera repens.*

Stomach Complications

This disorder is not quite defined in the whole Project Area. Abdominal pains, waist pains, constipation, diarrhoea, dysentery, purging are all included here. 17 species are used in treating stomach complications. The medicine is administrated either orally, as purgative or as enema. The most commonly used plants are *Clerodendrum* sp.; *Assystasia macrophylla, Entandrophragma candollei; Setaria megaphylla* and *Urera repens.*

Witchcraft and Protection

There are plants for protection of persons again witches and evil spirits that are distinguished from those for protection of houses and farms. Sixteen plant species were found alltogether including *Ageratum conyzoides, Asystasia gangetica, Chenopodium ambrosioides, Chromolaenaodorata, Costus englerianus, Dioscorea bulbifera, Emilia coccinea, Entandrophragma candollei, Musanga cecropioides, Nephrolepis biserrata, Nephrolepis undulata, Palisota hirsuta, Plumbago zeylanica, Sansevieria trifasciata, Smilax krausiana, Solenostemon monostachyus and Uncaria* sp.

Wounds

Fifteen plant species are used in the project area to treat wounds. Some are specific for fresh wounds while other are for persistent wounds. The following species are commonly used: *Ageratum conizoides, Asystasia macrophylla, Cnestis ferruginea, Combretum hispidum, Costus afer, Cyathula prostrata, Rauvolfia vomitoria* and *Tabernaemontana crassa*.

Chest pains

Sixteen species are used in the treatment of chest pains such as bronchitis, pneumonia and tuberculosis. Various preparation methods are used: squeezing in water and taken orally, boiled with ants and taken orally or cooked with ants and eaten. Common species include *Albizia zygia, Alstonia boonei, Boerhavia diffusa, Ceiba pentandra, Nephrolepis biserrata,Piper umbellatum, Sesamum indicum, Tetrorchidium didymostemon, Treculia obovoidea* and *Zanthoxylum gilletii*.

Rheumatism

Rheumatic pains are a common illness of the project area especially among old people. Locally it is described as a condition were general pains concentrated mostly around joints is experienced. It is generally known to be a disease of the elderly. A host of plant species are identified throughout the project area as potential treatment for rheumatic pains. These include: *Alchornea cordifolia, Anchomanes diformis, Barteria fistulosa, Costus dubius, Desmodium adcendens, Dichapetalum affine, Lavigeria macrocarpa, Ludwigia abyssinica, Manniophyton fulvum and Phyllanthus amarus.* The required plant parts are either chewed and spitum spat on the affected areas or grounded and tied to or rubed on the affected areas.

Diarrhoea

Seven plant species were recorded as treatments for diarrhoea. One of the treatments makes use of the bark of *Alstonia boonei* boiled with "Akanwoua" and taken orally.

Squeezing, boiling and drinking provide other remedies using such important species as *Alstonia boonei, Anchomanes difformis, Erythrococca anomala, Lasianthera africana, Scoparia dulcis, Solenostemon monostachyus* and *Urera trinervis*.

Yellow Fever

During the survey, it was noticed that most of the inhabitants take the African gin locally cold «**afofo** ». This local wine is known to affect the liver and may be the main cause of the fast developing Yellow Fever disease within the area. About eleven plant species are known to be used in the treatment of this disease.

They are: *Annickia chlorantha, Rhabdophyllum callophyllum, Carica papaya, Chromolaena odorata, Desmodium adcendens, Garcinia kola, Harungana madagascariensis, Irvingia grandifolia, Morinda lucida, Pycnanthus angolensis* and *Tabernaemontana eglandulosa*. Boiling the useful plant parts and taking the resulting solution orally prepares the remedies. In some cases, a mixture of more than one plant species is ideal for treatment by just inhaling the vapour from boiling mixtures.

Poisoning

Remedies for food or wine poisoning are a common feature of traditional medicine within the project area. Different plant species are used for protection against poisons just as others are used to treat poisons. An important step in the treatment of poisons is normally to administer to the patient a concoction that will provoke vomiting. The following species are used: *Asystasia macrophylla, Coffea* sp., *Harungana madagascariensis, Lavigeria macrocarpa, Psychotria* sp., *Solenostemon* sp*., Solenostemon monostachyus* and *Vernonia stellulifera.*

Headache

Treatments for headache (both simple and chronic) are administered by squeezing the liquid of some plant species into the eyes or nostrils of patients using a funnel made of leaves. In other cases, the forehead is lacerated using a blade for incision while a paste of medicine is rubed into it. Species commonly used include: *Acmella caulirhiza, Acmella caulirhiza, Ageratum conizoides, Eremomastax* sp*., Laportea ovalifolia, Musanga cecropioides, Pteris* sp*., Scoparia dulcis* and *Solenostemon monostachyus*.

Cough

Only eight species were used in the treatment of this disease. They are: *Psychotria* sp. BS 200; *Desmodium adcendens; Dissotis rotundifolia; Newbouldia laevis; Piper umbellatum; Psychotria* sp.2; *Scoparia dulcis* and *Solanum torvum.* The remedies are administered orally by chewing or grinding and eating it with palm oil. Most of the species are used for the treatment of both adult and children cough. However, the dosage varies for each case.

Snake bite

Treatments for or against snakebites are also an important aspect of traditional medicine within the project area. The forest in close proximity to most human habitations constitutes a reservoir of snakes and other dangerous reptiles. As a result, the development of traditional methods of treating snakebites is a common feature of traditional medicine throughout the project area.

Some remedies are meant to scar away snakes while working in the farms or in the house e.g. *Dalbergia hostilis* and *Boreria monticola* while others are used to treat actual snakebites.

Species that are used in treating snakebites have the ability either to provoke vomiting or reduce the power of the venom. Ten species are used: *Baphia Nitida, Boerhavia diffusa, Commelina* sp., *Mezoneuron benthamianum, Lavigeria macrocarpa, Mitracarpus scaber, Penianthus* sp., *Penianthus longifolius*, *Scoparia dulcis, Smilax Anceps* and *Acmella caulirhiza*. The use of *Aframomum* sp. in the preparation of remedies for snakebites is equally common.

Fever

This includes malaria, and other feverish conditions. As in most tropical rain forest fever is very recurrent in this zone. The presence of many blood-sucking insects like mosquitoes, tsetse flies, midges, and the absence of mosquito nets and other repellents are surely the cause of the high prevalence of fevers within the project area.

The inability of the villagers to distinguish between fevers may have resulted to the dead of many. Typhoid fever, a deadly disease was not clearly sighted throughout the survey. This shows that any case of typhoid fever can be mistaken to be malaria or other minor fevers thereby making it impossible for appropriate treatment to be administered.

Most people are aware of at least one plant species used in the treatment of one form of fever. The following species are used as a remedy for feverish conditions in children: *Annickia chlorantha, Kalanchoe crenata, Nephrolepis biserrata, Solenostemon monostachyus* and, *Spermacoce monticola*.

The treatments are administered by warming and massaging, oral application, or through a steam bath.

Baby problems

Child delivery is still handled in the most traditional way within the Project Area. This, together with the unhygienic conditions, exposes newborn babies to various illnesses. The society through traditional medicine has developed many methods (though not really effective) to combat these situations. Common diseases of babies with noted cures are: cough, purge, constipation, navel pains, dysentery, jetty-jetty and convulsion.

Where a baby's anus becomes red, commonly known as jetty-jetty, the leaves of *Ageratum conizoides* are squeezed and administered orally. Enema is prepared with the following species to treat pancreatic complications: *Anchomanes difformis*, *Angylocalyx talbotti*, *Schumaniophytum magnificum* and *Masularia accuminata.*

For the navel complications of children, use is made of the leaves of *Clerodendrum* sp. while the leaves of *Solenostemon monostachyus* are squeezed in oil and used to rub a baby for vitality.

### 4.4 Description of Some Ethnobotanically Important Medicinal Species

This section sets out above all to provide both theoretical and practical ways of identifying some species highlighted as important forest resources. It also gives the uses of these plants in other localities (Irvine, 1961).

***Acanthus montanus* (Nees) T. Anders**

Herb of about 30cm high. The leaves are deeply lobed, spiny. The inflorescence is terminal. The flowers are white. It is mostly found in the understorey of secondary growth and in the fallow.

***Alchornea cordifolia* (Schum. & Thonn.) Muell.**

It is a multi-stemmed, almost climbing shrub or small spreading tree up to 6-8m. Petiole long leaves broadly ovate and cordate with gland in axils of basal nerves. Flowers greenish white, often dioeciously. The fruits are greenish. It is a widely used medicinal plant in West Africa. The roots are used on the coast with other medicaments for jaundice, leprosy and snakebites. With young leaves, white clay and pepper it is given as an enema to check abortion. A decoction of leafy twigs is a wash for feverish chills, rheumatic pains and sores and is applied as a lotion or poultice to sore feet.

***Alstonia boonei* De Wild.**

A large tree up to 35m high, with high narrow buttresses, and deeply fluted beyond, bark smooth and grey, slash spotted white and light brown. Latex white leaves in whorls of 4-7 at each node. Fruits paired, long thin follicles up to 50cm. It grows rapidly, being one of the first trees to appear in forest clearings. It's natural regeneration is prolific. This plant is chiefly used for gonorrhoea treatment and fever along the coast, alone or with *uncaria talbotii* and various spaces. The roots, bark and leaves are used externally for rheumatism. The bark, macerated in water with spices is widely used for fever. The latex is said to be very good for the eyes and is used for serpent-bites, either locally after incision of the wound, or as a drink.

***Angylocalyx talbotii* Bak. F.ex Hutch. & Dalz.**

It is an erected shrub or a small tree up to 5m high. The bark is smooth olive green, branchlets glabrous, leaves pinnate, glabrous, leaflets long-acuminate, alternate, spots in short racemes. The fruits on short stalks sometimes near the ground. The wood is yellowish, and, where large enough, is used for local construction.

***Anonidium mannii* (oliv.) Engl. & Diels Ash**

It is a tree up to 25 m high, with dense foliage and wide-spreading crown. The bark is dark green, the slash brown and spongy. The leaves are puberulous, becoming glaucous, oblong-elliptic to obovate, acuminate, base narrowed or sub cordate, petiole short. The inflorescence bears pale green flowers. The fruits are large with a reticulated surface, resembling an apple or a pineapple, turning black later. The bark is used medicinally in Central Africa (Congo).

***Anthocleista schweinfurthii* Gilg**

It is a tree up to 15m high, which appears commonly in the forest clearing. It is very distinguished by its large leaves in all types of Fallow (Zapfack, 1998). The leaves are very long. The wood is soft and white. The bark is used in decoction to remove worms. The roots, sometimes with *Capsicum frutescens*, are a common remedy for constipation. In southern Nigeria, the roots are used for venereal discharges. The bark decoction is used as a stomachic and purge and for fever. The bark is applied as a poultice to sores in Liberia and is given to dogs suffering from diarrhoea.

***Baphia nitida* Lodd.**

It is a shrub or a small tree up to 10m high, branchlets usually glabrous, leaves oblong-elliptic to ovate, acuminate, base rounded. The flowers white with yellow spot. Fruits glabrous. It is the earliest West African dyewood which has been replaced later by African padauk (*Pterocarpus soyauxii*). In Nigeria, the dried powdered roots, prepared with water and oil as an emulsion, is applied to the ringworm-like fungus, which attacks the feet.

The bark and leaves are used in an enema for constipation. It is applied as an ointment, with palm oil, to the feet for a skin disease. The leaf infusion is drunk as a remedy for gastro-intestinal pains and enteritis.

***Combretum hispidum* Laws**

It is a scan dent or strangling climber. The leaves are elliptic and entire. The flowers are sticky, salmon-pink within, and paler at margins and without, filaments pale pink. The fruits are sticky.

***Cylicodiscus gabunensis* Harms**

A large tree up to 35m high, crown flatfish, wide-spreading and fairly open; buttresses short, slash pale yellow, stringy, with offensive smell. The roots are well developed and deep. Young bark ashy white turning reddish brown or almost black. Leaves bipinnate, pinnate one pair, opposite, leaflets alternate. The flowers are small, yellowish or greenish white. The fruits are yellow at first, turning brown. The seeds are flat. The vapour from the bark decoction is inhaled in south Cameroon for general pains. This bark decoction is also used as an enema for stomach pains or in lotion for rheumatism.

***Desmodium adscendense* (Sw.) DC**.
It is a prostrate herb, branches slender, thinly pubescent. The leaflets closely pubescent above. Terminal leaflet broadly obovate-elliptic. Flowers whitish or pink, pods rather deeply indented on one side. It easily grown from cuttings or seeds, and useful as a perennial cover crop in permanent plantations. A leaf decoction is drunk for constipation and the leaves are mixed with salts and roasted cornmeal and eaten to cure dysentery. The pounded leaves with limejuice are applied as a dressing to wounds.

***Entandrophragma candollei* Harms**
A huge tree with wide-spreading crown up to 40m high. The buttresses are cylindrical and rounded, extending to 3m up the trunk. The bark is like that of *E. cylindricum* at first, becoming rough and scaly later and dark brown with greyish patches. The slash of young tree is deep pink, of old trees pinkish with cream-coloured spots, turning to uniform brown later. The leaves are near the end of branchlets. The flowers are yellow, in short pubescent panicles. The fruits, scarcely pendulous with woody capsules. It natural regeneration is poor, taking about 14 days to germinate. It is known as magic tree in the Basal zone where it is used in all the remedies as antidote.

***Garcinia kola* Heckel**
A spreading forest tree up to 35m high. The crown is dense and heavy. The bark is greenish brown, thick, and smooth, sap resinous and yellow. Leaves shortly acuminate. Male and female flowers are separate; female flowers yellow and male with greenish-white petals. Fruits are smooth reddish-yellow in colour. The raw bark is used as purgative, while the powdered bark is applied to malignant tumours and cancer. The sap is used against parasitic skin diseases. The seeds are used in Lagos (Nigeria) for bronchitis and throat troubles.

***Manniophyton fulvum* Mull.Arg.**
It is a straggly bush or lofty, hairy woody climber. The branchlets have brown stinging hairs. The leaves are often asymmetric. The male and female flowers are separate. The fruits are nearly spherical with raised ribs. This plant is renowned for its medicinal properties in part of Ivory Cost. A root decoction with leafy twigs is used for treating stomachache and gonorrhoea. The drink made of decoction of roots and young shoots is a sovereign remedy for coughs and bronchitis.

***Massularia acuminata* (G. Don) Bullock ex Hoyle**
A shrub of about 12 m high leaves sub sessile, elliptic-oblanceolate, and acuminate. The flowers are usually red, the fruit narrowly ovoid. The bark, leaves, and fruits are used in Liberia as a fish poison. It is sometime used medicinally but always-in external application. The pulped roots as enema are said to be effective for dysentery and an aphrodisiac.

***Morinda lucida* Lam.**
A medium size tree up to 8 m high, crown dense, branchlets slender, leaves broadly elliptic to broadly ovate, acuminate, and entire. The flowers are white, fragrant, in terminal and axillary peduncle heads. The fruits are lobed and black. A decoction of the bark of the roots or stem with spices is drunk or used as enema for fever with constipation or drunk for piles and dysentery.

***Musanga cecropioides* R. Br.**
A small to medium size tree up to 20m high, above the ground roots are present, rapid growing coloniser of forest openings, crown umbrella-like. Leaves alternate, greyish hairy below, acuminate, deeply digitate. The flowers are inconspicuously male and female separate. The fruits are succulent and green. The fruits are sometimes eaten in Congo. The bark shavings are used for making sugar-cane wine more intoxicating. The bark infusion is used as a gargle for toothache and a bark decoction is used for treating chest troubles.

***Piper umbellatum* Linn.**
It is a strong-scented shrub of about 1.3m high. The leaves are large, deeply caudate. The inflorescence is axillary, with numerous tiny whitish flowers. The roots are put in alcoholic drinks for treating rheumatic pains. Pregnant women eat the pounded leaves, as a laxative.

***Rauvolfia vomitoria* Afz.**
A shrub or small tree up to 7 m high, latex white, leaves narrowly obovate and acutely acuminate. The flowers are white. Large bees usually visit them. The fruits are solitary or paired. The roots are used for many diseases. The bitter roots bark is a powerful drug acting as a strong purgative becoming an emetic if used carelessly. The roots and bark are crushed and are used in Central Africa to kill lice and vermin.

***Tetrorchidium didymostemon* (Baill.) Pax & K. Hoffm.**
Tree of about 12 to 15 m height. Young twigs with rings at nodes, strongly "zigzagged"; Leaves sometime slightly serrated or opposite. It is species of disturbed forest, mainly a light demander exposed to sun. The slash with red or brownish watery exudates is yellow and granular. The leaves are more or less papery. The bark soaked in water is used as a purge and for treating body swellings. The leaves also have medicinal uses. The oil from seeds is used in body massage in Nigeria.

### 4.5 Fish Poisons

The local fish poisons are plant materials used for killing fishes by throwing them into the streams and rivers. A total of 12 plant species from 9 families were indicated to have fish killing abilities within the project area. In most cases the parts used are the seeds and leaves, although the barks of some species are more effective. Table 3 below shows the species and plant parts used for fish poisoning.

**Table 2: Wild Plants Species Used as Fish Poisons**

| Family | Genus | Species | Tribe | L/Name | Part | Used |
|---|---|---|---|---|---|---|
| Leguminosae-Mimosoideae | Albizia | Sp. | Becheve | Okoh | lvs | Fish poison |
| Zingiberaceae | Aframomum | Sp. | Ovande | Kanzole | fruits | Fish poison |
| | | | Anyang | Genkwoh | lvs | Fish poison |
| Loganiaceae | Anthocleista | Sp. bs219 | Anyang | Elie | fruits | Fish poison |
| Anacardiaceae | Antrocaryon | mycraster | Anyang | Denge-etchi | lvs | Fish poison |
| Acanthaceae | Asystasia | macrophylla | Anyang | Cwoa-choa | lvs | Fish poison |
| | | Sp. | Ovande | Otchwatwah | lvs | Fish poison |
| | | Sp. BS242 | Basho | Tchua-tua | lvs | Fish poison |
| Sapotaceae | Baillonella | toxisperma | Anyang | Mpwoh | chaffs | After extracting oil, use chaffs as fish poison |
| Rubiaceae | Massularia | acuminata | Basho | Feyilie | Frts, lvs | Fish poison |
| | | | Ovande | Igili | lvs | Fish poison |
| | | | Anyang | Edgele | lvs | Fish poison |
| Leguminosae-Mimosoideae | Piptadeniastrum | africanum | Basho | Ketieh | bark | Fish poison |
| | | | Ovande | Okpamitane | bark | Fish poison |
| | | | Anyang | Dankpe-nyi | saw dust | Fish poison |
| Loganiaceae | Strychnos | phaeotricha | Basho | Kemboh | fruits | Fish poison |
| | | | Becheve | Engula | Fruits | Fish poison |
| | | | Ovande | Epoum | Fruits | Pounded and used to Poison fish |
| | | | Anyang | Gemboh | Seeds | Tranquillizer for fish |
| Leguminosae-Papilionoideae | Tephrosia | vogelii | Basho | Kachie | Lvs | Fish poison |
| | | | Ovande | Kechi | Lvs | Fish poison |
| | | | Anyang | Dachi-nkwa | Lvs | Fish poison |
| IngFP1 | | | Becheve | Nah | lvs | Fish poison |
| IngFP2 | | | Becheve | Apomoh | seeds | Fish poison |
| OboFp1 | | | Anyang | Tako-noh | lvs | Fish poison |
| | aff Albyzia | | Becheve | Okoh | Leaves | |
| Zingiberaceae | Aframomum | sp. | Ovande | Kanzole | Fruits; | None |
| | | | Anyang | Genkwoh | lvs | fish poison |
| Loganiaceae | Brenania | brieyi | Anyang | Elie | fruits | fish poison |
| Anacardiaceae | Antrocaryon | mycraster | Anyang | Denge-etchi | lvs | fish poison |
| Acanthaceae | Asystasia | macrophylla | Anyang | Chwoa-choa | lvs | fish poison |
| | | Sp. | Ovande | Otchwa-twah | Lvs | None |
| | | Sp. BS242 | Basho | Tchua-tua | Leaves | fish poison |
| | Basfish1 | | Basho | Ndumu-ketchie | Leaves | Fish poison |
| | Basfish2+B261 | | Basho | Takwo-kennoh | Fruits | fish poison |
| | fishpoiobo1 | | Anyang | Tako-noh | lvs | fish poison |
| Mimosaceae | Piptadeniastrum | africanum | Basho | Ketieh | Bark | fish poison |
| | | | Anyang | Dankpe-nyi | saw dut | fish poison |
| | | | Ovande | Okpanilane | Bark | None |
| | Poising1 | | Becheve | Engula-nah | Bark/leaves | fish poison |
| Loganiaceae | Strychnos | acueata | Ovande | Epoum | Fruits; | None |
| | | | Anyang | Gemboh | seeds | fish poison |
| | | | Basho | Kemboh | Fruits | fish poison |
| | | | Becheve | Strychnos acueata | Apomoh | Seeds |
| Fabaceae | Tephrosia | vogelii | Ovande | Kechie | Lvs | Planted |
| | | | Basho | Kachie | Leaves | fish poison |
| | | | Anyang | Dachi-nkwah | lvs | fish poison |

Key: lvs=Leaves; frts=Fruits; Sp.=Spices

The use of poisons is detrimental both to the environment and to the consumers. Since these poisons are not selective, all aquatic life is affected after their application.

### 4.5 Edible Wild Plants

A wide variety of wild food products and ingredients are gathered from the plant species in forests, around farms and fallow areas. These include: condiments and spices, oil producing seeds, vegetables, edible fruits, nuts, yams, mushrooms, and beverages. Wild foods constitute an important part of the local village economy. While some of these foods are gathered for home consumption, many are harvested to serve both local and international (Nigerian) markets. Those therefore constitute an important source of income for the inhabitants of the project areas (Ayeni et al, 2000).

Seeds and Nuts

These constitute an important part of forest foods (Table 3). During the survey, 10 species were identified to be valued for their seeds and nuts. They belong to 10 families and 9 genera. The seeds of *Cola acuminata* and *Garcina kola* are very important during various cultural manifestations ranging from marriage celebrations to dead celebrations. Cola nuts are commonly offered to strangers as a sign of hospitality in all the tribes surveyed. In some tribes e.g. Boki and Anyang, pepper to stimulate the body accompanies cola nuts.

Table 3: Useful Seeds and Nuts Producing Plant Species of the Project Area

| Genus | Species | Tribe | L/ Name | Organ | Use |
|---|---|---|---|---|---|
| Afrostyrax | kamerunensis | Ovande | Eloweh | Seeds | In pepper soup, stews and in porridge. |
| Cola | acuminata | Boki | Lebe | seeds | Often offered first thing to a visitor. Also eaten while taking palm wine. |
| | Lepidota | Anyang | Genboh | mesocarp | Sweet, eaten by both adult and children |
| Garcinia | kola | Anyang | Mmiale | seeds | Eaten as a digestive |
| | | Boki | Oge | seeds | Preferred when drinking the local wine "hot" |
| Irvingia | gabonensis | Ovande | Iweh | Seeds | Used in soup. |
| Piper | guineense | Ovande | Kakwale | Seeds | Used in pepper soup and stew. |
| Poga | oleosa | Anyang | Menyor | seeds | Eaten after the nut has been cracked |
| | | Basho | Nenyoh | Nuts | Cracked to release the seed, which is eaten raw. |
| | | Becheve | Monyoh | Nuts | Nuts; cracked and eaten raw. |
| | | Boki | Enyor | nuts | The nuts are cracked and the seeds are eaten raw. |
| | | Ovande | Monyorh | seeds | Cracked and eaten raw |
| Tetracarpidium | conophorum | Anyang | Megia-mewa | nut | Eaten after boiling |
| | | Basho | Meyah | Nuts | Boiled and cracked usually with teeth to eat the seed. |
| | | Boki | Okah-lekan | nuts | Boiled and eat the seeds. |
| | | Ovande | Mogaseh | seeds | "Cashew", boiled before eating. |
| Tetrapleura | tetrapleura | Ovande | | Pods | Pods; in pepper soup and stew. |
| Xylopia | hypolampra | Ovande | Otoh | Seeds | In pepper soup, stews and soup. |

Also, the seeds of *Garcina cola* are widely used by male adults as aphrodisiac as well as to reduce constipation. The seeds of *Cola verticellata* are not cherished because of they are slippery while chewing.

The nuts of *Poga oleosa,* are eaten throughout the Project Area. This tree is found mostly in the forest. The nuts are cracked with stones, and the oily seeds are eaten raw or in a few cases crushed to release the oil.

Cashew nuts (*Tetrocarpidium conophorum*) are cherished by all both old and young. The nuts are boiled and cracked with the teeth to release the seed. These nuts constitute a source of income for the inhabitants.

Though seeds and nuts are important, their domestication is a practice that is still remote in the project area. Reliance upon the forest for these products is a major source of conflict among communities. The only species which is domesticated is *Cola acuminata*, while the others are only protected in farms during land preparations.

### 4.5.1 Description of Some Wild Plants Producing Edible Seeds and Nuts

*Cola acuminata*. Schott and Endl. (Sterculiaceae)
A forest tree to 15m high, sometimes cultivated but natives only from Togo eastward, also in southern Cameroon and southward to Angola. Its leaves are compound, digitate (oblanceolate to narrowly oblong or elliptic sometimes narrowly obovate, gradually long-accuminate at apex, the acumen often twisted downwards) and fruiting carpels russet-brown or oligaceous. Other kola species are also important in Akwaya. In this light we can make mention of *C. lepidota* locally called "monkey kola". The difference here is that only the fleshy ariel is edible.

*Elaeis guineensis*. Jacq. (Palmae)
The African oil palm easily recognisable by its arching, dark green leaves and straight trunk clothed when young with petiole-bases. The fruits are ovoid or somewhat angular often-bright red and shining black when ripe. Its pericarp is spongy and oily, fibrous inside while the endocarp is hard and often thick enclosing the seed. Fruits of this product can be consumed as food for the fat and oil they contain, its mostly used in the fabrication of red oil and it kernels used in the manufacture of oil.

*Poga oleosa* (Rhisophoraceae)
Large secondary forest specie of about 30m high. The fruits have a very hard endocarp. This makes the natural regeneration of the specie very difficult. The seedlings are scare under the mother tree. The seeds are edible and yield oil, which is used for cooking and has some medicinal applications. The tree is easily found in the crop field or in the fallow. it is one of the non-felling species when farms are set.

*Tretracarpidium conophorum* (Euphorbiaceae)
It is a tall forest liana, usually preserved when land is cleared for agriculture. The seeds are eaten throughout the project Area, roasted or boiled. Sales from these nuts also add to the income of the local population. This product is harvested mainly from the forest.

*Garcinia kola* Linn. (Gutliferae)
A forest tree, reaching 20m with its fruits reddish-yellow, having the size of an orange. The leaves are opposite, simple broadly elliptic connate to rounded at the base. The bole is straight, cylindrical and the slash is dark brown while the latex is yellow. Seeds of this product are commonly called "bitter kola". These seeds have high commercial values. They serve as indispensable compliments to palm wine to the local people. The bark of *G. kola* is usually added to palm wine to ease fermentation. The seeds are highly medicinal. They are used as aphrodisiacs and stomach ache treatment. The wood of this species has strong physical properties. Its durability makes it favoured in local construction.

## 4.6 Wild Plant Sources of Condiments and Spices

These are generally regarded as leaves, roots, barks, seeds etc. added to stews, soups or porridges to enhance their palatability. They are oil and protein-rich seeds and fruits often applied as soup thickeners or as flavourers.

The use of condiments in food preparation is a general feature of traditional food preparation in the project area. Condiments and spices are prepared mostly from seeds though a few pods, barks, and roots are also used. During the survey, a total of 12 species were identified to be used as condiments and spices (Table 4).

Table 4: Wild Plants Sources of Condiment or Spices

| Genus | Species | Tribe | Name | Organ | Use |
|---|---|---|---|---|---|
| Afrostyrax | Kamerunensis | Basho | felou | seeds | In pepper soup "turning" of cocoyams and in vegetables. |
| | | Becheve | Elonge | seeds | For pepper soup and other traditional preparations |
| | | Ovande | Eloweh | seeds | In pepper soup and stew as well as in porridge. |
| | | Anyang | Elu | seeds | Condiments |
| Irvingia | Gabonensis | Basho | Kelua | seeds | Grinned and use in soup |
| | | Boki | Ejeb | seeds | In soup |
| | | Ovande | I weh | seeds | In soup |
| | | Anyang | Gluea | seeds | Condiments |
| Irvingia | Robur | Boki | Mfaghe | seeds | Use when Irvingia gabonensis seed are scare, in soup |
| | | Basho | Febieoh | seeds | Used in case Irvingia gabonensis is scare for soup. |
| | | Anyang | Mfageh | seeds | Condiments |
| Mondia | Whitei | Basho | Kekah | rhyzomes | In pepper soup |
| Monodora | Myristica | Basho | Masantor | seeds/ pods | In pepper soup and soup |
| Pentaclethra | Macrophylla | Boki | Mpkah | seeds | As condiments but generally sold to Nigerians |
| Piper | Guineense | Basho | Taquale; Fenkienkie | seeds | In pepper soup; in soup and porridge |
| | | Becheve | Iyeyeh | seeds | For pepper soup |
| | | Boki | Ashoesie | seeds | In pepper soup |
| | | Ovande | Kakwale | seeds | In pepper soup and stew |
| Piper | Capense | Anyang | Bie | seeds | Condiments |
| Psychotria | Sp. | Basho | Keba | flowers | In pepper soup and stew |
| Ricinodendron | Heudelotii | Basho | Ngoku | seeds | In stews and pepper soup |
| | | Becheve | Itche | seeds | For pepper soup |
| | | Boki | Ngoge | seeds | In pepper soup, stew and porridge |
| | | Anyang | Ngogeh | seeds | Condiments |
| Tetrapleura | Tetraptera | Boki | Kenkpen | pods | In pepper soup and soup |
| | | Ovande | | pods | In pepper soup and stew as well as in porridge. |
| | | Anyang | Nenkwo | seeds | In pepper soup |
| Xylopia | Hypolampra | Basho | Etarh | pods | In pepper soup |
| | | Becheve | Etandele | pods | For pepper soup |
| | | Boki | Kenya | seeds | Grind and added to soup and pepper prepared to be eaten with cola nuts |
| | | Ovande | Otoh | seeds | In pepper soup stew and soup |
| | | Anyang | Etowh | seeds | Condiments |

**Description of Some Wild Plants Producing Condiments and Spices**

*Afrostyrax lepidophyllus* (Styracaceae)
This is an Evergreen forest trees of about 15-20m high, without basal glands (Hawthone, 1990). The leaves have short petiole and drip tip. Slash smelling strongly of onions.

*Tetrapleura tetraptera* Benth. (Leguminose)
A forest tree, to 20m high with dark green fern-like foliage (leaves are compound and bipinnate), flowers creamy or pink, turning orange; fruits dark purple-brown with a longitudinal wing-like rather fleshy ridge about 2cm broad. Large individuals posses conspicuous sharp buttresses.

The long pod-like fruits have a curiously caramel-like odour and are widely used as an additive to soups and stew and more especially in the traditional yellow-soup of the West and North West provinces of Cameroon. They are also added to palm wine sometimes to impact an extra flavour in it and as medicine. In this light this resource is used for a wide range of ailments and as such wildly traded in.

*Xylopia aethiopica* A Rich. Engl and Dcols (Annonaceae)
A tree up to 15m high with greenish-white fragrant flowers; fruits are a cluster of very numerous narrow dark brown carpels; leaves elliptic to oblong gradually acuminate obtuse or rounded at base.

The fruits of this species are used, as condiment while the bark is medicinal. The powder from the bark mixed with that of *Pterocarpus soyauxia* is used as an anti-rheumatism (Adjanohoun et al 1985).

***Irvingia robur* Mildbr.( Irvingiaceae)**
It is used in place of *Irvingia gabonensis* when the latter is scarce.

***Irvingia gabonensis* Aubrev. (Irvingiaceae)**
A forest tree up to 30m high, with substantial buttresses and dark-green foliage reflecting grey. Its leaves are simple, alternates and this tree posses a very heavy, hard and unusually brown wood with edible fruits. It's locally known, as "bush mango" Bush mango is one of the most important resources that contributes directly to household incomes in the project are. The seeds are cracked to obtain the kernel that is used as a soup thickener. The seeds are also used in medicine and cosmetics while the wood is used as timber. Bush mango seeds are widely traded in both nationally and internationally.

***Pentacletra macrophylla* (Leguminosae)**
It is a medium-size forest tree of about 20m high, with enormous woody pods containing large seeds. They are sometimes eaten or sold to nearby Nigerian towns. The seeds are baked, ground and put in soup. The bark is medicinal

***Ricinodendron heudelotii* Mull.arg. (Euphorbiaceae)**
This is a fast growing late secondary forest tree found in the Guinean-Congolean humid forest of West and Central Africa, from Senegal to Sudan, Uganda and Tanzania, and down the Western coast of Sub-Saharan Africa to Angola. This is a large deciduous tree to 30m high, found in drier types of forest, especially in secondary re-growths. Its leaves are digitate and the fruits, 2(3)-lobed, are indehiscent.

All parts of the tree are used to some extent. The wood is light and easily carved; the bark and roots have therapeutic properties; and the seeds contribute to the local cuisine both as a condiment and in soups and stews. Its wood is used to carve household utensils such as traditional spoons, stools, and bowls.

Obtaining the seeds from the fruits of *R. heudelotii*, which are used in cooking, is extremely labour intensive. The large green kidney-shaped fruits drop towards the end of the rainy season and are collected into piles under the tree, usually by the women and children of the village on a first come first served bases. The piles signify both ownership of the fruits as well as allowing the pulp to rot, revealing the yellow nuts. It takes about 3-4 weeks for the fruits to decompose. After the fleshy parts are taken off the nuts are boiled for long to ease it cracking without damaging the kernels. These kernels are dried and can be kept for several years and may be sold throughout the year in urban markets.

The yellow seeds are crushed and used as a condiment for soups and fresh fish. It has a spicy taste and acts as a thickening agent in stews and other dishes.

The labour requirement for the processing of this forest product partly explains why processed seeds were not common during the survey and why the prices of seeds are high.

### 4.7 Wild Plants Sources of Green Vegetables

Wild vegetables contribute to the nutritional needs of all the tribes surveyed. Vegetables are used in many traditional dishes like porridges, soups and stews among others.

The most commonly used vegetables are from *Gnetum africanum, Gongronema latifoliumsp, Piper guineensis*. Others like *Ceiba pentandra, Asystasia gangetica, Amaranthus spinosus, Piper umbelatum* are used in at least two tribes within the project area.

A total of 35 plant species from 17 families: Acanthaceae, Amaranthaceae, Balsaminaceae, Bombacaceae, Compositae, Convolvulaceae, Euphorbiaceae, Gnetaceae, Gramineae, Icacinaceae, Leguminosae-Mimosoideae, Moraceae, Pandaceae, Piperaceae, Rubiaceae, Sterculiaceae, and Zingiberaceae are known to be used as vegetables within the project area. Of these, 19 were encountered in Anyang, 11 in Boki, 7 in Becheve, 9 in Basho and 7 in Ovande tribes (Table 5).

Wild vegetables contribute significantly to the local economy. Substantial income is made through the sale of *Gnetum africanum*, and *Piper guineensis*. The registration of local harvesters and buyers constitute an important source of income for the traditional councils within the project area.

However, the present methods of harvesting these vegetables, especially *Gnetum africanum* and *Piper guineensis,* is not sustainable. In both cases, the leaves combined with ropes are cut making regeneration impossible. If the unsustainable harvesting practice continuous, the 2 species will become scarce in the nearest future

Table 5: Wild Plants Sources of Vegetables in the Project Area

| Genus | Specie | Tribe | L/Name | Used |
|---|---|---|---|---|
| Acalypha | ciliata | Boki | Nyoaya | In porridge & soup |
| Aframomum | flavum | Basho | Kencho | In porridge and preparation of koki corn. |
| Albizia | ferruginea | Becheve | Egaga | For soup and porridge. |
| Albizia | zygia | Boki | Kamkpene | In porridge and soup |
| | | Anyang | Dakpene | Vegetable |
| Amaranthus | spinosus | Anyang | Mage-fuo | Vegetable |
| | | Ovande | Oforh | In soup, and porridge |
| Amaranthus | viridis | Basho | Kumfu | In porridge; squeezed for bananas and fufu. |
| Asystasia | gangetica | Basho | Mbulou | in porridge, cooked to eat with bananas |
| | | Anyang | Mbuli | Vegetable |
| Asystasia | sp. | Anyang | Menom-buli | Vegetable |
| | | Becheve | Ofolo-meche | For soup and porridge |
| Bertiera | sp. bs214 | Anyang | Damgambe | Vegetable |
| Borreria | sp. monticola | Anyang | Makea - magili | Vegetable |
| Ceiba | pentandra | Boki | Bokem | In porridge |
| | | Becheve | Ikemeeh | For soup and porridge |
| Climber | | Boki | Ogbamu | In porridge |
| Crassocephalum | cepidioides | Anyang | | |
| Ficus | sp.BS 232 | Becheve | Agem-bah | For soup and porridge |
| Ficus | sp.col ingini | Basho | Kehtoh | In soup, porridge and stew |
| Gnetum | africanum | Ovande | Ikokoh | Fondly call "Africa salad" used to eat fufu |
| | | Anyang | Gelu | Vegetable |
| | | Boki | Ecole | Mostly prepared to be eaten with fufu |
| Heinsia | crinita | Boki | Atama | In porridge and pepper soup |
| Impatiens | balsamina | Anyang | Ginsinye-nyi | Vegetable |
| Gongronema | latifolium | Basho | Edasi | For porridge |
| | | Boki | Otashi | In porridge |
| | | Anyang | Odashi | Vegetable |
| | | Ovande | Odashe | Used in porridge |
| Lasianthera | africana | Boki | Odindang | In soup and porridge |
| Matveg | | Ovande | Nyou-lili | In soup and porridge |
| Microdesmis | puberula | Boki | Kawah | In soup and porridge |
| Milicia | | Anyang | Makpo-ogo | Vegetable |
| Pennisetum | purpureum | Becheve | Agwoh | For soup and porridge |
| Piper | capense | Boki | Akachoat | In soup |
| | | Anyang | Biabi | Vegetable |
| Piper | guineense | Basho | Taquale | For soup and pepper soup |
| | | Becheve | Iyeyeh | For soup and porridge |
| | | Boki | Asho esi | In soup |
| | | Anyang | Acachat | Vegetable |
| | | Ovande | Kakwale | In soup and porridge |
| Piper | umbellatum | Basho | Kambo | As in porridge and soup |
| | | Anyang | Mambogeah | Vegetable |
| | | Ovande | Membefeh | In porridge and soup |
| Psychotria | Sp.248 | Basho | Tangambe | For soup, porridges or with fufu |
| Scaphopetalum | Sp. | Anyang | Gelure | Vegetable |
| | | Ovande | Kishi-ndiri | In porridge |
| SHRUB | | Becheve | Lnad-gam-beh | For soup and porridge |
| vegbash1 | | Basho | | In soup and porridge |
| vegobo1 | | Anyang | Gambue | In soup and porridge |

| | | | | |
|---|---|---|---|---|
| vegobo2 | | Anyang | Menyi-nembe | In soup and porridge |
| vegobo3 | | Anyang | Menyi-okwone | In soup and porridge |
| vegobo4 | | Anyang | | Vegetable |

**Description of Some Wild Plants Sources of Vegetable**

Amaranthus spinosus (Amaranthaceae)
An erect, prickly annual herb up to 60 cm high. The stem is fleshy, round and hairless, greenish but sometimes reddish and always with rigid, sharp pointed spines about 10 cm long. It is a ruderal annual herb, which grows in the vegetation surrounding the houses and in the crop field where it is considered as weed. The leaves are used as green vegetable in the entire project area.

Gnetum africanum (Gnetaceae)
Small woody climbers, common in second growth (fallow of different ages, secondary forest) throughout the project area. It is a most economically important wild green vegetable. The leaves are finely cut and cooked with Talinum triangulare to make "eru", which is popular throughout the forest zone of Cameroon.

Piper guineensis Linn (piperaceae)
This forest liana with branchlets spiralling up shrubs is commonly called the African pepper or bush pepper. This resource occurs both in secondary and closed canopy forest but has also undergone cultivation attempts. The small black round fruits of bush pepper once dried form the basis of "pepper soup" a traditional staple of southwest Cameroon and southeast Nigerian (Sunderland and Tchouto, 1999). Large quantities of the fruits are packed and transported to Nigeria from Cameroon and the trade is very profitable.

Piper umbellatum Linn. (Piperaceae)
A shrub, 1.5-2m high with leaves deeply cordate and many-nerved at base. This plant is easily recognised by these leaves and by the erect spikes of green, then white flowers, several edges, in scruby secondary regrowth and in gallery forests. Leaves of this resource are highly medicinal and are consumed with the almond of fruits of *Irvingia gabonensis* to prevent menstrual and abdominal pains (Adjanohun et al., 1985)

Talinum triangulare (Portulacaceae)
An erect, fleshy perenial herb up to 60 cm high that has a swollen taproot. The stem is fleshy, smooth, greenish and little branched below the inflorescence. The leaves are simple and alternate. It is a very common weed which grows in the crop fields and young fallow. They have three or more tubers, which kept water during the drying period. It is used as green vegetable in the Takamanda Forest Reserve area and is associated with *Gnetum africanum*.

### 4.8 Wild Plants as Sources of Fruits

Wild fruits are generally appreciated within the project area. The most important are *Irvingia gabonensis*(Bush mango), *Trichoseypha acuminata* (Okoyong), *Angylocalyx talbotii, Synsepalum brevipes, Cola lepidota (Monkey cola), and Myranthus arboreus and Carpolobia alba.*

In most cases, the sweet succulent seed coat is sucked. Though substantial income is not obtained through the sales of wild fruits, their presence in local diets may be an important source of valuable vitamins. The harvesting and use of fruits is mainly an activity of children and the youths. Only the fruits of *Irvingia gabonensis* and *Cola lepidota* are used by all age groups (Table 6).

During the survey, a total of 15 species from 12 families (Anacardiaceae; Burseraceae; Cecropiaceae; Guttiferae; Irvingiaceae; Leguminosae-Papilionoideae; Marantaceae; Polygalaceae; Sapotaceae; Sterculiaceae; Verbenaceae; Zingiberaceae) were identified as important sources of fruits from the forest.

**Table 6: Wild Plants Sources of Fruit in the Project Area**

| Genus | Species | Tribe | L / Name | Organ | Use |
|---|---|---|---|---|---|
| Aframomum | baumannii | Boki | Eyong | Fruits | Sucked |
| Aframomum | sp. | Basho | Mashiea | Fruits | sucked by adult and children |
| Aframomum | flavum | Boki | Ebebe | Fruits | Sucked |
| Angylocalyx | talbotii | Basho | Choa | Fruits | Beans-like pods split to release seeds, which are sucked by children. |
| | | Boki | Otigabee | Fruits | Beans-like fruits are cherished by children |
| | | Anyang | Gekwa-kwa | fruits | Sweet sucked by both adults and children |
| Polystachya | brevis | Becheve | Agba-miemieh | Fruits | Sucked by children |
| Canarium | schweinfurthii | Basho | Tafeley | Fruits | Often eaten boiled |
| | | Boki | Bushu basum | fruits | Often boiled before eaten |
| | | Ovande | Voutine | Fruits | Boiled and eaten by a few people |
| | | Anyang | Gamfle | Fruits | Sucked mostly by children, could also be boiled and eaten |
| Carpolobia | alba | Basho | Fesha | Fruits | Sucked by children and adults |
| | | Boki | Oka | Fruits | Adult males prefer fruits |
| | | Ovande | Eyale-mbeh | Fruits | Adult males prefer fruits |
| | | Anyang | Essa | Fruits | Sucked by both adults and children |
| Cola | lepidota | Basho | Kemboh | Fruits | Split open to release seeds surrounded by sweet succulent seed coat which is eaten |
| | | Boki | Ekembong | Fruits | "Monkey" cola. The fleshy seed coats are eaten |
| | | Ovande | Moumboh | Fruits | Refresher |
| | | Basho | Fengwolo | Fruits | Open to release seeds with succulent coat which is eaten |
| Dacryodes | edulis | Boki | Ashu | Fruits | Boiled and eaten with different combinations |
| | | Ovande | Azimpe | Fruits | Fruits; boiled and eaten with maize or cassava. |
| Garcinia | kola | Basho | Mmiale | Fruits | Sucked by adults |
| | | Becheve | Emiale | Fruits | Sucked by mostly adults |
| Irvingia | gabonensis | Boki | Ejeb | Fruits | Sucked by both adults & children |
| | | Ovande | Iweh | Fruits | Sucked by both adults & children |
| Myrianthus | arboreus | Boki | Esoleka | Fruits | Sucked |
| | | Boki | Keso-leken | Fruits | "Bush pineapple"; sucked by children |
| Thaumatococcus | daniellii | Basho | Kendoh | Fruits | Broken open to release very sweet seeds cherished by children. |
| | | Boki | Keku akbang | Fruits | The high sugar content of the fruit makes it children' choice as its sweetness can persist even after several hours |
| Trichoscypha | acuminata | Basho | Okoyong | Fruits | Fondly called "bush bonbon". Mostly children enjoy the fruits. |
| | | Boki | Okoyong | Fruits | "Bush bonbon" as its locally called; the fruits are borne on the stem (cauliflorous) and are children' choice |
| | | Anyang | Okoyong | Fruits | A cauliflorous tree; which gives fruits call local "bonbon", sucked by mostly children |
| Vitex | grandifolia | Anyang | Apoh | Fruits | Sucked by both adults and children |

**Description of Some Wild Plants Sources of Fruit in the Project Area**

*Aframomum Sp.* (Zingiberaceae)
About 21 species of *Aframomum* are found in South-West Province of Cameroon (Haris and Ndam, 1999). In the project area, three species were identified: *Aframomum alboriolaceum*, *A. baumannii* and *A.flavum*. These are edible fruits, which are sucked by children and adults.

*Dacryodes edulis* (Burseraceae)
A medium-sized tree found in the wild and commonly associated to home gardens; up to 20m high, bark clear-grey and irregular, leaves compound imparipinnate. Fruits are drupaceous and bright pink-violet or blue when ripe.

This species commonly cultivated in home gardens is a high value forest resource. Its edible fruits are of high food value and have high trade potentials. They are usually roasted and consumed with plantain, bananas and cassava in the villages.

*Myrianthus arboreus* P. Beauv. (Cecropiaceae)
A shrub to 15m high with spreading branches from a short stem found in forest regrowth and damp places in forest. It's leaves are digitately lobed and fruits yellow when ripe. Fruits of this species are edible and commonly called “Bush pineapple”. Children cherish the yellowish fruits.

*Thaumatococcus danielii* (Marantaceae)
This is perennial herb found in the understorey of the primary and secondary forest, and in the fallow coming from the forest. It is a very important species as it is used in mat weaving, wrapping and the seeds contains a non-carbohydrate sweetener, which is very strong and sucked mostly by children.

*Trichoscypha acuminata* (Anacardiaceae)
Tree of about 15m high and 50 cm diameter. The fruits appear on the trunk. They are borne in large bunches on the trunk between May and June. The reddish brown fruits borne on the stems (Cauliflorous) are easily harvested. They are often kept for home consumption.

### 4.9 Mushrooms Collected From the Wild

Collecting mushrooms is a very common activity in the Project Area. Mushrooms are normally added in soups, fried and are regarded as local meat. These mushrooms are available during the rainy season. They are found growing either on the forest floor, on dead wood, or dead palms.

Traditionally mushrooms that do not host maggots or other saprophytes and that are dotted are considered non-poisonous. Although this identification does not seem very reliable the local people claim that from time immemorial edible mushrooms have been separated from poisounous ones using those criteria.

Information on mushrooms in this study is scanty because of the difficulty obtain specimen from the wild. However, 7 species of mushrooms were identified: *Tremitomyces microcarpus*, *Termitomyces* sp.1, *Termitomyces* sp.2, *Termitomyces* sp.3, *Tremella* sp., *Lantinus squarosulus* (Lentinaceae or Polyporales) and *Lentanus tuber-regium* (Lentinaceae) found all over the project area (Table 7).

## Table 7: Edible Mushrooms Collected from the Wild in the Project Area

| Code | Tribe | L / Name | Organ | Use |
|---|---|---|---|---|
| Bs 239 | Basho | Teyele | whole | Found on the forest floor. Available only after July. |
| Bashmush1 | Basho | Tapoh-etchi | whole | On dead sticks |
| Bashmush2 | Basho | Tonkolou-longkon | whole | On dead wood |
| Tremella sp. | Basho | Ambuale | whole | On dead wood |
| Schizophyllum commune | Basho | Tenyne-kie | whole | Whitish, often pounded before cooking, on dead sticks. |
| Bashmush4 | Basho | Apouh | whole | White, tender and soft, on dead palms. |
| Bashmush5 | Basho | Kenkyie | whole | Big whitish mass, mostly on forest floor. used in place of melon (egusi) in soup. |
| Bashmush6 | Basho | Obwa-kenda | whole | Common,growing after palms have been tapped, fried, used to eat bananas, plantains, in soup and porridge. |
| Termitomyces microcarpus | Basho | Tanten-tena | whole | White, on the forest floor, usually many of them found concentrated on one small area. |
| Bashmush8 | Basho | Achieah | whole | They are yellowish and normally grow on dead wood. |
| Bashmush9 | Basho | Malulu | whole | Yellow with white streaks, found on the forest floor. |
| Bashmush10 | Basho | Otoh-bwah | whole | Very large, growing on the forest floor, around October. |
| Bashmush11 | Basho | Kewoh-lok | whole | White and grow on dead wood. |
| Bashmush12 | Basho | Matantoh | whole | Grow on dead sticks |
| BS226 | Becheve | BS226 | whole | Ogege |
| Ingmush1 | Becheve | Ejoh-who | whole | On forest floor |
| Termitomyces sp. | Becheve | Asola | whole | On forest floor |
| Ingmush3 | Becheve | Inflow-who | whole | On forest floor |
| Termitomyces microcarpus | Becheve | Mesinah-neh | whole | Small white mushrooms,on one spot on the forest floor. |
| Ingmush5 | Becheve | Ezoye- teni | whole | On forest floor |
| Ingmush6 | Becheve | Ezo-yivileh | whole | On dead palms after tapping. |
| Ingmush7 | Becheve | Elishe(Ebuya) | whole | |
| kekmush1 | Boki | Mbiagalo | whole | Big mass often growing on forest floor, normally use in place of melon (egusi) |
| kekmush2 | Boki | Mbiache | whole | On forest floor and sticks |
| kekmush3 | Boki | Mbia-oke | whole | Growing on dead palms |
| kekmush4 | Boki | Mbia-bokem | whole | Growing on dead *Ceiba pentandra* |
| kekmush5 | Boki | Mbia-oche | whole | Growing on forest floor, has a long stem |
| kekmush6 | Boki | Keshishe-mbia | whole | They are red in colour and often grow on dead wood |
| Termitomyces microcarpus | Boki | Oseh-mbia | whole | They are very small, forest floor, also eaten by tortoise |
| kekmush8 | Boki | Mbia-kegbuju | whole | On forest floor |
| kekmush9 | Boki | Kasenghe-mbia | whole | On forest floor |
| kekmush10 | Boki | Keshubatoh-mbiap | whole | On sticks and forest floor |
| Matmush1 | Ovande | Yaseleke | whole | None |
| Matmush2 | Ovande | Anzole | whole | None |
| Matmush3 | Ovande | Obwan | whole | None |
| Matmush4 | Ovande | Alongh | whole | None |
| Matmush5 | Ovande | Makruh-keke | whole | None |
| Matmush6 | Ovande | Kekeh(Ebuya) | whole | None |
| Matmush7 | Ovande | Apu-bwah | whole | None |
| Obomush1 | Anyang | De-gillie | Whole | Mushrooms |
| Obomush2 | Anyang | Otoh-bueah | Whole | Mushrooms |
| Obomush3 | Anyang | Mageib-riwoh | Whole | Mushrooms |
| Obomush4 | Anyang | Ambuea-geleh | Whole | Mushrooms |
| Obomush5 | Anyang | Cocobiaco | Whole | Mushrooms |
| Obomush6 | Anyang | Ge-conkoh | Whole | Mushrooms |

| | | | | |
|---|---|---|---|---|
| Obomush7 | Anyang | Datugeih | Whole | Mushrooms |
| Obomush8 | Anyang | ge-nya-nya | Whole | Mushrooms |
| Obomush9 | Anyang | Gen-ngeh | Whole | Mushrooms |
| Obomush10 | Anyang | Apouh | Whole | Mushrooms |
| Obomush11 | Anyang | Buw-gendia | Whole | Mushrooms |
| Obomush12 | Anyang | Buea-genga | Whole | Mushrooms |
| BS217 | Anyang | Akpan-pa-genome | Whole | Mushrooms |

Table 7 Continued.

### 4.10 Wild Plants Sources of Additives

These include any plant components added to wines (both local and foreign), to enhance its power, taste or hasten the fermentation process. The use of additives is not very common in the Project Area.

However, during the survey, 5 species were identified (Table9) as additives for both palm wine and local gin (fofo). Common species are *Elais guinensis* and *Annickia chlorantha.*

The common additive, *Sacoglottis gabonensis*, was used only among the Bokis and Anyang. *Garcinia lucida* (Gutiferae) and *Paulinia pinata* (Sapindaceae) are widely used in the semi-decidous forest zone as additives in palm wine. Only the second one was found in the project area and it was not signalled as additive.

**Table 8: Wild Plants as Sources of Additives to Palm Wine**

| Genus | Species | Tribe | L / Name | Organ | Use |
|---|---|---|---|---|---|
| Annikia | chlorantha | Basho | Tekwoh | Bark | Peeled and added to local wine to enhance taste and make it stronger. |
| | | Becheve | Ofaechi | Bark | Added to palm wine and local liquor to, enhance taste and make it stronger. |
| | | Basho | Tekwoh | Bark | Peel and add to local wine to enhance taste and make it stronger. |
| Dalbergia | hostilis | Ovande | Makoh-koh | Bark | Added to palm wine. |
| Elaeis | guineensis | Basho | Mme | Fruits | Added to palm wine to reduce its foaming ability. |
| | | Basho | Mme | Nuts | Added to palm wine to reduce its foams. |
| | | Ovade | Iveh | Nuts | Added to palm wine to enhance fermentation. |
| Lovoa | trichilioides | Boki | Cida | Bark | Added to local wine to enhance taste and make it reddish on colour. |
| Sacoglottis | gabonensis | Anyang | Erad | Bark | Additive to palm wine before local distillation. |
| | | Boki | Olep | Bark | Added to palm wine before local distillation to increase fermentation, making the resulting wine stronger. |

### 4.11 Wild Plants as Sources of Oils

Oils constitute an important source of protein in human diets. They are ingredients in many traditional preparations. Within the Project Area, the most commonly used oil is from the Palm nuts (*Elaeis guineensis*). However, the importance of oils from the wild was appreciated during the survey.

The production of the highly priced *njabe oil* from *Baillonella toxisperma* is common among the Bokis, Anyang, and Bashos. Though this species is present within the Ovande (Matene) Community, it was not indicated as being exploited for its oil.

Njabe oil is used in stews, preparation of eru, and in a few cases, it is used to eat boiled bananas, cassava or plantains. It is also used as a component in many traditional remedies throughout the project area. It is normally prepared by collecting the seeds, drying them, crushing and squeezing to release the oil.

Though this oil is cherished, the constant search for wood from this species for furniture and other wood works, constitute a serious pressure on the population of this species in the wild and consequently a threat to the future availability of this favoured oil.
The oil from the seeds of *Poga oleosa* is not commonly processed while that of Canarium sweinfurthii is used as local candle for lighting households throughout the Project Area.

### 4.12 Wild Yams

Throughout the survey, only one species of wild yam was reported eaten. This species *Dioscorea* sp. is commonly found in advanced secondary forest. Its yellowish tubers are preferred boiled or roasted.

### 4.13 Uses of Wild Woody Plants

Woody plant are widely used by the villagers e.g for construction, furniture, fuel wood, as boundary markers and for shading.

#### 4.13.1 Construction

Throughout the project area villagers live in locally constructed thatched houses. The walls are made of sticks, while the roofs are thatched with the stems of *Bambusa vulgaris* and the petioles of *Raphia hookeri*.

The choice of the species is made with respect to durability, ability to withstand termites and rain and in some cases, the ability to regenerate while in use.

A total of 27 species have been identified for use in local construction. They belong to 16 families (Table 10). The most common species are, *Strombosia grandifolia, Baphia nitida, Uapaca guineensis* and *Greenwayodendron suaveolens.*

The reliance on these species for local construction and the increasing population of the inhabitants will greatly affect the population structure of these species in the forest. In fact, during the survey, it was not uncommon to move farther into the forest in a bit to see and identify some of these species.

**Table 9: Species of Wild Plants Commonly Used in Local Construction**

| Family | Genus | Species | Tribe | Local Name |
|---|---|---|---|---|
| Gutiferae | Allanblakia | floribundum | Becheve | Edakola-nah |
| | | | Boki | Ekweh-edueh |
| Annonaceae | Annickia | chlorantha | Boki | Kakolong |
| Rubiaceae | Brenania | brieyi | Becheve | Itenghe |
| Gramineae | Bambusa | vulgaris | Basho | Omphili |
| Leguminosae-Papilionoideae | Baphia | nitida | Anyang | Melue-nee |
| | | | Basho | Mehmi |
| | | | Ovande | Mutorh |
| Rubiaceae | Bertiera | Sp.BS 241 | Basho | Osah |
| Euphorbiaceae | Bridelia | micrantha | Anyang | Tampah |
| | Bridelia | Sp. | Basho | Tampha |
| Polygalaceae | Carpolobia | alba | Basho | Fesah |
| Euphorbiaceae | Drypetes | Sp.BS 240 | Basho | Awangneh |
| Apocynaceae | Funtumia | elastica | Anyang | Kembere |
| Guttiferae | Garcinia | mannii | Basho | Ojek-keshe |
| Annonaceae | Greenwayodendron | suaveolens | Anyang | Egili |
| | | | Boki | Leku-edweungi |
| | | | Ovande | Otoh |
| Hypericaceae | Harungana | madagascariensis | Anyang | Ge-thou-chuo-nyi |
| | | | Ovande | Ketunonok |
| Icacinaceae | Lasianthera | africana | Anyang | Nkpe-dansale |
| Leeaceae | Leea | guineensis | Anyang | Ta-pepe |
| Rubiaceae | Massularia | acuminata | Anyang | Edgele |
| | | | Basho | Fieyi-le |
| | | | Ovande | Igili |
| Dichapetalaceae | Tapura | africana | Basho | mokoh |
| Rubiaceae | Psychotria | Sp. | Anyang | Melea-meshu |
| | Rothmannia | hispida | Basho | Febwoh |
| Myristicaceae | Staudtia | kamerunensis | Anyang | Membele-meseh |
| | | kamerunensis | Boki | Mwope |
| Olacaceae | Strombosia | grandifolia | Boki | Keshu |
| | | | Anyang | Nkor |
| | | | Becheve | Okini |
| | | | Ovande | Kokini |
| Myrtaceae | Syzygium | guineense | Becheve | Aliama-phinde |
| Ulmaceae | Trema | orientalis | Becheve | |
| Euphorbiaceae | Uapaca | guineensis | Anyang | Olorh |
| Annonaceae | Xylopia | aethiopica | Becheve | Gewanere-ekane |
| | | staudtii | Anyang | Nemba |

### 4.13.2 Furniture

Most villages houses are furnished with beds, tables, and chairs. The most commonly wood used is from the following species; *Lovoa trichilioides, Baillonella toxisperma, Terminalia ivorensis,* and *Syzygium guineensis*.

Other furniture items like cupboards and stools are made from non-wood species like *Bambusa vulgaris* and *Raphia hookeri*. The interior of most kitchens is built from these materials.

**Table 10: Important Wild Plant Species Used for Furniture in the Project Area**

| Family | Genus | Species | Tribe | L / Name | Use |
|---|---|---|---|---|---|
| Annonaceae | Anonidium | mannii | Becheve | Etu-gweh | For furniture and building |
| Sapotaceae | Baillonella | toxisperma | Basho | Mpoh | Making chairs, tables, cupboards. |
| | | | Boki | Ogen | Making of furniture, doors and windows. |
| Apocynaceae | Funtumia | elastica | Basho | Nkoh | For tables and beds |
| Meliaceae | Entandrophragma | angolense | Becheve | Atomoh | For furniture |
| | | | Boki | | For furniture |
| Moraceae | Milicia | excelsa | Basho | Kensa | Making chairs, tables, cupboards. |
| | | | Becheve | Ekoh | For furniture and building |
| | | | Boki | Kekwa-kepe | Furniture and roofing |
| Myristicaceae | Pycnanthus | angolensis | Basho | Ocha | For tables |
| Combretaceae | Terminalia | ivorensis | Basho | Ekpe | Making chairs, tables, cupboards. |
| | | | Boki | Kekangne | Doors , windows, beds, roofing. |
| Combretaceae | Terminalia | superba | Basho | Okah | Making chairs, tables, cupboards. |
| Loganiaceae | Anthocleista | vogelii | Anyang | Ekpa-mbe | Drums |
| | crafobo1 | | Anyang | Weiamba | Drums |
| | crafobo2 | | Anyang | Meno-ntonyi | mortar pistles furniture |
| Moraceae | Milicia | excelsa | Anyang | Geshea | mortar pistles furniture |
| Leguminosae-Papilionoideae | Pterocarpus | soyauxii | Anyang | Okpu | To make village talking drums, canoes and paddles. |

### 4.13.3 Fuelwood

Energy for cooking in the project area is derived from the burning of wood. Though plant species are hardly discriminated in their use as fuelwood (table 12), some species are more preferred than others. Theses include *Hylodendron gabonensis, Uapaca guineensis, Bridellia* spp*., Marcaranga* spp*., Calpocalyx dinklegii*.

**Table 11: Preferred Feulwood Species in the Project Areas**

| Family | Genus | Species | Tribe | Local Name |
|---|---|---|---|---|
| Euphorbiaceae | Bridelia | micrantha | Anyang | Tampha |
| Dichapetalaceae | Dichapetalum | sp. | Ovande | Sesekpe |
| Dracaenaceae | Dracaena | arborea | Anyang | Ge-toto |
| Leguminosae-Caesalpinioideae | Hylodendron | Gabunense | Basho | Meshi-meshu |
| | | | Ovande | Otorh |
| | | | Anyang | Uchei |
| Irvingiaceae | Irvingia | Gabonensis | Ovande | Iweh |
| Ochnaceae | Lophira | Alata | Basho | Untoh |
| Apocynaceae | Tabernaemontana | Crassa | Anyang | Gatoh |
| Euphorbiaceae | Uapaca | guineensis | Basho | Olorh |
| | | | Anyang | Ulorh |

### 4.13.4 Mortars and Pestles

Table 12 shows the particulars of the wild plant species used in making mortars and pestles for domestic uses in the study areas. These are important cooking tools in all sites visited. Mortars are made from species like *Pterocarpus sauyauxii, Vitex doniana*, while species commonly used to make pestles are *Masularia acuminata and Irvingia gabonensis.*

**Table 12: Wild Plant Species Used for Making Mortars and Pestles**

| Family | Genus | Specie | Tribe | Local Name | Use |
|---|---|---|---|---|---|
| Leguminosae-Papilionoideae | Angylocalyx | sp. | Basho | Fekwa - kwe | Making of mortar pistles |
| Burseraceae | Dacryodes | edulis | Basho | Eseveh | Making of mortar pistles |
| | | sp. | Basho | Esveh | Making of mortar pistles |
| Irvingiaceae | Irvingia | gabonensis | Anyang | Oseh | mortar pistles furniture |
| | | | Basho | Mishi | Making of mortar pistles |
| | | | Boki | Kechi-ogep | Making of mortar pistles |
| Ochnaceae | Lophira | alata | Ovande | Ekwola | Making of mortars. |
| Rubiaceae | Massularia | acuminata | Boki | Odeng | Making of mortar pistles |
| | Matmort3 | | Ovande | Esesek-peh | Making of mortar and pistles |
| | matmot1 | | Ovande | Ekpa-ya-val | Making of mortar and pistles |
| | matmot2 | | Ovande | Ekil-leka | Making of mortars. |
| | crafobo2 | | Anyang | Meno-ntonyi | Mortar pistles furniture |
| Moraceae | Milicia | Excelsa | Anyang | Geshea | Mortar pistles furniture |
| Leguminosae-Mimosoideae | Pentacletra | Macrophyla | Anyang | Genka | Mortar and pistles |
| Leguminosae-Papilionoideae | Pterocarpus | Soyauxii | Basho | Fepuh | Making of mortar and pistles |
| | | | Basho | Fepuh | Making of mortar pistles |
| Verbenaceae | Vitex | Doniana | Ovande | Keflok | Making of mortars. |

## 4. 14 Wild Trees left on the Farms

Subsistence agriculture is the main stay of the inhabitants of the Project Area. A piece of virgin forest is cleared, the trees felled with cutlasses and axes before burning or simply killed by setting fires to standing trees.

Planting or hoeing immediately follows. The mode of preparation adopted at this stage depends upon the type of crops to be planted as well as the tribe. Burning and felling of trees during land preparation, to most inhabitants is an indispensable activity. The form of land preparation does not ensure natural soil improvement hence shifting cultivation is practiced, leading to constant movements from one forest patch to another, in search for fertile land. This is a major cause of deforestation within the project area.

The local knowledge about the use of trees for soil improvement, erosion control or as feeds for livestock is very low. Trees are left in farms either because they are difficult to fell or have noted uses.

However, unconsciously some leguminous trees are left in farms where they perform functions of natural soil fertility restoration by fixing atmospheric nitrogen. These include *Albizia zygia, Distemonanthus benthamianus* and *Piptadeniastrum africanum.*

Trees are left to grow with food crops for one of the following reasons:

Has medicinal value

Trees with noted medicinal values like *Annickia chlorantha, Entandrophragma candollei, Cylicodiscus gabonensis* are often left in farms.

Produces Non timber forest products (NTFPs)
NTFPs are important sources of income in the project area. Sales from species like *Irvingia gabonensis* are substantial. This species together with others like *Afrostyrax kamerunense, Ricinodendron heudolotii, Garcinia kola, Cola lepidota, Poga oleosa, Baillonella toxisperma* etc are left untouched during land preparation.

Religious/ Cultural reasons
One clear characteristic of the inhabitants of the project area is their strict adherence to their culture. This is manifested in their way of life. In all the tribes some trees are permanently protected because they are believed to be host to evil spirits (*Distemonanthus benthamianus* and *Santira trimera, Leea guineensis* and *Alstonia boonei* in Becheve communities) or can lead to ill luck if tampered with.

Timber species
Some species for their ability to produce valuable timber are protected during farming. This includes *Terminalia ivorensis*, *Lovoa trichlioides*, *Melicia excelsa* and other species of mahogany.

### 4.15 Uses of Wild Plants in Making Traditional Craft

Traditional craftsmanship such as mat making, thatch making, weaving of baskets and back packs, design of beds, cupboards and local ceiling, fishing traps and drying trays constitutes an important industry in the local economy. Indigenous knowledge in the design and preparation of important household items was seen in all the sites visited.

Mat Making
This is a very common activity within the project area. Mostly the old perform it. There are soft and hard mats.

The soft mats are made from the leaves of *Pandanus cadelabrum* while the hard mats are made from the stems of *Megaphrynium macrostachyum, Thaumathococcus daniellii*, etc.

Mats are used in the drying of Agricultural products, and for sleeping. Table 13 show the particulars of wild forest plants utilised in making various mats in the project area.

**Table 13: Wild Plant Species Used for Mat Making**

| Family | **Genus** | **Species** | **Tribe** | **Local Name** | **Organ** | **Use** |
|---|---|---|---|---|---|---|
| Marantaceae | Megaphrynium | macrostachyum | Becheve | Egongo | Sts | For making hard mats |
| Pandanaceae | Pandanus | candelabrum | Ovande | Oukoh | Lvs | Weaving of soft sleeping mats |
| | | | Becheve | Okwoh | Lvs | For making soft sleeping mats |
| | | | Boki | Kenkep | Lvs | Making of soft sleeping mats |
| Palmae | Phoenix | reclinata | Becheve | Azimbe | Lvs | For making sift sleeping mats |
| Marantaceae | Thaumatococcus | Daniellii | Boki | Akpong | Sts | For making of hand sleeping mats |
| | | | Ovande | Behkela | sts | Weaving of hard sleeping mats |

**Thatch Making**

Thatches are generally called local zinc. They are an important component in traditional construction. Most houses within the project area are made of thatch.
Thatches are made from the leaves and the petioles of *Raphia hookeri* and the stem of *Eremospatha wenlandiana*. The mode of preparation varies within tribes.

Baskets and Back Packs

Baskets are important tools in subsistence agriculture. They are used for washing, and carrying of farm produce. Backpacks are used in many tribes for carrying produce from farms.

The main raw material for making baskets and back packs are *Eremospatha wenlandiana Laccosperma secundiflorum.*

**Table 14: Wild Plant Species Used to Make Baskets and Back-packs**

| Family | **Genus** | **Species** | **Tribe** | **L / Name** | **Organ** | **Use** |
|---|---|---|---|---|---|---|
| Palmae | Eremospatha | wenlandiana | Becheve | Oukambe | sts | Basket weaving and local construction |
| | | | Boki | Kampkala | sts | Weaving of baskets |
| | | | Ovande | Eluh | sts | Weaving of baskets, local backpack and tying of houses. |
| | Laccosperma | secundiflorum | Becheve | Onyam-mbaka | sts | Baskets |
| | | | Boki | Kekam | sts | Weaving of baskets |
| | | | Ovande | Okwa | sts | Making of baskets, back pads |
| Marantaceae | Marantochloa | sp. | Becheve | Ikongleh | sts | Weaving of baskets |
| Malvaceae | Urena | Lobata | Boki | Krefrit | brk | To make ropes to tie dogs, and also weave hunting bags |

Beds, Cupboards, and Ceiling

Local furniture can be found especially in the homes of the young. Beds are made from the stems of *Bambusa vulgaris* (Gramineae) and the petioles of *Raphia hookeri* (Palmae). The latter is also used for making cupboards and local ceilings the design of which is an art that requires a lot of talent.

Bamboo Houses

The construction of local houses and restaurants completely using the stems of *Bambusa vulgaris* is an art that is fairly developed in the Project Area. However, in Nyang (an Anyang village), there is a bamboo house constructed by a villager that could not only constitute a nice tourist attraction but could also be used as an example to encourage others to use the same material to reduce pressure on the forest for local construction materials.

Fish Traps

Hunting and fishing are commonly practised throughout the project area. Many local fishing gears are available. Both the young and old males use fish traps, which are made either from rattans or from the petioles of the oil palm.

Drying Trays

Most agricultural products are sold dried. Different equipment is used for drying: mats, nylons, etc. However, the use of drying trays made from *Raphia hookeri* is a common practice throughout the project area.

Drying trays are used for the drying of pepper, njangsa, bush pepper, bush onion and assorted condiments and spices. The major advantage of these traditional drying trays is that during the drying process all stones and/or soil particles accidentally collected are sieved away.

Gari Sifters

Gari production is a viable source of income for the inhabitants of the project area. Traditional sifters made from rattans are commonly used to sieve the Gari before frying.

Cane Bridges

The project area is host to many streams and rivers, none of which is crossed by a permanent bridge. These rivers overflow their banks in the peak of the rainy season making movement within the area difficult. This led to the development of local technology for construction of rattan bridges.

### 4.16 Other Uses of Wild Plants

Traditional Dyes

Local dyes are used by all the tribes in the project area e.g. for decoration of dancers during traditional manifestations, and also to decorate sleeping mats.

Species commonly used are the fruits of *Rothmania hispida*, the leaves of *Masularia acuminata* and the bark of *Pterocarpus soyauxii*.

Cultural Values of Wild Plants

Plants parts are prominent in most cultural manifestations in the project area. They are used during birth and dead celebrations, in traditional societies during honour dances like the dances perform in honour of parents of twins.

Common species with cultural values are *Momodica charantha, Newboldia leavis, Costus afer* and *Combretum hispida.*

**Table 15: Various Cultural Values Placed on Wild Plants**

| Family | Genus | Species | Tribe | L.name | Use |
|---|---|---|---|---|---|
| Combretaceae | Combretum | hispidum | Boki | Kephea | To dance “kephea dance” (war-like dance) |
| Costaceae | Costus | afer | Basho | Mtuman-Kwale | The stems are held by parents of twin traditionally call "Manyi and Tanyi" for the mother and father respective, to perform the "Ofuah dance" |
| | | | Boki | Kelilibe | Used by women for a traditional dance |
| Burseraceae | Dacryodes | edulis | Basho | Ovia neshu | Leaves are use to perform the Ekpe dance |
| Palmae | Elaeis | guineensis | Boki | Ekwang | Young palm fronts for "Epoh dance” |
| | | | Anyang | Nekwa | Young yellowish palm fronts for many traditional dances; also to indicate the assembly of a particular traditional meeting |
| Cucurbitaceae | Momordica | charantia | Basho | Mbia | The stem combined with the leaves are tied on the heads of twins to perform Ofuah dance |
| | | | Ovande | Ambia | Leaves and stems tied round the heads of dancers in honour of a woman who gives birth to twins. |
| | | | Anyang | Malwo-ogpha | Whole climber tied on head during masquerade procession, also old women guarding a corps normally tie it round the head to reduce odours |
| Cecropiaceae | Musanga | cecropioides | Boki | Okobe | Stems for the "Obiankpong" masque |
| Oleandraceae | Nephrolepis | undulata | Anyang | Gohoke | Cultural value |
| Bignoniaceae | Newbouldia | laevis | Boki | Kechi-emah | Leaves for the "Ekpe" dance |
| | | | Ovande | Nfou-etchi | Leaves for the "Ekpe" dance |
| | | | Anyang | Mfon-etchi | Leaves for the “Ekpe” dance |
| Sapotaceae | Omphalocarpum | elatum | Boki | Elelah | Dry seeds round the legs for the "Ambong” dance |
| | | elatum | Anyang | Majorh | Seeds perforated and tied round ankles to perform the traditional dances: Agri dance, Agracha dance |
| Commelinaceae | Palisota | hirsuta | Boki | Kechi-ekpa | Leaves for traditional dances |
| | | | Anyang | Matoh-makwale | For a dance in honour of a woman with twins |
| Leguminosae-Papilionoideae | Pterocarpus | soyauxii | Ovande | Echia | Exudate (red) used to decorate traditional dancers |
| Selaginellaceae | Selaginella | vogelii | Anyang | Manya-nyanei | Whole plant used to tie on head during cultural festivals |

Dental Care
Most inhabitants of the project area rely on the forest to solve for dental care. The use of saplings and branches of *Garcina mannii* for brushes teeth is common throughout. A few people also use saplings of Masularia acuminata and *Carpolobia alba.*

Local sponge
The leaves of *Ficus exasperata* are commonly used for the washing of kitchen utensils. Also, local sponges are made from the stems of *Cissus* sp.

Trapping
Trapping of animals is generally practised throughout the project area. A line is cut across the selected site. A fence is constructed using either splits from *Musanga cercropioides* exclusively or palm fronts.

Traps are then prepared using saplings of some species and special wires preferably those that can withstand bending stress such as *Carpolobia alba, Masularia acuminata, Baphia nitida, Strombosia grandifolia, Strombosia pustulata* and *Microdesmis pulberula.*

Food wrapping
Wrapping material is necessary to wrap food during cooking or for transportation eg. To the market, to the bush or on long journey. Species used for wrapping food are free of poisons. Common species include *Thaumatococcus daniellii* and *Sarcophrynium brachystachyum*.

**Table 16: Wild Plant Species used for Wrapping**

| Family | Genus | Tribe | Local name | Use |
|---|---|---|---|---|
| Marantochloa | SpBS204 | Boki | | For wrapping |
| Sarcophrynium | brachystachyum | Boki | Akpong | Used for domestic wrapping of food items |
| Megaphrynium | macrostachyum | Anyang | Deca-ale | Leaves used for wrapping of materials in the local markets and households |
| Thaumatococcus | Daniellii | Anyang | Biaroko | Leaves used as wrapping material when cooking beans |
| Trachyphrynium | Braunianum | Anyang | Gekage-ekou | Leaves used as wrapping material |

## 4.17 Agriculture

Thirty seven species belonging to 23 families were identified as crop food. The most diversified families were Cucurbitaceae and Solanaceae (4 species each) and Dioscoreaceae and Rutaceae ( 3 species each).

Table 17 shows that there is diversity in crop production in the sites surveyed; a total of 37 crop species and two varieties are cultivated in the project area.

31 crops were found in Ingini while 28 were encountered at Obonyi III. Some of the traditional names are of Pidgin English or English origin.

One clear feature of food crop production in the project area is the fact that farming is not very well developed. A few crops are cultivated to target specific markets. The lack of agricultural extension facilities keep farmers remote from improved crop varieties. As a result, maximum yields are not obtained.

**Table 17: Food Crops Planted in the Takamanda Forest Reserve and their Traditional Names in the Five Main Tribes**

| **Family** | **Genus** | **Species** | **Boki** (Kekukesim I) | **Anyang** (Obonyi III) | **Ovande** (Matene) | **Becheve** (Ingini) | **Basho** (Basho II) |
|---|---|---|---|---|---|---|---|
| Amaranthaceae | Amaranthus | hybridus | Bophia | Ngwoo | Ongwoo | Ekélé | Ngbo |
| Bromeliaceae | Anana | comosus | Eyan | Nelah | Panaple | Ogweli oguegui | Nenla |
| Solanaceae | Capsicum | annuum | | Nkale | Nkale | | |
| Caricaceae | Carica | papaya | Popo | Popo | Oboel | Ogwele | Keboloun |
| Rutaceae | Citrus | sinensis | Ntchoko | Sookot | Ossokol | Olamba | Kempoo |
| Rutaceae | Citrus | pamplemousse | | Massoko koko | | Olamba | |
| Rutaceae | Citrus | limon | | | Ossokol | Olamba | Limes |
| Palmae | Coco | nucifera | Oku | Mema akala | Omam mokalala | Ecoemekae | Muamekala |
| Sterculiaceae | Cola | acuminata | | Nepeh | Alignè | Ediè | Nepi |
| Araceae | Colocasia | esculenta | Eberefood | Everefu | Icre | Ombalofo | Machouo |
| Araceae | Colocasia | esculenta ib koko | Ibo koko | Mankwo egbo | Ibo koko | Obombi | Mankou ibo |
| Burseraceae | Dacryodes | edulis | Bosu | Machou | Azim | Echou | Nechou |
| Dioscoreaceae | Dioscorea | 3 flle | Kelem | | | | |
| Dioscoreaceae | Dioscorea | alata | Bomakelo | | Keguiock | Eyane | Kegne |
| Dioscoreaceae | Dioscorea | rotundata | Kentouang | | | | |
| Cucurbitaceae | Cucumis | melo | Letsangue | Essa | Etsielie | Itchinguish | Mekii |
| Palmae | Elaeis | guineensis | Oware | Kendia | Evile | Ovile | Kendaa |
| Convolvulacea | Ipomoea | batatas | Kejulec | | | | |
| Anacardiaceae | Mangifera | indica | Bojep okarara | Ochi mekala | Ivogagné | Omongo | Mechii Mekala |
| Euphorbiaceae | Manihot | esculenta | Ewoua | Cassala | Cassava | Ekassala | Kassala |
| Cucurbitaceae | melong | etchio | Boufefe | | | | |
| Cucurbitaceae | melong | | Osan | Mintchii | Etsinguis | Idtchiele | |
| Musaceae | Musa | paradisiaca | Kenkua | Guewa | Kekomo | Akouma | kekwa |
| Musaceae | Musa | sapientium | Keko omo | Banana | Banana | Owkambo | Manana |
| Solanaceae | Nitiana | tobacum | | Elough | Odjou | Etembe | Odja |
| Labiatae | Ocimum | gratissimum | | Olo | Oudjou | Ayangna | Feghaa |
| Lauratceae | Persea | americana | | Nechou mekala | Adibo gagné | Achoguegni | Nechoune mekala |
| Myrtaceae | Psydium | guajava | Guava | Guava | Guava | Guava | |
| Cucurbitaceae | Telfairia | occidentalis | Kentouang | | | Ekon ava | Kekwo |
| Poaceae | Saccharum | officinarum | Ekekouo | Nguechuenchuen me | Vecalev | Agwoo | Kessonso |
| Solanaceae | Solanum | macrocarpum | Otou | | | | |
| Solanaceae | Solanum | nigrum | Bechwo | Oula | Osso"o | Essongo | Onchii |
| Sterculiaceae | Theobroma | cacao | Coco | Caca | Caca | Caca | Caca |
| Tiliaceae | Triumfetta | Gombo | Kekole | Nguechouleh | Itouglou | Etoufoulou | Etoulou |
| Asteraceae | Vernonia | Amygdalina | Otsu | Outchii | Otsinam | Etena | Otchii |
| Asteraceae | Vernonia | Calvoana | Out ekong | | | | Evalofo |
| Araceae | Xanthosoma | Sagitifolium | Agnong | Agnon | Mamfé | Agnua | |
| Araceae | Xanthosoma | Sagitifolium | Agnong | Agnon | Mamfé | Maafè | Mankoup |
| Poaceae | Zea | Mays | Nkoulong | | Ekoulegue | Ekouleke | Nchii |

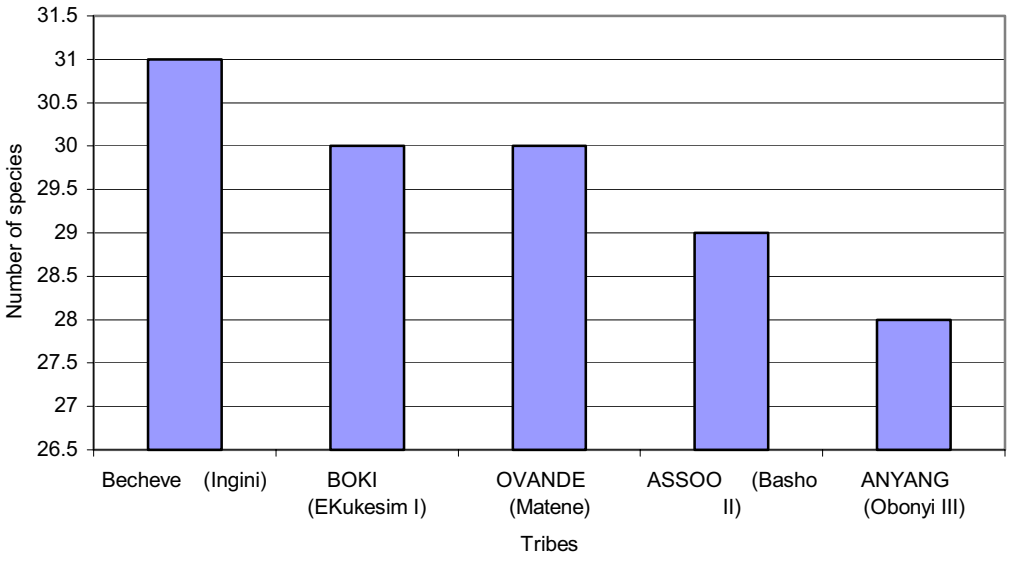



**Figure 5: Number of Crops Species Listed per Tribe in the Project Area**

### 4.17.1 Coco Yams

Four varieties of coco yams belonging to two species were encountered in the project area: *Xanthosoma sagitifolia* var. which is red coco-yam and *Xanthosoma sagitifolis* var. which is white coco-yam. The second specie is *Colocasia esculenta* with two varieties: *Colocasia esculenta* "mami coco" and *Colocasia esculenta* "ibo coco".

*Xanthosoma sagitifolium* (Araceae)
This variety of coco yam is an root crop of about 50 cm to 1 m high, the leaf is large sagitate, mid-green for the white variety and red for the red coco yam. The young leaves are eaten as green vegetable. Boiled corms are eaten with a soup sometimes made from the leaves.

Matured leaves are used to wrap food for steaming. They are also used as cover from rains or as temporal cups for drinking of water in the bush.

*Colocasia esculenta* (Araceae)
The variety commonly called Mami koko is a very widespread and important root crop of about 50 to 70 cm high. The leaf is not sagitate, the petiole is longer than the leaf. The young leaves are eaten as green vegetable. The exudate from the petiol or other part of the plant is used for boils and abscess.

The "igbo koko" is introduced from Nigeria and is widespread in the project area but not as common as the former. It is a herb of about 60 cm high, their long petiole bear medium size leaves which are not sagitate. The young leaves are seldom eaten; the inflorescence is eaten as vegetable.

### 4.17.2 Cassava

*Manihot esculenta* (Euphorbiaceae)
It is a semi woody specie of about 1.5 to 2 m high, leaves are display lobed, the petiol is long and red-greenish. The fruit is trilobed. This is a very widespread and important food crop of the entire project area. It is tolerant to many soils.

The root tuber are use to make cassava flour which is commonly eaten as "water fu-fu". The tubers are also use to make "gari". Tubers of sweet variety with less cyanide can be eaten raw or boiled. Leaves are use as green vegetable.

### 4.17.3 Plantains and Bananas

*Musa paradisiaca* (Musaceae)
A large number of varieties belonging to this specie are cultivated in the project area. These are plant of about 6 to 7 m hight, with long leaves. The reddish petioles and venation help to differentiate plantain from banana.

*Musa sapientium* (Musaceae)
The fruit size and the stem height are some of the features which help to differentiate bananas from the plantains. Many varieties are grown in the project area. They are eaten when ripe or boiled. Both men and women cultivate it.

### 4.17.4 Legumes and Grains

*Arachis hypogaea* (Fabaceae)
It is an annual herb of about 30 cm high. The leaves are trifoliate, the flower is yellow. The beans are underground. This species is widely cultivated within the Becheve tribe. They are eaten raw, boiled or in soup. Ground nuts constitute an important source of income for Becheve farmers. Most of the produce is sold in Nigerian markets via Akwaya town.

*Ipomoea batatas* (Convolvulaceae)
Many varieties are cultivated in the project area. They are creeping perennial herbs. Some varieties have simple and entire leaves while some have bilobed leaves. The species is characterised by the presence of white exudate when a leaf is cut. The root tuber can be eaten raw in the farm or boil and eaten with soup. They are present in the local market.

*Nitiana tobacum* (Solanaceae)
This plant is grown in farm gardens or in front of houses. It is mostly cultivated by the old, though in other Becheve villages like Ogbara and Kalumo it is grown just like other crops. It is used locally as a subsitute of cigarettes.

*Saccharum officinarum* (Poaceae)
It is grown in all the tribes surveyed though not in a large quantities. It is a perennial herb of about 2m high, found in mixed crop fields and young fallows. The stem is sucked as sugar cane.

*Hibiscus esculenta* (Tiliaceae)
This plant is annual specie of 1 to 2m high. The leaves are lobed and airly. The flower is white yellowish and the fruit long and dehiscent. It replaces in soup the bush mango in times of scarcity. It can be found in the local market around April.

*Zea mays* (Poaceae)
It is a widespread and important food crop in the project area. The stem is about 1.5 to 2 m in hight. Only a single crop per year is grown. Seeds are stored on the cob in houses, planted at the onset of the wet season and harvested after about 3 months. Fresh corn is boiled, roasted or dried to make corn flour for the much cherished koki corn.

### 4.17.5 Cucurbitaceae

*Cucurbita maxima* (Cucurbitaceae)
It is a climber herb which can some time be found creeping on the soil. The fruit is very large. It can be boiled and eaten with soup. The leaves are used as green vegetable. The seeds are cracked, ground and added as soup ingredient.

*Cucumeropsis mannii* (Cucurbitaceae)
It is a climbing herb, about 3m long. It normally needs support which is mostly made of dead branches of fallen trees. The seeds are cracked to make soup. It is cultivated just for local consumption.

*Cucumis melo* (Cucurbitaceae)
It is an annual herbaceous climber, cultivated throughout the project area. The seeds are cracked and used to make soup and "egusi". They are very much cherished in Nigerian markets.

*Telfairia occidentalis* (Cucurbitaceae)
It is an herbaceous climber with very large, glaucous, ellipsoid, ribbed fruits. The seeds and young shoots are eaten. It is widely used as food varieties. The wild type has smaller fruits and the leaves are rarely edible.

### 4.17.6 Vegetables

*Solanum macrocarpum* (Solanaceae)
It is a small woody species, about 60 cm high. Leaves are big and present a lobed margin. The flower is pink whitish. The young leaves are used as green vegetable. It is not widely grown in the whole project area.

*Solanum nigrum* (Solanaceae)
This species is widely grown in the project area. It is an herb of 70 cm hight. The inflorescence is umbelle and the fruits are darkish. The leaves are used as green vitamin rich vegetables.

*Vernonia amygdalina* (Asteraceae)
It is a semi-woody plant of more than 2m hight. The simple and dented young leaves are eaten after much of the bitterness has been leached out by washing. It is grown in farms and in fallow all over the project area. When the leaves are washed, they constitute an essential ingredient for "ndole" which is a popular dish eaten throughout Cameroon.

*Vernonia* calvoana (Asteraceae)
It is used in the same way as *Vernonia amygdalina* (called sweet "ndole"). The stem is smaller than that of *V. amygdalina*.

*Amaranthus hybridus* (Amaranthaceae)
It is one of the most widely cultivated vegetables in the project area. It is an annual crop of 70 cm hight, with simple and alternate leaves. The inflorescence is terminal. It bears many seeds, which are sprayed on the land after cleaning. The young leaves are mixed with groundnut to make a soup.

### 4.17.7 Yams
Three important species of indigenous and exotic yams were found in the project area.. Yams, a very important food crop, is cultivated in all the villages of the TFR for sale and home consumption. For food, yams are prepared by slicing the tubers, then boiling or steaming them.

*Dioscorea dumentorum* (Dioscoreaceae)
An indigenous, widely grown climber species with trifoliate leaves. The inflorescence is pendulous and bear small white greenish flowers. The tuber is eaten boiled. It is often sold in the local markets.

*Dioscorea alata* (Dioscoreaceae)
It is an exotic climber species with opposite leaves. The stem presents four well-developed wings that help to identified the species. The tubers are large and relatively short, often irregular in shape. It is cultivate throughout the project area. Tubers are sold locally.

*Dioscorea rotundata* (Dioscoreaceae)
This species was probably introduced to TFR from the neighbouring Nigeria. It is the best of yams varieties. The large long tubers are eaten with soup when boiled.

### 4.17.8 Spices

Spices are ground and added to soups, vegetables and porridge. The cultivated species are not as many as those harvested from the forest. Only two species were recorded.

*Capsicum annuum* (Solanaceae)
It is a neotripical herb of about 1 m of hight. This species was found all over the project area. The seeds are used most local meals. The ground dried seeds are offered to visitors combined with *Cola acuminata* as a sign of hospitality especially among the Bokis and Anyangs tribes

*Ocimum gratissimum* (Labiatae)
It is the most widely cultivated aromatic spice within the project area. In most sites visited, it is cultivated close by dwellings making its harvesting independent of the time of the day. The young leaves are also use in many local medicines.

### 4.17.9 Fruits and Tree Crops

*Anana comosus* (Bromeliaceae)
This is a cultivated herb of about 40 cm of hight. The margin of the leaves is spiny.
The inflorescence is terminal. The fruit is edible and sometimes sold in the local maket although it is mostly cultivate for consumption.

*Dacryodes edulis* (Burseraceae)
See also the wild fruit section

*Carica papaya* (Caricaceae)
This cultivated species, introduced from the neotropic, is a three of 3-7m of hight. It is found both in farms and fallow. The ripe fruits are eaten in the project area. The leaves and latex are used medicinally. The fruit is hardly sold in the market.

*Elaeis guineensis (*Palmae*)*
See wild fruits section.

*Citrus sinensis, Citrus Pamplemousse, Citrus limon* (Rutaceae)
These species are exotics, planted in the project area. The most eaten fruit is orange while lime, grapefruit and lemon are occasionally used for medicine or sucked. Lime is particularly important and is used to treat stomache ache, worms etc.

*Coco nucifera* (Palmae)
It is a tree of about 15 to 25 m high. It is widely planted in the project area particulary in home gardens. The fruits are eaten and sold in the local markets as well as in the neighbouring Nigeria.

*Cola acuminata* (Sterculiaceae)
This very important resource in the project area is commonly called "kola". The tree is of about 12m of hight with simple leaves. The fruits are shared during traditional ceremonies, but also used for medicine.

*Mangifera indica* (Anacardiaceae)
It is one of the more popular fruit found in the project area. The stem cans rich 15m high. It has simple leaves. The crown is dark green. The fruits are sold in the market.

*Persea americana* (Lauraceae)
This is a neotropical exotic tree of about 10 to 20 m high. The white flowers can appear twice a year. The fruits are edible with coco yam or boil plantain. They are sold in the local markets.

*Psydium guajava* (Myrtaceae)
This is also an exotic species which is cultivated in all the villages of the project area. It is a tree of about 5m of hight with opposite and simple leaves. The fruits are eaten when wripe. Two main varieties are found in this area. The young leaves are used to cure dysentery. The fruits are not found in the market.

*Theobroma cacao* (Sterculiaceae)
It is a small exotic cash crop, found all over the project area. Several varieties have been introduced in the area from the neighbouring Nigeria. At local level, the seeds are sucked. When dry, they are sold for the international market.

### 4.18 Orchids of the Takamanda Forest Reserve

Many orchids were seen and identified directly while walking through theforest. A few of them were collected and dried as herbarium specimen including *Ancistrorhynchus capitatus, Angraecum angustipetalum, Angraecum aporoides, Brachycorythis macrantha, Cyrtorchis chailluana, Diaphananthe bueae, Diaphananthe pellucida, Diaphananthe plehniana, Eulichone rotschildiana, Graphorchis lurida, Liparis nervosa, Nervilia taillieziae, Plectrelminthus caudatus, Polystachya concreta, Polystachya odorata and Solenangis scandens.*

African orchids are not widely known in horticulture/floriculture circles. However there are some that compare well in beauty with the commercial European species. Some of those encountered in theTFR are as follows:

*Angraecum birrimense* Rolfe
A large, attractive epiphyte, often seen in southern Cameroon. The stem is sometimes 2m high or more, slightly flattened and two-winged, generally hanging, with numerous aerial roots. The large fragrant flowers are usually two on each penduncle (about 4 cm long). In each pair of flower, one opens much earlier than the other.

*Plectrelminthus caudatus* (Linld) Summerh
This is a large, sturdy epiphyte with a long, rather sparsely-flowered inflorescence and thick aerial roots. The flowers are quite and conspicuous mainly because of the long, characteristically looped spur. The plant is easily cultivated under humid conditions. The stem is 2-5 cm, rarely 15 cm long. The inflorescence, zigzag shaped, measures 25-60 cm and bears 4 to 10 flowers. The spur is 16 to 25 cm long.

*Cyrtorchis arcuata* Summerh
This species, because it is not very demanding, does well under cultivation. The long sprays of hite fragrant flowers are quite attractive. The flowers are symmetrical; the lip is very similar to the other perianth-segments. The bract is quite large, brown and triangular in shape. The stem is elongate, up to 50 cm but generally much shorter. Many thick aerial roots are observed. The white flowers turn orange and heavily scent at night.

*Eulichone rothschildiana* (O'Brien) Schtr.
This is a very beautiful, large flowered but rare epiphyte that grows in the lower storey of the tropical rain forest. It is not difficult to cultivate, provided the conditions are shady and humid. The delicate flowers are fragrant, especially in the daytime. The stem is short, about 7 cm long. There are 2 to 3 inflorescence bearing 2 to 6 flowers each.

*Ancistrochilus thomsonianus*
This is an epiphyte of the basal or central parts of large branches Johansson (1974). The stem is short and woody. The pseudobulbs are crowded and conical. The leaves are lanceolate, thin, ribbed and dark green. The inflorescence is long, it bears large pink flowers.

### 4.19 Rattans (Palmae)

Rattans are climbing palms exploited for their flexible stems that occur in a wide range of forest types (Sunderland, 1998). These stems are used either split or whole to manufacture a wide range of household products, from bridges to baskets, from fish traps to furniture.

Although a number of different species may occur in the Takamanda Forest Reserve, only three, *Eremospatha wenlandiana, Calamus deeratus* and *Laccosperma secundiflorum* are of economic importance to people of this locality. The cane is bundled and then head-portered out of the forest and used at the village-site. Local based artisans undertake the majority of harvesting for commercial purposes.

## 5. RECOMENDATIONS

The ethnobotanical has provided detailed information on the types of species used for various purposes within the project area. In other to ensure sustainability of these resources, the need to study the methods by which these products are harvested is indispensable. This will enable the identification of unsustainable harvesting methods as well as the silvical requirements of important species.

Also, since most indigents rely on traditional medicine for various cures, sensitisation programs should include dosage determination and information on negative side effects of some medicinal plants. Also, the domestication of important medicinal plants could be encouraged. This will reduce the reliance on the forest.

The dissemination of research findings may have far reaching results. Information on medicinal plants, wild vegetables and mushrooms should be exchanged among tribes. This will lead to increased knowledge as well as ensure maximum use of plant resources. Formation of an Association of Traditional Healers will enhance co-ordination in this sector.

A detailed study of the Orchids of the Takamanda Forest Reserve could enable the preparation of a comprehensive checklist as well those with a high potential to be use as ornamentals.

An investigation of edible mushrooms may be worth while. This will reveal their cultivation requirements; a prerequisite for their domestication.

**Picture 1**: Participants at ethnobotanical surveys (above at Obonyi III, below at Ingini)

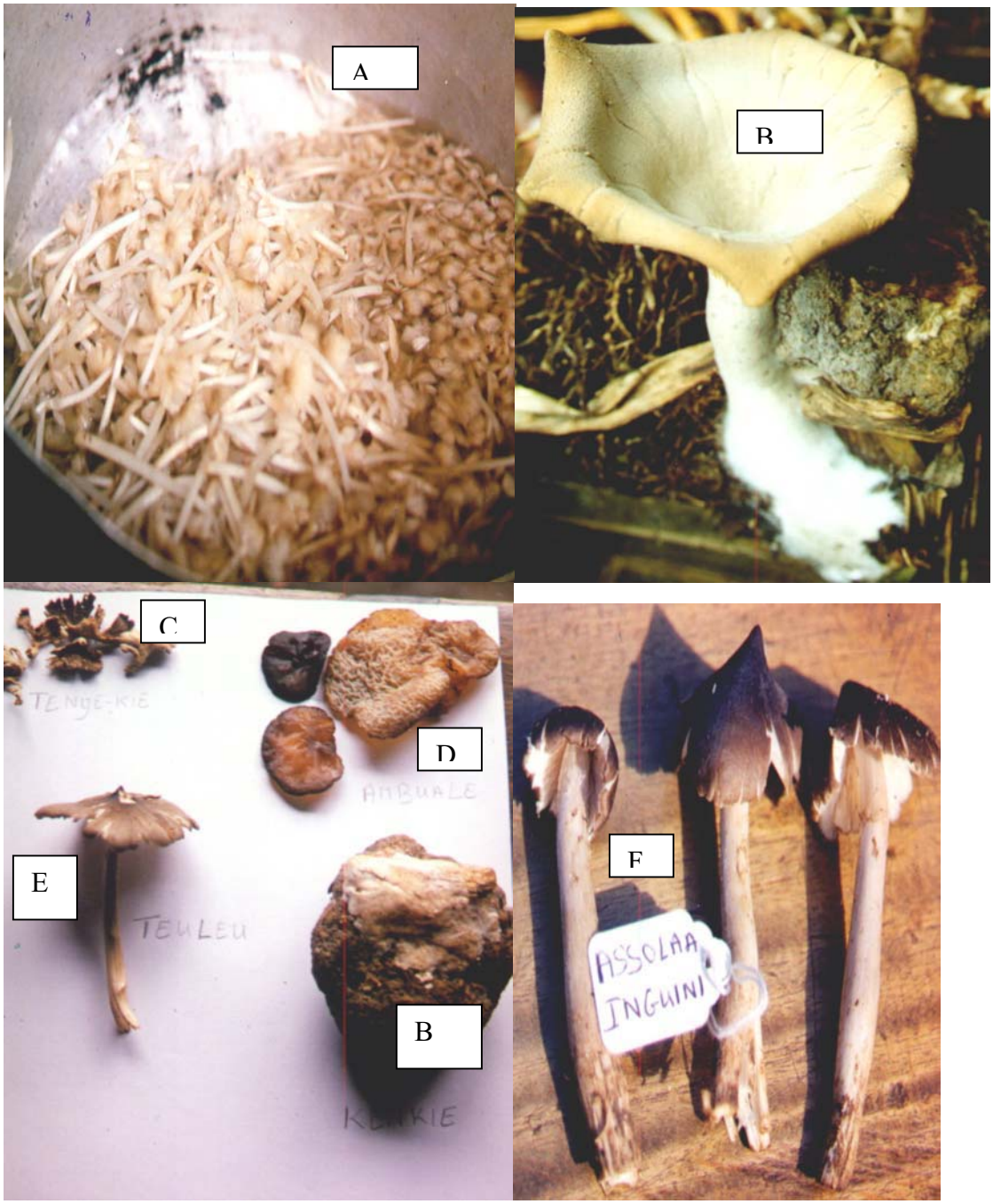
**Picture 2:** Ethnobotanical survey activities in Kekukesem I (above in the field, below in the village homestead)

**Picture 3**: A baby is washed in a basin containing the stem of *Maranthocloa purpurea*. It is both an internal (if the baby drinks the water) and external (warm bath) cure for stomach problems

**Picture 4**: Some medicinal plants of the project area: *Dissotis rotundifolia* (above) and *Ageratum conizoides* (below)

**Picture 5**: Some important medicinal wild plants of the project area: *Musa sapientium,* a food crop (above left); *Ocimum gratissimum,* a spice (above right); *Sena alata,* a medicinal plant (below left) and *costus afer,* another medicinal plant (below right).

**Picture 6**: Some of the important medicinal plants of the project area (above: *Piper umbellatum,* below: *Eremomastax speciosa*)




**Picture 7**: The important mushrooms encountered during the rainy season in the project area are A=*Termitomyces microcarpus*; B=*Lentinus squarosulus*; C=*Termitomyces* Sp 1; D=*Termitomyces* Sp.4; E=*Termitomyces* Sp. 2; and F=*Termitomyces* Sp.3.

**Picture 8**: Nuts of *Baillonella toxisperma* the cotyledons of which produces very important oil throughout the Project area

**Picture 9:** Traditionally the walls of houses are pasted with endocarp/seeds of *Irvingia gabonensis* to preserve them until the dry season to fetch higher price. (above: house roofed with palm fronds compared to iron sheet roofing (below))

Mortar and Pestle are important tools for pounding food items in all sites visited. Mortars are made from species like *Pterocarpus sauyauxii, Vitex doniana*, while species commonly used to make pestles are *Masularia acuminata* and *Irvingia gabonensis*.

**Picture 10:** A dug-out mortar made from stem of *Pterocarpus sauyauxii*

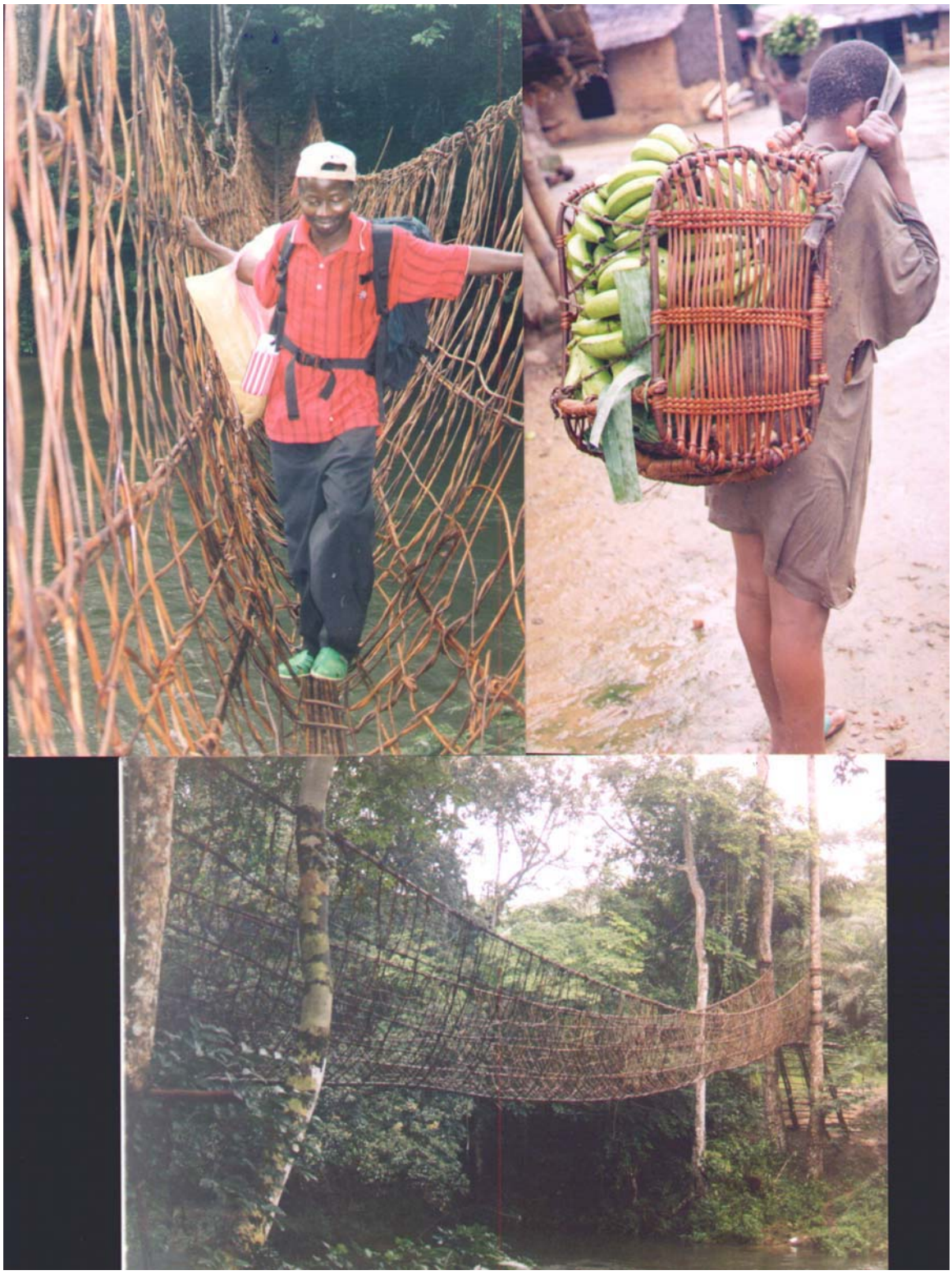
**Picture 11**: An old man at Ingini making traditional mats from the leaflet of *Phoenix reclinata* (Arecaceae)

**Picture 12**: Baskeks and back-packs woven from *Eremospatha wenlandiana* and *Laccosperma secundiflorum* are widely used to carry goods in the project area

**Picture 13**: Beds and house ceiling are made from rachis of leaves of *Raphia hookeri*

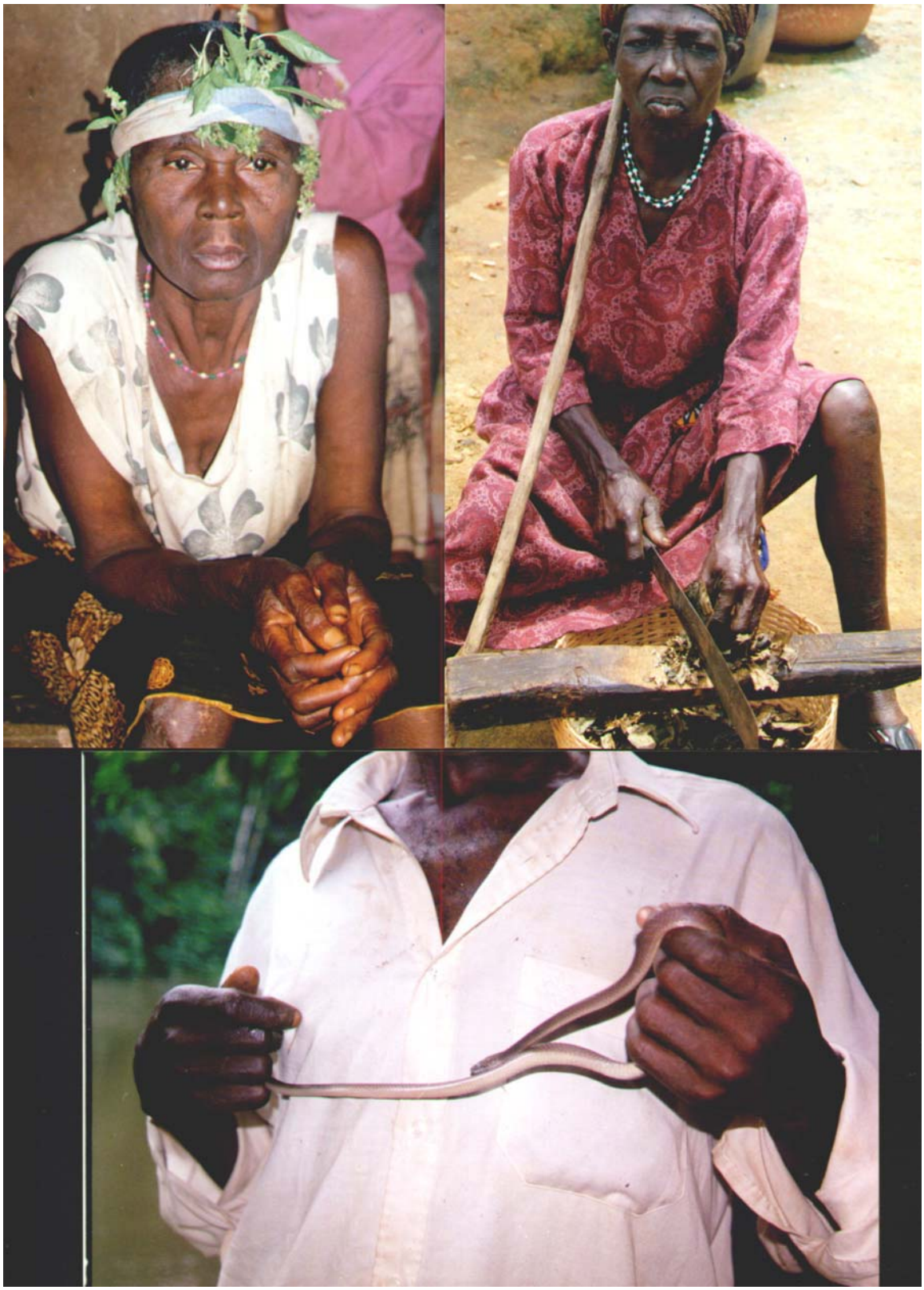
**Picture 14**: Bamboo is widely used in the project area (above: jungle houses completely made by *Bambu vuigaris,* and below: a market store under construction)

**Picture 15**: Several items including calabash placed on a drying tray fabricated from the rachis of the leaves of *Raphia hookeri*



**Picture 16**: Below and left above: rattan is used to make bridges for crossing rivers during the rains. Above right: back-pack basket of green bananas.

**Picture 17**: The fruits of *Rothmannia hispida* are commonly used to prepare dyeing stuff used to change white colour of materials made from cotton materials into black.



**Picture 18**: Above left: woven leaves around the head are an enblem of performing rituals.
Above right: leaves being prepared for vegetable soup.
Below: leaves used to tame snakes.

**Picture 19**: Igbo-koko *Colocasia esculenta* are normally planted in newly opened farmlands, a major cause of forest clearing throughout the project areas.

**Picture 20**: One of the most beautiful terrestrial Orchids of the project area

**Picture 21**: Two of the Orchids species of the project area: *Cyrtorchis arcuata* (above) and *Angraecum birrimense* (below) produce very attractive scents/perfume.

**Picture 22**: An old man in the process of weaving back-pack from the stem of *Laccosperma secundiflorum* cane

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## APPENDIX 1:

### Wild Medicinal Plants, Diseases Treated and Parts Utilized

(Key: lvs= leaves; yg lvs= young leaves; rts= roots; wl= whole; fwr= flower; fr= fruits; bk= bark; sds= seeds)

| Disease | Genus | Species | Tribe | Tra. Name | Part used | Use |
|---|---|---|---|---|---|---|
| Abdominal pain | Aframomum | sp. | Basho | Kenchuo | Yg Lvs | Squeeze and drink |
| | Cyperus | sp. | Anyang | Nee- le | Wl | Grind and eat |
| | Dalbergia | hostilis | Becheve | Ojunow | Lvs | Squeeze and drink to treat lower abdominal pain |
| Abortion | Cylicodiscus | gabunensis | Anyang | Gendow | Bk | Used to commit abortion |
| Abscess | Rinorea | oblongifolia | Anyang | Mekwimendeay | Lvs | For the treatment of abscess |
| | Acanthus | montanus | Basho | Kenchua | Lvs | Grind and rub on abscess and swollen parts |
| | | | Anyang | Ou - yeye | Rts | The roots are also used to treat abscesses |
| | | | Boki | Kenyinya | Rts | Grind and rub on affected area |
| | | | Ovande | Evat | Rts | Grind and place on area |
| | Borreria | sp. | Anyang | Marceh - magili | Lvs | |
| | Mitracarpus | scaber | Anyang | Ntoh | Lvs | |
| | Combretum | dolichopetalum | Anyang | Dan - soh | Flw | |
| | Costus | afer | Boki | Owomboh | Rts | |
| | Ficus | exasperata | Anyang | Gebveah | Lvs | |
| | Hibiscus | asper | Anyang | Menone maneh | Wl | |
| | Hypodaphnis | zenkeri | Anyang | gentoh-ande | Bk | |
| | Jateorhiza | macrantha | Ovande | Oyi-wekouk | Rts | Grind and rub on area |
| | Ocimum | gratissimum | Ovande | Andifan | Lvs | Grind and place on affected parts |
| | Manniophyton | fulvum | Anyang | Nyeh-feu | Lvs | |
| | Mimosa | pudica | Anyang | Agbo gokole | Wl | |
| | Musanga | cecropioides | Ovande | Vookombo | | Grind and placed on affected area |
| | Palisota | hirsuta | Boki | kechi ekpa | Lvs | Grind the leaves and tie on the affected parts. |
| | Piper | umbellatum | Basho | Kambo | Lvs | Grind and put on abscess. |
| | Sterculia | tragacantha | Anyang | Gemoah | Bk | |
| | globimetula | oreophila | Anyang | Awan noch | Lvs | To treat breast abscess in nursing mothers |
| | Urera | repens | Anyang | Ejuamoh | Wl | |
| | | | Boki | Ogwa eshi | Wl | |
| Additive | Cola | acuminata | Boki | Lebeeh | Sds | Added to many traditional remedies |
| Anti-biotic | Cylicodiscus | gabunensis | Anyang | Gendow | Bk | Solution from the bark |
| Aphro-disiac | Garcinia | kola | Boki | Ogeh | Sds | |
| | Carpolobia | alba | Ovande | Nyerem-mbe | Bk | Chew roots |
| | | | Boki | katep bokah | Rts | Chew roots |
| | Costus | afer | Basho | Ewoumboh-ondi | Stm | Chew young leaves with seven seeds of alligator pepper |
| | Garcinia | kola | Ovande | Emiale | Rts | Chew roots |
| | Massularia | acuminata | Boki | Odeng | Rts | Chew roots |
| | | | Ovande | Egili | Rts | Chew roots |
| | | | Anyang | Egili | Rts | Chew roots |
| Appe-tizer | Dioscorea | sp. | Basho | Nchen-deh-menfeh | Wl | Squeeze and put in palm wine |
| | Palisota | hirsuta | Becheve | Erieandelle | Lvs | Grind and eat |
| Asthma | Piper | guineense | Anyang | Biabi | Sds | Grind and eat |
| | Aframomum | baumannii | Becheve | Ayouloh | Rts | Grind and rub child to treat measles |
| | Acanthus | montanus | Anyang | Ou - yeye | Wl | To treat convulsion in children |

| | | | | | | |
|---|---|---|---|---|---|---|
| Baby | Aframomum | alboriolaceum | Becheve | Ayuola | Fr | Grind and eat to expel worms in children |
| | Ageratum | conyzoides | Anyang | Mayaren beh | Ivs | A conviction where a baby's anus becomes red* |
| | | | Ovande | Ketim-bik-keh-koumenok | Lvs | To treat high fevers in children |
| | Amaranthus | spinosus | Anyang | Geh-for ndong | Lvs | To relieve children of side pains |
| | Anchomanes | difformis | Anyang | Mpoh | Rt | Enema to treat pancreatic complications in hildren |
| | Angylocalyx | talbotii | Anyang | Gekwa - kwap | Bk | Enema against pancreatic problems in children |
| | | | Boki | Otegabi | Bk | Enema against pancreatic problems in children |
| | Asystasia | macrophylla | Anyang | Wonkow | Bl | Squeeze and drink to stop convulsion in children |
| | Barteria | fistulosa | Basho | kenkwoh | Bk | Grind with seven ants and rub on child side after light laceration to treat pancreatic complications in children |
| | | | Ovande | Okongba | Bk | Enema to treat pancreatic problems in children |
| | Costus | afer | Anyang | Ewom-boh | Lvs | Enema to treat pancreatic problems in children |
| | Anubias | cf hostifolia | Becheve | Okwa-idoh | Lvs | Side pains treatment for children |
| | Dissotis | rotundifolia | Boki | kak-nyinyi | Wl | To treat convulsion in children |
| | Ficus | exasperata | Becheve | Ukweyah | Lvs | Grind and eat to stop purge in both adults and children |
| | Kalanchoe | crenata | Ovande | kefrerevek | Wl | Squeeze and use to massage children with high fever |
| | Laportea | ovalifolia | Anyang | De kwi – schi | Wl | As enema to treat diarrhoea and dysentery in children |
| | Guarea | glumerulata | Ovande | Andarh | Lvs | Used for treating convulsion in children |
| | Scoparia | dulcis | Boki | Kabebe mpong | Wl | It can be ground and given to children to stop cough |
| | Sabicea | cf orientalis | Ovande | Ekwors | Lvs | As an energizer for children |
| | Ipomoea | Sp. | Anyang | Mokwo-chale | Wl | Used to treat anaemia in children |
| | Ocimum | gratissimum | Anyang | Olu | Lvs | To treat convulsion in children |
| | | | Boki | Canjang | Lvs | For treatment of convulsion |
| | Piper | umbellatum | Boki | keeboh | Lvs | Treat convulsion |
| | Santiria | trimera | Basho | Netake | Bk | Grind and rub on body to treat chicken pox |
| | Schumannioph yton | magnificum | Anyang | Eno - mawi | Lvs | Leaves; to treat heart problems in children, Bark; to treat male impotence, and pancreatic problems in children |
| | | | Ovande | Kaka | Bk | Boiled and used as an enema to treat pancreatic problems in children |
| | Solanum | torvum | Anyang | Nkogole - abu | Fr | For enema to treat navel complications in children |
| | | | Becheve | Eyolo-fiande | Lvs | To treat navel complications in children |
| | Solenostmon | monostachyus | Basho | Eya-ice manah | Lvs | Squeeze in oil and rub a baby to improve health |
| | | | Becheve | Oduengha | Lvs | Squeeze and wash a child to treat high fever |
| | Spermacoce | monticola | Ovande | Ijiandol | Lvs | As a treatment for abscess in children |
| | Stephania | abyssinica | Becheve | Makoulou | Wl | Squeeze, give to a child to enable it to move |
| | Stephania | laetifica | Anyang | Meko - etc | Lvs | Squeeze and drop to treat fontanel in children. |
| | Tristmma | mauritianum | Ovande | Ekoman-nyi-yini | Lvs | Squeeze and drink to cure cough in children |
| | Distmonanthus | benthamianus | Anyang | Eno - aloh | Bk | Grind and use on children against fever |
| | Massularia | acuminata | Boki | Odeng | Bk | Boil and used as enema to treat pancreatic complications in children |
| | Clerodendrum | scandens | Anyang | | Lvs | Navel complications in children |
| Blood | Alchornea | cordifolia | Anyang | Nepweh | Lvs | Boil and drink to improve blood production |
| | Eremomastax | speciosa | Boki | kekukwa, balong | Wl | Squeeze and drink to improve blood quantity |
| | | | Basho | Kigbih | | Used to improve blood production |

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|---|---|---|---|---|---|---|
| Body pain | Anonidium | mannii | Basho | Awoutou | Bk | Boil and drink to cure general body pains |
| | Cylicodiscus | gabunensis | Basho | Kendoh | Bk | Boil and drink to treat general body pain; also used as an antibiotic. |
| | Spathodea | campanulata | Becheve | Etiti | Bk | Boil and bath to relieve general body pain |
| Boil | Clerodendrum | Sp. | Ovande | Kebeleh | Lvs | Squeeze and place on boils |
| | Bochmeria | macrophylla | Ovande | Andifan | Lvs | Grind and place on affected parts to treat boil |
| | Desmodium | adcendens | Becheve | Egelegea- kouh | Rts | Grind and rub on boils and abscesses |
| Breast pain | Oxyanthus | Sp. | Boki | | Lvs | Leaves are put on the breast to relieve breast pains in women |
| Burn | Globimetula | oreophyla | Ovande | Oduare | Lvs | For the treatment of fire burns |
| | Melanthera | elliptia | Anyang | War-warsy | Lvs | Ground as powder and spread on burns |
| Chest pain | Mostuea | brunonis | Ovande | Ozorwang | Lvs | Boil and drink to treat chest pain |
| | Agelaea | cf hirsuta | Anyang | | lvs | To treat chest pain |
| | Albizia | zygia | Becheve | Ewen- wen | Lvs | Cook and eat to treat chest pain |
| | Alstonia | boonei | Becheve | Okweli | bk | Stip in water and drink to treat chest pain |
| | Annickia | chlorantha | Basho | Foukou | bk | Boil and drink to treat chest pain |
| | Begonia | Sp. | Anyang | Mbale-nuh | lvs | Treats chest pain |
| | Brillantaisia | patula | Ovande | Himbih-igbohi | wle | Squeeze and drink to stop chest pain |
| | Carapa | procera | Basho | Mewoloh | bk | Boil with salt and drink to treat chest pain |
| | Calpocalyx | dinklagei | Anyang | Oba - awe | Stm | Steem to treat chest pains in adult |
| | Ceiba | pentandra | Becheve | Ikemeeh | Lvs | Squeeze and drink to treat chest pain |
| | Crassocephalum | Sp. | Becheve | Ekinye-ke-koum | Lvs | Cooked with oil and eaten to treat chest pain |
| | Culcasia | striolata | Anyang | Nele-negele | Lvs | To treat chest pain |
| | Sesamum | indicum | Becheve | Eliveh | Lvs | Squeeze and drink to treat chest pains, heart burns, palpitation and mental disorder |
| | Nephrolepis | biserrata | Basho | Okusuh | Wl | Dry and grind without leaves, boil and drink to treat chest pain |
| | Piper | umbellatum | Becheve | Esho- sho-mbue | Lvs | Cook with oil and salt, eat to treat chest pain |
| | Tetrorchidium | didymostmon | Anyang | Eya-agboh | Lvs | To treat chest pain |
| | Treculia | obovoidea | Boki | Oken | Lvs | Lick to treat chest pain |
| | Zanthoxylum | gilletii | Anyang | Elogo - eli | Bk | Boil and drink to treat chest pain |
| Collapse | Pteris | Sp. | Becheve | Oshila-komboh | Lvs | For pains and illness leading to collapse; squeeze, drink and spread on the whole body |
| Consti-pation | Afrostyrax | kamerunensis | Anyang | Elah | Rts | Chewed to stop constipation |
| | Garcinia | kola | Anyang | Mmea - lay | Sds | Seeds to stop constipation |
| | | | Ovande | Emiale | Sds | Used to stop constipation and to enhance digestion |
| | | | Boki | Ogeh | Sds | Seeds aid digestion and stop constipation |
| | Stephania | abyssinica | Anyang | Ncho - onee | Lvs | Constipation |
| Cough | Harungana | madagascariensis | Ovande | Ketu-nonok | Stm | Stems are used to treat dental problems while the leaves are chewed to cure cough |
| | Annickia | chlorantha | Anyang | Ekwoh | Bk | For the treatment malaria |
| | Rhigiocarya | racemifera | Boki | Kahi bokwa | Lvs | Used as a remedy for cough |
| | bs211 | | Anyang | Eno - gekwe | Wl | Cough |
| | Calpocalyx | dinklagei | Anyang | Oba - awe | Bk | Bark to treat cough for adults |
| | Cissus | Sp. bs 222 | Ovande | Oyi-eyoh | Lvs | Chewed to treat cough in adults |
| | Costus | dubius | Boki | kenseghe-malem | Stm | Chewed to cure cough |
| | Cyathula | prostrata | Anyang | Ekili | Wl | Treatment of cough |
| | Desmodium | adscendens | Boki | Nfre-balen | Lvs | The leaves are used to treat cough |
| | | | Basho | Agelo-ge-oloh | Wl | Eat to prevent vomiting; also eaten as a remedy for cough. |
| | Dissotis | rotundifolia | Becheve | Ekikem- koh | Wl | Eat to treat cough |
| | Dissotis | Sp. | Becheve | Itikemo-kosli | Wl | Squeeze and drink to cure cough |

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| | Pyrenacanthus | vogeliana | Ovande | | Wl | Chewed for treatment of cough |
| | Newbouldia | laevis | Anyang | Nfonege - chi | Lvs | As a remedy for cough |
| | Raphia | hookeri | Anyang | Nchuo | Lvs | Dry, grind and eaten to stop cough in children. |
| | Rubiaceae herb | | basho | Keashie | Rts | Chew to stop cough |
| | Brillantaisia | patula | Ovande | Himbih-igbohi | Wl | Squeeze and drink to stop cough |
| dental | Acmella | caulirhiza | Becheve | Eshi- koh | Flw | Used to rub on teeth to cure dental problems |
| | Alchornea | cordifolia | Ovande | Ijakou | Lvs | Used to scrub teeth as a remedy for toothache |
| | Garcinia | mannii | Boki | Keshoa | Stm | To treat dental problems; commonly used as local toothbrush |
| | Macaranga | spinosa | Basho | Pampha | Bk | Boil and use liquid to raise mouth to treat dental problems |
| | Poga | oleosa | Boki | Onyoh | Bk | Boil and use resulting solution to treat dental problems. |
| | | cordata | Becheve | Betigeh-kangeh | Wl | For the treatment of dental problems |
| | Harungana | madagascariensis | Ovande | Ketu-nonok | Stm | Stems are used to treat dental problems while the leaves are chewed to cure cough |
| Devil | Asystasia | gangetica | Boki | Bole-atong | Wl | Used in compounds to keep away devils |
| diarrhoea | Anchomanes | difformis | Becheve | Ikole- bambeh | Stm | Boil and drink to treat diarrhoea |
| | Alstonia | boonei | Boki | boku | Bk | It can be boiled with "Akanwoa " and taken to treat diarrhoea. |
| | Desmodium | adscendens | Anyang | Ngilcesi alo | Wl | To treat diarrhoea. |
| | Erythrococca | anomala | Anyang | Mehr - mba mdeoh | Rts | To treat diarrhoea |
| | Scoparia | dulcis | Anyang | Megampo | Lvs | Treat diarrhoea |
| | Solenostmon | S. | Anyang | Entoh - popo | Wl | Treats diarrhoea |
| | Solenostmon | monostachyus | Anyang | Ntoh | Wl | As an anti poison ,for self protection and for the treatment of diarrhoea |
| | Rhigiocarya | racemifera | Anyang | Nchuo - nemege | Wl | As a remedy for diarrhoea |
| | | | Boki | Mkpopok | Lvs, | Squeeze drink to cure diarrhoea |
| | Lasianthera | africana | Boki | Odingdang | Lvs | Squeeze drink to cure diarrhoea. |
| | Urera | trinervis | Basho | kellah | Lvs | Squeeze, put in calabash, warm a bite and drink to treat chronic diarrhoea |
| Disapea-rance | Begonia | Sp. | Anyang | Mbale-nuh | Lvs | To prepare charms for disappearance during danger |
| | Alchornea | cordifolia | Anyang | Nepweh | Lvs | To prepare a charm for disappearance in times of danger |
| Dizzi-ness | Momordica | charantia | Becheve | Ayiyi | Lvs | To restore somebody from dizziness |
| Dysen-try | Anchomanes | difformis | Becheve | Ikole- bambeh | Stm | Boil and drink to treat dysentery |
| | BS200 | | Boki | Mkpopok | Lvs | Squeeze drink to cure dysentery. |
| | Eremomastax | speciosa | Becheve | Elinge-ka-kumba | Lvs | Squeeze and drink to treat chronic dysentery |
| | Erythrococca | anomala | Anyang | Mehr - mba mdeoh | Rts | To treat dysentery |
| | Rhigiocarya | racemifera | Anyang | Nchuo - nemege | Wl | As a remedy for dysentery. |
| | Solenostmon | Sp. | Anyang | Entoh - popo | Wl | Treats dysentery |
| | Urera | trinervis | Basho | kellah | Lvs | Squeeze, put in calabash, warm a bite and drink to treat chronic dysentery |
| Enema | Tetrorchidium | didymostmon | Basho | Nanye-nyolo | Lvs | Squeeze and drink as enema |
| Exzema | Ficus | Sp. m106 | Boki | Kentong | Ext | Rub on affected areas to treat eczema |
| | Senna | alata | Anyang | Nkwe - mukalo | Lvs | Used to treat eczema |
| | Brillantaisia | patula | Anyang | Nkon - koho maneeh | Wl | Squeeze and drop in eye to treat cataracts |
| | Microglossa | cf. pyrifolia | Becheve | Eyiyihi | Lvs | Squeeze and drop in the eyes to relieve eye problems. |

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| Eye | Clerodendrum | Sp. | Boki | Ophiang tong | Lvs | Grind and rub round a swollen eye |
| | Otomeria | cameronica | Ovande | Kandere | Lvs | Squeeze and drop in eyes to treat eye redness. |
| | Mallotus | oppositifolius | Boki | Katep | Yg lvs | To treat eye infections; squeeze, boil, and drop in eyes with *Aframomum* sp. |
| | Poggea | stenura | Ovande | Kesak-kequok | Lvs | Used to treat eye problems. |
| | Setaria | megaphylla | Ovande | Keewale | Lvs | Drop in eye to treat eye complications. |
| Fever | Kalanchoe | cf crenata | Becheve | Otoh- toh | Wl | Warm and massage to relieve fever |
| | Nephrolepis | biserrata | Anyang | Nganga - gefone | Wl | To treat high fever |
| | | | Boki | Lebii | Wl | For the treatment of high fever; warm on fire and use to beat the patient |
| | Nephrolepis | undulata | Anyang | Gachoke | Wl | As remedy high fever |
| Gastric ulcer | Leea | guineensis | Becheve | Echongoh | Lvs | Squeeze and drink to cure gastric ulcer |
| | Alsodeiopsis | rowlandii | Ovande | Akwale | Lvs | Squeeze and drink to treat gastric ulcer |
| | Pyrenacanthus | vogeliana | Anyang | Ele - elou | Lvs | For the treatment gastric ulcer |
| | Urera | cordifolia | Becheve | Elamb | Lvs | Squeeze and drink to treat gastric ulcer |
| | Urera | trinervis | Anyang | Olah | Lvs | Treatment of gastric pains |
| | Acacia | Kamerunensis | Anyang | Genkpet | Lvs | The leaves are used for the treatment of gastric ulcer |
| Gonorrhoea | Alchornea | cordifolia | Anyang | Nepweh | Lvs | Boil and drink as antibiotic against gonorrhoea |
| | Crotalaria | Sp. | Anyang | | Lvs | Treat gonorrhoea |
| | Mussaenda | Sp. | Anyang | | Lvs | To treat gonorrhoea |
| | Stephania | abyssinica | Anyang | Nenyeh - ekwone | Wl | Squeeze in palm wine and drink to cure gonorrhoea |
| | Anthocleista | cf vogelii | Becheve | Esongo-eyah | Rts | Boil and drink to treat gonorrhoea |
| | Sida | acuta | Ovande | Elet | Lvs | Squeeze and drink to treat gonorrhoea. |
| | Vernonia | conferta | Becheve | Echine- esoh | Lvs | Squeeze and drink to cure gonorrhoea |
| Haemorrhoid | Pyrenanthus | vogeliana | Boki | Olu eloh | Lvs | Squeeze and drink to treat haemorrhoids. |
| | Asystasia | gangetica | Boki | Kaphege-balong | Wl | Squeeze and drink to treat haemorrhoids |
| Head ache | Acmella | caulirhiza | Anyang | Maloh - makwo | Wl | For the treatment of chronic headache |
| | | | Basho | Ame-mequo | Wl | Grind and place on fore head after laceration to treat head ache. |
| | | | Ovande | Esikek | Lvs | To treat headache. |
| | Ageratum | conyzoides | Boki | wawalah | Lvs | The lvs are squeeze and dropped in the eyes to cure chronic headache. |
| | | | Becheve | Alufuo-kol | Lvs | Squeeze and massage with palm kernel oil to treat headache |
| | Alchornea | laxiflora | Anyang | Da ken - meshi | Rts | To treat severe headache |
| | Eremomastax | Sp | Basho | Meso-mantoh | Wle | Squeeze, put in local funnel and drop in eyes and nose to treat chronic head ache |
| | Laportea | ovalifolia | Boki | Bakekoh | Wle | To treat headache |
| | Mallotus | oppositifolius | Anyang | Mera-ken-mechi | Lvs | Squeeze and drop in eyes to cure severe headache |
| | Microdesmis | puberula | Anyang | Esa - megeli | Rts | For chronic head ache |
| | Musanga | cecropioides | Basho | Takwo | stipel | Grind and cover head after total laceration to treat chronic head ache |
| | Solenostmon | monostachyus | Boki | Esemgeh esha | Lvs | For the treatment of frontal headache; squeeze and drops in eyes. |
| | Urera | repens | Basho | Edjua-meh | Wl | Squeeze and drop inside ear to treat ear ache |
| Heart | Dalbergia | hostilis | Anyang | Ncha - moh | Lvs | Boil and drink to treat heart complications |
| | Dioscorea | bulbifera | Anyang | Nendoh - nalou | Tbr | To treat heart problems |
| | Geophila | Sp. | Anyang | | Wl | To treat heart problems |
| | Sabicea | Cf orientalis | Ovande | Kennegeh | Lvs | Squeeze young leaves and drink to treat heart burn. |
| Hidden motion | Laportea | ovalifolia | Becheve | Mossoso | Wl | Squeeze and give to child to harden motion |

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| Hip pain | Acacia | kamerunensis | Anyang | Genkpet | Lvs | The leaves are used for the treatment of hip pains |
| | Tristmma | mauritianum | Anyang | Magele | Frs | Fruits; for hip pains. |
| Hunting | Treculia | obovoidea | Anyang | Ekeh | Ltx | To prepare hunting dogs |
| Hynea | Barteria | fistulosa | Boki | Nkonmgban | Rts | Roots are used to treat hynea |
| | Afrostyrax | kamerunensis | Boki | Kaloh | Bk | To stabilise hynea |
| | Glossocalyx | Sp. | Basho | Feukou | Lvs | Squeeze, boil and drink to stabilise hynea |
| | Massularia | acuminata | Boki | Odeng | Stm | Stem: as chewing stick, also chewed to treat hynea |
| | Penianthus | longifolius | Anyang | Oucha | Ext | Exudate; as first aid for strangulating hynea |
| Hypertention | Leea | guineensis | Anyang | Ra - pepe | Lvs | For the treatment of hypertension. |
| Impotence | Crotalaria | Sp.m30 | Anyang | | Lvs | Male impotence |
| | Entandrophragma | candollei | Anyang | Menem-menok | Rts | Roots: impotence etc |
| | Schumannioph yton | magnificum | Anyang | Eno - mawi | Lvs | Leaves; to treat heart problems in children, bark; to treat male impotence, and pancreatic problems in children. |
| | Antidesma | Membranaceum | Anyang | Ukea-jeah | Lvs | For treating male impotence |
| | Carpolobia | alba | Boki | katep bokah | Rts | Chew roots to treat impotence in men |
| | | | Anyang | Esah | Rts | Male impotence |
| | | | Ovande | Nyerem-mbe | Rts | To restore potency in men. As an aphrodisiac; chew the roots. |
| | Massularia | acuminata | Anyang | Egili | Rts | Used to treat male impotence |
| | Mussaenda | Sp. m17 | Anyang | | Lvs | Male impotence |
| | Entandrophragma | candollei | Boki | Etiti-nyama-kuba | Rts | To treat impotence |
| | Stephania | abyssinica | Boki | Olivakon | Wl | To restore potency in men; squeeze with alligator pepper and drink. |
| Infected testes | Tabernaemontana | penduliflora | Anyang | Ema - mpah | Frs | As a traditional test to detect infected testes. |
| Itches | Scoparia | dulcis | Ovande | Megam-poh | Lvs | Squeeze and use as sponge to wash in order to treat itches resulting from witchcraft. |
| Kidney | Ruthalicia | cf longipes | Ovande | Owole | Lvs | Squeeze and drink to treat kidney complications in adults. |
| Kneel Pain | Spermacoce | monticola | Boki | Osah | Wl | To redress knee complications. |
| | Lavigeria | macrocarpa | Anyang | Enkoree | Lvs | The leaves for kneel sprains also squeeze and drink to cleanse somebody of bad luck. |
| Malaria | Annickia | chlorantha | Basho | Foukou | Bk | Boil and drink to treat malaria |
| | | | Boki | Kaka long | Bk | To treat malaria |
| Male | Combretum | hispidum | Anyang | Mada - nsum | Yg lvs | Squeeze and drink to make sperms more productive |
| Maternity | Laportea | ovalifolia | Boki | Bakekoh | Wl | Treatment of ringworm and also to improve milk production in a nursing mother. |
| | Aframomum | Sp. | Boki | kensengne | Lvs | Boiled and use to massage newly delivered woman |
| | Calpocalyx | dinklagei | Anyang | Oba - awe | Stm | The roots are used to sweeten breast milk in a nursing mother. |
| | Dioscorea | bulbifera | Boki | Alwan balem | Blbs | Used to sweeten breast milk in a nursing mother. |
| | Ficus | Sp. | Anyang | Ge - chuo | Lvs | Enema for pregnant woman |
| | M35 | | Anyang | Nemba | Lvs | Enema for woman during hard labour |
| | Sesamum | indicum | Anyang | Ekpuli-jeh | Lvs | Use as enema for children for vitality after suspending breast feeding( waning). |
| | Laportea | ovalifolia | Boki | Bakekoh | Wl | Treatment of ring worm and also to improve milk production in a nursing mother. |
| | Mallotus | oppositifolius | Anyang | Mera-ken-mechi | Lvs | The leaves are used to facilitate child birth |

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| | Musanga | cecropioides | Anyang | Da - kwoh | Ex | As enema for pregnant woman to eliminate extra amniotic fluid. |
| | | | Becheve | Okomboh | stpls | Squeeze and drink to speed up delivery in woman |
| | Rhaphidophora | africana | Anyang | Asu ma - lume | Lvs | Enema for pregnant woman |
| | | | Boki | Amo-uchu | Wl | To treat complicated pregnancy |
| | Carpolobia | alba | Ovande | Nyerem-mbe | Rts | Boil and drink to enhance breast production |
| Memory | Cephaelix | Sp. | Anyang | Mbale-nyi | Lvs | To enhance memory |
| | Psychotria | Sp. | Anyang | Gebah | Rts | For education; to give a retentive memory |
| | Newbouldia | laevis | Boki | Kechi-emah | Bk | To enhance memory; grind the bk and put in seven places; eat six places and use one to rub on tongue after eating. |
| Mens-truation | Entandrophragma | candollei | Boki | Etiti-nyama-kuba | Rts | To treat stabilise problem menstruation. |
| | Anthocleista | schweinfurthii | Ovande | Kialok | Rts | Used as enema to stabilise irregular menstruations . |
| | Harungana | madagascariensis | Basho | Kenku-??? | Yg lvs | Chew to rehabilitate a drunkard; enema to treat painful menstruation |
| mental | Combretum | hispidum | Becheve | Efa-fah | Lvs | Squeeze and drink treat mental complications. |
| | Dalbergia | hostilis | Anyang | Ncha - moh | Lvs | Boil and drink to cure mental problems. |
| Miscarriage | Myrianthus | serratus | Anyang | Danganya | Lvs | As enema for women to avoid miscarriage |
| | Stephania | abyssinica | Ovande | Mokouli | Wl | To prevent miscarriage in women squeeze the leaves, drink and tie rope on the waist. |
| Neck pain | Ampelocissus | bombycina | Ovande | Oyi-yoh | Lvs | Massage neck to treat neck pain |
| | Brillantaisia | Sp. | Becheve | Engwelle | Lvs | Warm and massage to treat neck pains |
| | Sabicea | calycina | Anyang | | Lvs | To treat neck ache |
| Nervous | Acanthus | montanus | Anyang | Ou - yeye | Wl | To treat nervous disorder leading to stiffness |
| Palpitation | | | Becheve | Evala- vah | Lvs | Squeeze and drink to treat palpitation |
| | Sesamum | indicum | Ovande | Kennegeh | Lvs | Squeeze young leaves and drink to treat palpitation |
| Pancreatic | Combretum | Sp. | Anyang | Embu - buo - nechi | Lvs | For swollen in the Skin and also used to prepare enema as a remedy for pancreatic complications. |
| | Schumannioph yton | magnificum | Anyang | Eno - mawi | Lvs | Leaves; to treat heart problems in children, bark; to treat male impotence, and pancreatic problems in children. |
| Protection | Nephrolepis | biserrata | Boki | Lebii | Wl | Used to protect a farm from thieves. |
| | Cylicodiscus | gabunensis | Anyang | Gendow | Bk | For compound protection |
| Poison | Alstonia | boonei | Anyang | Okou | Bk | Used as an antipoison. |
| | Entandrophragma | candollei | Anyang | Menem-menok | Bk | Bark: as antipoison |
| | Harungana | madagascariensis | Basho | Kenku-??? | Yg lvs | To treat food wine poison. |
| | Coffea | Sp. | Ovande | Kafia | Rts | Chew as an anti - poison |
| | Psychotria | Sp. | Anyang | Nele-negele | Lvs | Anti poison |
| | Solenostmon | Sp. | Basho | Fentou | Wl | Anti-poison |
| | Solenostmon | Sp. bs202 | Boki | Kachi bohy | Wl | Used as an anti poison or treat poison through wine. |
| | Vernonia | stellulifera | Basho | | Lvs | Used in combination with others as antipoison |
| | Acanthaceae | bs 215 | Anyang | Antoh - megwi | Wl | Antipoison |
| Protec-tion | Acacia | kamerunensis | Anyang | Genkpet | Bk | The bark is used to prepare protection rings |
| | Selaginella | myosurus | Anyang | Okah- mkpeh | Wl | the roots are used to prepare a charm for protection against enemies. |
| | Spermacoce | Sp.monticola | Anyang | Mpe - eh | Wl | For body cleansing after spiritual attack. |
| | | | Anyang | | Stm | For self protection |
| | acanthaceae bs 215 | | anyang | Antoh - megwi | Wl | Protection against gun shots |
| | Urera | repens | Basho | Edjua-meh | Wl | Drink to stop purges. |

| | | | | | | |
|---|---|---|---|---|---|---|
| Purge | Afrostyrax | kamerunensis | Boki | Kaloh | Bk | As a purgetive. |
| | Tabernaemontana | penduliflora | Basho | Muatam-peh | Rts | Used to stop purge |
| | Cercestis | mirabilis | Basho | Ambia | Lvs | Squeeze in cold water and drink to stop purge |
| | Desmodium | adscendens | Anyang | Ngilcesi alo | Wl | To stop purge |
| | | | Ovande | Owoh-agregi | Wl | Chew to stop purging. |
| | Microdesmis | puberula | Boki | kawah | Stm | Chew to stop purge. |
| | Rauvolfia | vomitoria | Ovande | yando-yotongo | Yg lvs | Grind with salt and eat to stop purge |
| | Tabernaemontana | crassa | Becheve | Odongho | Bk | Stip in water and drink to stop purge |
| Purification | Lophira | alata | Anyang | Eweli | Lvs | Bk; for body purification. |
| | Cylicodiscus | gabunensis | Anyang | Gendow | Bk | Body purifiation |
| | Anonidium | mannii | Anyang | Ago - etchy | Bk | For body purification |
| | Penianthus | longifolius | Anyang | Oucha | Ext | Exudate; as first aid for body purification |
| | Santiria | trimera | Anyang | Netale | Bk | Body purification for hunters and bussiness men |
| | Uapaca | guineensis | Anyang | Ulorh | Bk | Purification for hunters |
| Rehabilitation | Spermacoce | monticola | Boki | Osah | Wl | Used to rehabilitate a person who has transformed into an animal. |
| | Leea | guineensis | Boki | kechimpong | Wl | To rehabilitate a person who transforms into an animal. |
| | Microsorum | punctatum | Boki | Bebwoh-bat-eshian | Wl | To rehabilitate somebody who transforms into an animal. |
| | Maysa | lanceolata | Becheve | Epiah | Lvs | Squeeze and drop in nose and mouth to resuscitate somebody in a coma |
| | Nephrolepis | undulata | Becheve | Ishola- kombo | Wl | Used to rehabilitate somebody affected by witchcraft |
| Respiration | Barteria | fustulosa | Anyang | Mekwan-mgba | Rts | Roots; for the treatment of respiratory problems. |
| | Gouania | longipetala | Becheve | Okolo | Lvs | To treat respiratory problems |
| Rheumatism | Alchornea | cordifolia | Boki | Ndoh | Lv | To relieve rheumatism pains; chew and spite on affected area. |
| | Anchomanes | diformis | Boki | Mpog- balem | Tbr | Used to cure rheumatism pains |
| | Barteria | fistulosa | Boki | Nkonmgban | Bk | Scrap bark together with ants and tie on affected part to treat rheumatism |
| | Commelina | Sp. | Becheve | Egogole | Lvs | To treat rheumatism pains |
| | Desmodium | adcendens | Boki | Nfre-balen | Rts | To cure rheumatism |
| | Lavigeria | macrocarpa | Boki | Ekolekeh | Tbs | The tubers are used to treat rheumatism pains |
| | Ludwigia | abyssinica | Boki | Ofri | Wl | For the treatment of rheumatism pains |
| | Nelsonia | Ssp. | Ovande | ostar | Wl | For painful joints; squeeze and massage |
| | Costus | A fer | Boki | kenseghe-malem | Rts | For rheumatic pains; grind and rub on affected side affected laceration with a blade |
| | Selaginella | myosurus | Anyang | Okah- mkpeh | Wl | Rheumatism |
| | Phyllanthus | amarus | Boki | | Rts | To treat rheumatism pains in adults. |
| | | | Anyang | | Wl | To treat rheumatism pains. |
| | Chromolaena | odorata | Anyang | Obie - rata | Lvs | Warm and massage affected areas to cure rheumatism pains. |
| | Dichapetalum | affine | Anyang | Mamyi nde | Lvs | To treat pains around the joints |
| | Dracaena | cerasifera | Anyang | | Lvs | For the treatment of joint and rheumatism pains |
| | Manniophyton | fulvum | Anyang | Nyeh-feu | Lvs | To treat rheumatism pains |
| | Massularia | acuminata | Anyang | Egili | Bk | For rheumatism pains |
| Ring worm | Senna | alata | Anyang | Nkwe - mukalo | Lvs | Used to treat ring worms |
| | Ficus | exasperata | Anyang | Gebveah | Lvs | For the treatment ring worms |
| Skin desease | Santiria | trimera | Anyang | Netale | Bk | For the treatment of skin diseases. |
| | Graphorkis | lurida | Becheve | Eyi-bwa | Blbs | Grind, rub and eat to treat scrotal pains |

| | | | | | | |
|---|---|---|---|---|---|---|
| Scrotal pain | Manniophyton | fulvum | Boki | Ndoh | Yg lvs | Eat with alligator pepper and cola acuminata to cure scrotal pains. |
| Syphilis | Guarea | longispetala | Basho | | Lvs | Boil and drink to treat syphilis. |
| Shoulder pain | Jateorhiza | micrantha | Boki | Ole kenken | Lvs | Grind and rub on shoulder after laceration with blade to treat a painful shoulder. |
| | Chromolaena | odorata | Becheve | Ava- kakala | Lvs | Use to massage shoulder to treat shoulder pains |
| Side pain | Emilia | coccinea | Becheve | Osala- kambe | Lvs | Squeeze and drink to treat side pains |
| | Harungana | madagascariensis | Becheve | Yatononoh | Lvs | Squeeze and drink to treat side pains |
| | Rhabdophyllum | callophyllum | Anyang | | Lvs | For the treatment of side pains |
| | Olax | latifolia | Anyang | | Rts | For the treatment of side pains |
| | Bridelia | atroviridis | Ovande | ukineve | Lvs | For treatment of side pains |
| | Paullinia | pinnata | Becheve | Ekambakamba | Lvs | Squeeze and drink to treat side pains |
| | Scoparia | dulcis | Anyang | Megampo | Lvs | To get control of an audience during speech presentation as well as treat side pains |
| Snake bite | Lavigeria | macrocarpa | Boki | Ekolekeh | Stm | The stms to treat snake bites |
| | Borreria | sp. monticola | Basho | | Wl | Grind and rub on snake bite. Squeeze and rub through the wle body to scar away snakes. |
| | Selaginella | myosurus | Anyang | Okah- mkpeh | Wl | snake bites |
| | Baphia | nitida | Boki | Oseh | Yg Lvs | Chew with aframomum and spite on a snake bite to reduce the power of the venom. |
| | Commelina | sp. | Boki | Gambilipkang-pkang | Wl | After a snake bite, a concoction made from it is given to the victim to enable him vomit the poison. |
| | Dalbergia | bs198 | Boki | katep-ewat | Bk | It is normally combined with Aframomum sp and tied on the legs to scare away snakes while in the forest. |
| | Mytracarpus | scaber | Ovande | Umpulu | Lvs | Squeeze and drink to reduce the power of venom after a snake bite. |
| | Acmella | caulirhiza | Boki | Abanqua | Wl | To treat snake bite |
| | Afrostyrax | kamerunensis | Anyang | Elah | Frs | Fruits; to scare away snakes |
| | Scoparia | dulcis | Boki | Kabebe mpong | Wl | Treatment of snake bite |
| | Penianthus | longifolius | Anyang | Eno - nyoh | Rts | Chew to remove poison after snake bite |
| | Smilax | anceps | Basho | Kenkphie | Lvs | With others to treat snake bite |
| Sores | Thonningia | sanguinea | Basho | Muemeh veh | Wl | Dry and grind to treat sores resulting from running water |
| Spirit | Asystasia | gangetica | Anyang | Meno-mbuli | Wl | To keep away devils and evil spirits. |
| | Carapa | procera | Boki | Okeechi balem | Bk | Bark; peeled, grind and rub to cleanse a patient attacked by evil spirits. |
| | Santiria | trimera | Boki | Kamom | Bk | Grind with alligator pepper, rub, to drive away evil spirits. |
| | Urera | repens | Ovande | Ojwoa | Wl | Used to wash away evil spirits |
| Spleen | Barteria | fustulosa | Anyang | Mekwan-mgba | Bk | For spleen complications |
| Sprain | Borreria | sp. monticola | Basho | | Wl | Grind with Afrostyrax camerunense and put on sprain |
| | Ruellia | praetermissa | Basho | Nepoah | Wl | Grind with 7 seeds of alligator pepper to massage sprains |
| | Commelina | benghalensis | Anyang | Akohbiabia | Wl | To treat sprains |
| | Mariscus | alternifolius | Anyang | Nele | Wl | To treat sprains and also use to massage other affected parts |
| | Ocimum | gratissimum | Anyang | Olu | Lvs | Massage sprains |
| Sterility | Cylicodiscus | gabunensis | Boki | Kachi kagba | Bk | Boil as enema, to treat sterility in women. |
| | Entandrophragma | candollei | Boki | Etiti-nyama-kuba | Rts | To treat sterility in both men and women respectively |
| | Rauvolfia | vomitoria | Anyang | Nkude - denyome | Lvs | Bark for stomach ache |

| | | | | | | |
|---|---|---|---|---|---|---|
| Stomach | Tabernaemontana | crassa | Anyang | Gatoh | Bk | The bark is grind and taken as a remedy for stomach pains |
| | Alstonia | boonei | Ovande | Kwokweah | Rts | To treat stomach problems; boil and drink. |
| | Asystasia | macrophylla | Becheve | Eyiba | Lvs | Squeeze and drink to stop stomach ache |
| | Borreria | monticola | Ovande | Voucaoh-velotd-ojot | Lvs | To treat stomach abscess; grind and eat |
| | Rhigiocarya | racemifera | Anyang | Nchuo - nemege | Wl | As a remedy for stomach disturbances |
| | bs 224 | | Ovande | Echin-mengeh | Lvs | Squeeze and drink to stop stomach-ache. |
| | Cissus | sp.matene | Becheve | Kiyi | Lvs | Squeeze and drink to stop stomach complications |
| | Cola | lepidota | Basho | Meyemua | Lvs | Squeeze and drink to treat stomach ache and other stomach complications |
| | Drymaria | cordata | Ovande | Veokaoh-jah | Lvs | Squeeze and drink to stop stomach disturbances |
| | Entandrophragma | candollei | Anyang | Menem-menok | Bk | Bark: For stomach ache |
| | | | Boki | Etiti-nyama-kuba | Bk | Used for stomach complications |
| | | | Ovande | Otiti-nyuma-kuma | Rts | Roots are used for stomach complications |
| | Eremomastax | sp. | Becheve | Mawhola | Lvs | Squeeze and drink to treat stomach ache |
| | Garcinia | kola | Anyang | Mmea - lay | Bk | As remedy against stomach problems in adults. |
| | Ipomoea | sp. | Ovande | Odashe | Wl | Squeeze and drink to stop stomach problems |
| | Momodica | charantha | Ovande | Ambia | Lvs | Squeeze and drink to treat stomach pains. |
| | Pyrenacanthus | vogeliana | Anyang | Ele - elou | Lvs | For the treatment stomach upset |
| | Piper | umbellatum | Ovande | Membefeh | Lvs | As enema for nursing mother to stop stomach complications. |
| | Setaria | megaphylla | Basho | Okou-kou | Yg lvs | Grind and leek to treat stomach complications |
| | Sida | rhombifolia | Becheve | Iloh- loh | Lvs | Grind with salt and eat to treat stomach complications |
| | Tristmma | mauritianum | Anyang | Magele | Frs | Fruits; for stomach pains |
| | Acmella | caulirhiza | Ovande | Esikek | Lvs | To treat stomach ache |
| | Afrostyrax | kamerunensis | Boki | Kaloh | Bk | Enema for stomach disorder |
| | Angylocalyx | talbotii | Boki | Otegabi | Bk | Boiled as enema for women to treat stomach complications |
| | Solenostmon | sp. | Ovande | Oko-oga-nongolo | Wl | Squeeze and drink to treat stomach ache/pains. |
| | Spermacoce | monticola | Boki | Osah | Wl | It is grinned with Aframomum sp and eaten with red oil to stop stomach complications |
| | Treculia | obovoidea | Anyang | Ekeh | Ltx | Lick against stomach problems |
| | Microglossa | cf. pyrifolia | Becheve | Eyiyihi | Lvs | Squeeze and drink to stop stomach ache. |
| Swollen parts | Combretum | sp. | Anyang | Embu - buo - nechi | Lvs | For swollen in the Skin and also used to prepare enema as a remedy for pancreatic complications. |
| | Clerodendrum | sp. | Basho | Awolo kankie | Lvs | Grind and apply on swollen parts |
| vomiting | Rhynchospora | corymbosa | Becheve | Ekangala- kah | Rts | Grind and eat with salt to stop vomiting |
| | Solanecio | mannii | Becheve | Etoh- toh | Lvs | Squeeze and drink prevent vomiting in order to resuscitate the sick. |
| Waist pain | Euphorbia | hirta | Anyang | Gefam - megieh | Wl | To treat waist pains. |
| | Euphorbia | prostrata | Anyang | Nkon - kou - ama | Wl | To treat waist pains |
| Wedlor | Anchomanes | difformis | Basho | Nekuolo-?? | Tbs | Grind and tie on finer to treat wedlor |
| | Commelina | benghalensis | Anyang | Akohbiabia | Wl | To treat wedlor |
| | Euphorbia | prostrata | Anyang | Nkon - kou - ama | Wl | To treat wedlor |
| | Urera | repens | Anyang | Ejuamoh | Wl | To treat wedlor |
| | Distmonanthus | benthamianus | Anyang | Eno - aloh | Bk | Protection against witchcraft. |

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|---|---|---|---|---|---|---|
| Witch-craft | Entandrophragma | candollei | Boki | Etiti-nyama-kuba | Bk | Used protection against witchcraft. |
| | | | Ovande | Otiti-nyuma-kuma | Bk | The bark is used as a protection against witchcraft. |
| | | | Anyang | Menem-menok | Bk | Protection against witchcraft |
| | Stephania | abyssinica | Anyang | Ncho - onee | Lvs | Protection against witchcraft |
| | Begonia | sp.zl1688 | Anyang | Meba - ntia | Wl | Hinting prevent witchcraft from flooding the light dumb hunting* |
| | Commelina | sp. | Boki | lenyem | Wl | Used against witchcraft |
| | Costus | afer | Ovande | Iyiandok | Lvs | Used in the village as a test to know the person responsible for another person's illness through witchcraft |
| | Plumbago | zeylanica | Ovande | Nifu | Wl | For protection against witchcraft |
| | Musanga | cecropioides | Boki | Bokobe | Stpls | Join with Leea guineensis, boiled and drink to rehabilitate somebody at the point of dead who performs through witchcraft. |
| | Nephrolepis | undulata | Boki | lebii 2 | Wl | Used for protection against witchcraft. |
| | Palisota | hirsuta | Ovande | Malema-kwale | Wl | Protection against witchcraft farms from thieves. |
| | Acacia | kamerunensis | Anyang | Genkpet | Stm | The stems are used to protect compounds from witchcraft |
| | Chenopodium | ambrosioides | Anyang | jage-nempho | Lvs | Protection against witchcraft |
| | Costus | englerianus | Anyang | Yane - fou | Wl | For the protection of compound against witchcraft |
| | Emilia | coccinea | Anyang | Nehsara-juoh | Lvs | Protection against witchcraft |
| | Massularia | acuminata | Ovande | Egili | Wl | Whole; protection against witchcraft |
| | Smilax | anceps | Anyang | Gewea- alo | Wl | Protection against witchcraft |
| | | | Ovande | Otom-mbol-wakpa | Stm | To protect compound from witches. |
| | Euphorbia | kamerunica | Anyang | Geh - chicy | Wl | Protection against witchcraft |
| | Hypodaphnis | zenkeri | Anyang | Nekwa nchi | Wl | For protection against witchcraft |
| | Lophira | alata | Anyang | Eweli | Lvs | Leaves; personal protection against witchcraft, Bark; for body purification. |
| | Uncaria fourmis??? | sp. | Basho | Tanchecke-nya | Wl | Used for the protection of compounds against witchcraft. |
| | Annickia | chlorantha | Anyang | Ekwoh | Bk | To protect compound against witchcraft. |
| | Sansevieria | trifasciata | Anyang | Mege - okwon | Wl | Protection of compound against witches. |
| | Uapaca | guineensis | Anyang | Ulorh | Bk | Against witchcraft |
| Women | Peddiea | fisheri | Anyang | Gekwale | Lvs | To treat menstrual complications in women |
| | Rhaphidophora | africana | Basho | Mbelah | Wl | Boil to make enema for pregnant women to ensure safe delivery. |
| | Cogniauxia | podoleana | Anyang | Nchuo - nyi | Lvs | As enema to treat menstrual problems in women. |
| | Cola | sp. bs246 | Basho | Meyemua | Lvs | Used to treat stomach complications in a pregnant woman. |
| Worm | Rauvolfia | vomitoria | Anyang | Nkude - denyome | Lvs | The roots are grinned to be used as a worm expeller in women. |
| | Ficus | exasoerata | Boki | Okpegii | Lvs | To treat skin disease like ring worm. |
| | Alstonia | boonei | Boki | boku | Bk | The bark is used as a worm expeller |
| Wound | BS208 | | Boki | Kaphege-balong | Wl | Liquid used to treat wounds . Leaves: grind and put on wound. |
| | Ageratum | conizoides | Boki | wawalah | Lvs | Warmed, squeeze and drop on wounds to heal them |
| | Annickia | chlorantha | Boki | Kaka long | Bk | To teat wounds. |
| | Dischistocaloyx | sp. | Becheve | Ofolo-meche | Lvs | Grind and put on wounds. |
| | Chromolaena | odorata | Anyang | Obie - rata | Lvs | As an antiseptic for cleaning fresh wounds |
| | Clematis | simensis | Becheve | Okpala- dah | Lvs | To treat fresh wounds |
| | Cnestis | ferruginea | Becheve | Epah | Lvs | Used to treat old persistent wounds |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Combretum | hispidum | Basho | Fesa-femoku | Lvs | Grind and put on a wound giving by stone |
| | | | Boki | katep kefah | Lvs | Grind and put on wounds |
| | | | Ovande | Kofaf | Lvs | Squeeze and use to wash wounds |
| | Costus | afer | Basho | Ewoumboh-ondi | Stm | Warm, squeeze and put on a wound |
| | Cyathula | prostrata | Boki | Ekolankoh | Lvs | For the washing of wounds |
| | Funtumia | africana | Anyang | Gembere | Ltx | Treatment of wounds. |
| | Hibiscus | afer | Anyang | Menone - maneh | Wl | To treat wounds |
| | Hypodaphnis | zenkeri | Anyang | gentoh-ande | Bk | Wounds |
| | Macaranga | barteri | Ovande | Onom-wah-jah | Lvs | Used to treat wounds |
| | Piper | umbellatum | Basho | Kambo | Lvs | Grind and put on wounds |
| | Rauvolfia | vomitoria | Boki | Kechibabeh | Bk | To treat fresh wounds. |
| | Smilax | anceps | Becheve | Ukumblakpa | Lvs | Grind and put on fresh wounds. |
| | | | Ovande | Akalaka | Lvs | Squeeze and use to wash fresh wounds |
| | Rhigiocarya | racemifera | Boki | | Wl | Treatment of wounds. |
| | Tabernaemontana | crassa | Basho | Fehtow | Bk | Peel, grind and place on fresh wounds. |
| | | | Anyang | Gatoh | Ltx | Latex; for the treatment of wounds |
| Yellow fever | Annickia | chlorantha | Boki | Kaka long | Bk | To treat yellow fever |
| | Carica | papaya | Boki | pawpaw | Lvs | For yellow fever treatment; bath and drink concoction from the leaves. |
| | Chromolaena | odorata | Boki | Obiratoh | Lvs | Mixed with other substances to prepare a concoction used to cure yellow fever |
| | Harungana | madagascariensis | Boki | Ntwoleh | Bk | Boil and drink to cure yellow fever |
| | Morinda | lucida | Boki | kakoboh | Rts | Squeeze in water or wine to cure yellow fever. |
| | Desmodium | adcendens | Boki | Nfre-balen | Rts | To cure yellow fever |
| | Garcinia | kola | Boki | Ogeh | Bk | Boil and drink to treat yellow fever |
| | Tabernaemontana | eglandulosa | Boki | Ochichet kandbum | Lvs | Traditional test for yellow fever. The leaves are squeezed in a pan together with a stone and later placed on the stomach of a patient. If the patient is suffering from yellow fever, the solution will become thick immediately. Otherwise, it will remain unchanged. |
| | Irvingia | grandifolia | Anyang | Meh - mah | Bk | For the treatment of yellow fever |
| | Bertiera | clabensis | Anyang | Menoh - ntonyi | Bk | Treatment of yellow fever |
| | Pycnanthus | angolensis | Basho | Oacha | Bk | Boil and drink to treat yellow fever |
| | Rauvolfia | vomitoria | Anyang | Nkude - denyome | Lvs | As a traditional test for yellow fever |
| | Annickia | chlorantha | Basho | Foukou | Bk | Boil and drink to treat yellow fever |
| | Campylospermum | elongatum | Anyang | Gen icume | Lvs | Treatment of yellow fever |
| | Annickia | chlorantha | Anyang | Ekwoh | Bk | For the treatment of yellow fever |
| | Alstonia | boonei | Anyang | Okou | Bk | Put in palm wine and drink as a preventive measure against yellow fever |
| | Asystasia | sp.m109 | Anyang | Phapang | Lvs | Not used here |
| | Rhigiocarya | racemifera | Ovande | kin-grunk | | Not used as medicine here. |
| | Chromolaena | odorata | Ovande | Omena | | Not used here |
| | Cyathula | prostrata | Ovande | Ekwele-chacha | | Not used here |
| | Dioscorea | bulbifera | Ovande | Ijeoku | | Not used here |
| | Microdesmis | puberula | Ovande | Mokpo-dasale | | Not used here as medicine |
| | Nephrolepis | sp. | Ovande | Isuli | | Not used here |
| | Sansevieria | trifasciata | Ovande | Kwalouk | | Not use here |
| | Solanum | torvum | Ovande | Angele-gendeh | | Not used as medicine here. |
| | Solenostmon | monostachyus | Ovande | Kitimbik-ibok | | Not use here |
| | Triumfetta | cordifolia | Ovande | Ileu | | Not used here |

**Appendix 2: Comprehensive List of Useful Wild Plant Species of Takamanda Foerest Reserve and its Border Zones**

| Families | Genus | Species | Total |
|---|---|---|---|
| Acanthaceae | Nelsonia | sp. | |
| | Ruellia | Practermissa | |
| | Acanthus | Montanus | 4 |
| | Asystasia | Gangetica | 4 |
| | Asystasia | Macrophylla | 3 |
| | Asystasia | sp. | 2 |
| | Asystasia | sp. | 1 |
| | Asystasia | sp. | 1 |
| | Asystasia | sp. | 1 |
| | Brillantaisia | Patula | 1 |
| | Brillantaisia | sp.BS 230 | 1 |
| | Eremomastax | Sp | 2 |
| | Eremomastax | Speciosa | 3 |
| Agavaceae | Dracaena | Cerasifera | |
| | Dracaena | Arborea | 1 |
| Amaranthaceae | Amaranthus | Spinosus | 3 |
| | Amaranthus | Viridis | 1 |
| | Celosia | trigyna | 1 |
| | Cyathula | Prostrata | 2 |
| Anacardiaceae | Antrocaryon | Mycraster | 1 |
| | Trichoscypha | Acuminata | 3 |
| Anisophylleaceae | Poga | Oleosa | 7 |
| Annonaceae | Annickia | Chlorantha | 8 |
| | Anonidium | Mannii | 2 |
| | Greenwayodendron | Suaveolens | 2 |
| | Monodora | Myristica | 1 |
| | Poliatha | Suaveolens | 1 |
| | Xylopia | Aethiopica | 1 |
| | Xylopia | Hypolampra | 5 |
| | Xylopia | Staudtii | 1 |
| Apocynaceae | Alstonia | Boonei | 4 |
| | Apocynaceae | apocynaceae | 1 |
| | Funtumia | elastica | 3 |
| | Rauvolfia | vomitoria | 2 |
| | Tabernaemontana | crassa | 3 |
| | Tabernaemontana | eglandulosa | 1 |
| Araceae | Anchomanes | difformis | 4 |
| | Cercestis | mirabilis | 1 |
| | Culcasia | sp. BS229 | 1 |
| | Culcasia | sp. M7 | 1 |
| | Rhaphidophora | africana | 2 |
| Asclepiadaceae | Mondia | whitei | 1 |
| Balanophoraceae | Thonningia | sanguinea | 1 |
| Balsaminaceae | Impatiens | balsamina | 1 |
| Begoniaceae | Begonia | sp. | 1 |
| Bignoniaceae | Newbouldia | laevis | 5 |
| | Spathodea | campanulata | 1 |
| Bombacaceae | Ceiba | pentandra | 6 |
| Burseraceae | Canarium | schweinfurthii | 5 |
| | Dacryodes | edulis | 5 |
| | Dacryodes | sp. | 1 |
| | Santiria | trimera | 4 |
| Caesalpiniaceae | Hylodendron | gabonense | 1 |
| Caricaceae | Carica | papaya | 1 |
| Caryophyllaceae | Drymaria | cordata | 1 |
| Cecropiaceae | Musanga | cecropioides | 8 |
| | Myrianthus | arboreus | 2 |
| Chenopodiaceae | Chenopodium | ambrosioides | 1 |
| Combretaceae | Combretum | cf dolichopetalum | 1 |
| | Combretum | hispidum | 5 |
| | Terminalia | ivorensis | 4 |
| | Terminalia | superba | 1 |
| Commelinaceae | Commelina | sp. | 3 |
| Commelinaceae | Palisota | hirsuta | 5 |
| Compositae | Ageratum | conizoides | 1 |
| | Acmella | caulirhiza | 6 |
| | Melanthera | elliptica | 3 |
| | Chromolaena | odorata | 3 |
| | Crassocephalum | biafrae | 1 |
| | Crassocephalum | sp. | 1 |
| | Emilia | coccinea | 2 |
| | Microglossa | cf. pyrifolia | 1 |
| | Solanecio | mannii | 1 |
| | Vernonia | conferta | 1 |
| | Vernonia | stellulifera | 1 |
| Connaraceae | Agelaea | sp.M16 | 1 |
| | Cnestis | ferruginea | 1 |
| Convolvulaceae | Ipomoea | sp. | 5 |
| Costaceae | Costus | afer | 6 |
| | Costus | afer (circulaire) | 1 |
| | Costus | englerianus | 1 |
| Crassulaceae | Kalanchoe | cf crenata | 2 |
| Cucurbitaceae | Ruthalicia | cf longipes | |
| | | | |
| | Momordica | charantia | 5 |
| Cyperaceae | Mariscus | alternifolius | 1 |
| | Rhynchospora | corymbosa | 1 |
| Davaliaceae | Nephrolepis | biserrata | 1 |
| Dichapetalaceae | Dichapetalum | sp. | |
| | Dioscorea | bulbifera | 2 |

| | | | |
|---|---|---|---|
| Dioscoreaceae | Dioscorea | sp. | 3 |
| | Dioscorea | sp. | 1 |
| | Dioscorea | sp. | 1 |
| | Dioscorea | sp. | 1 |
| Dracaenaceae | Dracaena | arborea | 5 |
| | Sansevieria | trifasciata | 1 |
| Euphorbiaceae | Antidesma | membranaceum | |
| | Bridelia | atroviridis | |
| | Acalypha | ciliata | 1 |
| | Alchornea | cordifolia | 1 |
| | Bridelia | micrantha | 3 |
| | Bridelia | sp. | 1 |
| | Drypetes | sp. | 1 |
| | Erythrococca | anomala | 1 |
| | Euphorbia | hirta | 1 |
| | Jatropha | sp. | 1 |
| | Macaranga | barteri | 1 |
| | Macaranga | spinosa | 1 |
| | Manniophyton | fulvum | 3 |
| | Phyllanthus | amarus | 1 |
| | Ricinodendron | heudelotii | 6 |
| | Strombisia | grandifolia | 1 |
| | Tetracarpidium | conophorum | 4 |
| | Tetrorchidium | didymostemon | 2 |
| | Uapaca | guineensis | 4 |
| | Mallotus | oppositifolius | 1 |
| | Phyllanthus | amarus | 1 |
| Fabaceae | Angylocalyx | sp. | 1 |
| | Baphia | nitida | 1 |
| | Dalbergia | | 1 |
| | Dalbergia | hostilis | 1 |
| | Desmodium | adcendens | 1 |
| | Tephrosia | vogelii | 1 |
| Gnetaceae | Gnetum | africanum | 3 |
| Gramineae | Bambusa | vulgaris | 6 |
| | Oplismenus | burmannii | 1 |
| | Pennisetum | purpureum | 1 |
| | Setaria | megaphylla | 3 |
| Gutiferae | Allanblakia | floribundum | |
| | Garcinia | kola | 8 |
| | Garcinia | mannii | 2 |
| Hypericaceae | Harungana | madagascariensis | 7 |
| Huaceae | Afrostyrax | kamerunensis | 7 |
| | Afrostyrax | lepidophyllus | 1 |
| Humiriaceae | Sacoglottis | gabonensis | 2 |
| | Pyrenacanthus | vogeliana | |
| | Lasianthera | africana | 4 |

| | | | |
|---|---|---|---|
| Icacinaceae | Lavigeria | macrocarpa | 1 |
| Irvingiaceae | Irvingia | gabonensis | 15 |
| | Irvingia | grandifolia | 1 |
| | Irvingia | robur | 3 |
| Labiatae | Ocimum | gratissimum | 2 |
| | Solenostemon | monostachyus | 2 |
| | Solenostemon | sp. | 2 |
| | Solenostemon | sp. | 1 |
| | Solenostemon | sp. clavata | 3 |
| Lauraceae | Hypodaphnis | zenkeri | 1 |
| Leeaceae | Leea | guineensis | 5 |
| Leguminosae-Caesalpinioideae | Distemonanthus | benthamianus | 3 |
| | Hylodendron | gabunense | 3 |
| | Senna | alata | 1 |
| Leguminosae-Mimosoideae | Albizia | ferruginea | 2 |
| | Albizia | zygia | 3 |
| | Cylicodiscus | gabunensis | 2 |
| | Mimosa | pudica | 1 |
| | Pentaclethra | macrophylla | 1 |
| | Piptadeniastrum | africanum | 2 |
| | Tetrapleura | tetraptera | 3 |
| Leguminosae-Papilionoideae | Angylocalyx | sp. | 1 |
| | Angylocalyx | talbotii | 5 |
| | Baphia | nitida | 4 |
| | Crotalaria | sp.M29 | 1 |
| | Dalbergia | hostilis | 2 |
| | Desmodium | adscendens | 3 |
| | Mucuna | flagellipes | 1 |
| | Pterocarpus | soyauxii | 13 |
| | Tephrosia | vogelii | 4 |
| Loganiaceae | Anthocleista | cladantha | 1 |
| | Anthocleista | cf vogelii | 2 |
| | Anthocleista | schweinfurthii | 1 |
| | Anthocleista | sp. | 1 |
| | Strychnos | acueata | 2 |
| | Strychnos | phaeotricha | 2 |
| Loranthaceae | Globimetula | oreophila | 1 |
| Malvaceae | Hibiscus | asper | 1 |
| | Sida | acuta | 1 |
| | Sida | rhombifolia | 1 |
| | Urena | lobata | 1 |
| Marantaceae | Marantochloa | sp. | 1 |
| | | sp. | 1 |
| | Megaphrynium | macrostachyum | 3 |
| | Sarcophrynium | brachystachyum | 1 |
| Maranthaceae | Thaumatococcus | daniellii | 5 |
| | Trachyphrynium | braunianum | 1 |

| | | | |
|---|---|---|---|
| | Megaphrynium | macrostachyum | 1 |
| Melastomataceae | Dissotis | rotundifolia | 2 |
| | Dissotis | sp. | 1 |
| | Tristemma | mauritianum | 1 |
| Meliaceae | Carapa | procera | 1 |
| | Entandrophragma | candollei | 2 |
| | Guarea | glumerulata | 1 |
| | Lovoa | trichilioides | 1 |
| Menispermaceae | Rhigiocarya | racemosa | |
| | Jateorhiza | macrantha | 2 |
| | Penianthus | sp. | 1 |
| | Stephania | abyssinica | 4 |
| Mimosaceae | Piptadeniastrum | africanum | 1 |
| | Tetrapleura | tetrapleura | 1 |
| Monimiaceae | Glossocalyx | sp. | 2 |
| Moraceae | Ficus | exasperata | 4 |
| | Ficus | sp. | 1 |
| | Ficus | sp. | 1 |
| | Ficus | sp.coll ingini | 1 |
| | Milicia | excelsa | 4 |
| | Treculia | obovoidea | 1 |
| Myrsinaceae | Maysa | lanceolata | 1 |
| Myristicaceae | Pycnanthus | angolensis | 3 |
| | Staudtia | kamerunensis | 2 |
| Myrtaceae | Syzygium | guineense | 1 |
| Ochnaceae | Campylospermum | flavum | 1 |
| | Lophira | alata | 3 |
| Olacaceae | Olax | latifolia | |
| | Strombosia | grandifolia | 3 |
| Oleandraceae | Nephrolepis | biserrata | 1 |
| | | sp. | 1 |
| | | undulata | 3 |
| Onagraceae | Ludwigia | abyssinica | 1 |
| Orchidaceae | Ancistrorhynchus | capitatus | 1 |
| | Angraecum | angustipetalum | 1 |
| | Angraecum | aporoides | 1 |
| | Brachycorythis | macrantha | 1 |
| | Cyrtorchis | chailluana | 1 |
| | Diaphananthe | bueae | 1 |
| | Diaphananthe | pellucida | 1 |
| | Diaphananthe | plehniana | 1 |
| | Eulichone | rotschildiana | 1 |
| | Graphorchis | lurida | |
| | Liparis | nervosa | 1 |
| | Nervilia | taillieziae | 1 |
| | Plectrelminthus | caudatus | 1 |
| | Polystachya | concreta | 1 |
| | Polystachya | odorata | 1 |
| | Solenangis | scandens | 1 |
| Piperaceae | Piper | capense | 3 |
| | Piper | guineense | 9 |
| | Piper | umbellatum | 7 |
| Poaceae | Bambusa | vulgaris | 1 |
| Polygalaceae | Carpolobia | alba | 6 |
| Polygaliaceae | Carpolobia | alba | 1 |
| Polypodiaceae | Microsorum | punctatum | 1 |
| Pteridaceae | Pteris | sp. | 1 |
| Ranunculaceae | Clematis | simensis | 1 |
| Rhamnaceae | Gouania | longipetala | 1 |
| Rhizophoraceae | Poga | oleosa | 1 |
| Rubiaceae | Bertiera | clabensis | |
| | Cephaelis | sp. | |
| | Coffea | sp. | |
| | Mitracarpus | scaber | |
| | Otomeria | cameronica | |
| | Psychotria | sp. | |
| | Sabicea | cf orientalis | |
| | Bertiera | sp. bs214 | 1 |
| | Bertiera | sp.BS 241 | 1 |
| | Mitracarpus | scaber | 1 |
| | Spermacae | Sp. monticola | 3 |
| | Hallea | stipulosa | 1 |
| | Heinsia | crinita | 1 |
| | Massularia | acuminata | 13 |
| | Morinda | lucida | 1 |
| | Mussaenda | sp. | 1 |
| | Oxyanthus | sp. | 1 |
| | Psychotria | sp | 1 |
| | Psychotria | sp. | 1 |
| | Psychotria | sp. | 1 |
| | Psychotria | sp.inteligence | 1 |
| | Rothmannia | hispida | 4 |
| | Sabicea | calycina | 1 |
| | Schumanniophyton | magnificum | 1 |
| | Spermacoce | monticola | 3 |
| | Uncaria | sp. | 1 |
| Rutaceae | Zanthoxylum | gilletii | 1 |
| Sapindaceae | Paullinia | pinnata | 1 |
| Sapotaceae | Pachystela | brevis | |
| | Baillonela | toxisperma | 1 |
| | Baillonella | toxisperma | 6 |
| | Omphalocarpum | elatum | 2 |
| Scrophulariaceae | Scoparia | dulcis | 4 |
| Selaginellaceae | Selaginella | sp. | 1 |
| Smilacaceae | Smilax | anceps | 3 |
| Solanaceae | Solanum | torvum | 3 |

| | | | |
|---|---|---|---|
| Sterculiaceae | Cola | acuminata | 3 |
| | | lepidota | 6 |
| | | sp. | 1 |
| | | sp. | 1 |
| | Scaphopetalum | sp. | 2 |
| Styracaceae | Afrostyrax | kamerunensis | 1 |
| Thymeliaceae | Peddiea | fisheri | |
| Tiliaceae | Christiana | africana | 1 |
| Tiliaceae | Triumfetta | cordifolia | 1 |
| Ulmaceae | Trema | orientalis | 1 |
| Urticaceae | Bochmeria | macrophylla | |
| Urticaceae | Laportea | ovalifolia | 3 |
| | Urera | Cameroonensis | 1 |
| | Urera | repens | 4 |
| | Urera | trinervis | 2 |
| | Clerodendrum | sp. | 3 |
| | Clerodendrum | sp. | 1 |
| | Vitex | doniana | 1 |
| | Vitex | grandifolia | 1 |
| Violaceae | Rinorea | sp. | 1 |
| | Ampelocissus | bombycina | 1 |
| | Cissus | sp. | 1 |
| | Cissus | sp. | 1 |
| | Aframomum | Melegue | 1 |
| | Aframomum | sp. | 7 |
| | Aframomum | sp. | 1 |
| | Aframomum | sp. | 1 |
| | Aframomum | sp. | 1 |
| | Aframomum | sp. | 1 |

## Appendix 2 Continued

**BUNDARY MARKERS**

| | | | | |
|---|---|---|---|---|
| Dracaenaceae | Dracaena | arborea | Basho | Ewony |
| Dracaenaceae | Dracaena | arborea | Buing | Eloalooa |
| Dracaenaceae | Dracaena | arborea | Bukek | Ketoh |
| Dracaenaceae | Dracaena | arborea | Bumat | |
| Euphorbiaceae | Jatropha | sp. | Bukek | Njock -deou |
| Leeaceae | Leea | guineensis | Buing | Etongong |
| Leeaceae | Leea | guineensis | Buing | |
| Rubiaceae | Massularia | acuminata | Bumat | |

**FALLOW SPECIES**

| | | | | |
|---|---|---|---|---|
| Cecropiaceae | Musanga | cecropioides | Ovande= matene | |
| Euphorbiaceae | Uapaca | guineensis | Basho | Olorh |
| | Bridelia | micrantha | Ovande | |
| Irvingiaceae | Irvingia | gabonensis | Ovande | Kapha |
| Leguminosae-Caesalpinioideae | Hylodendron | gabunense | Basho | Meshi-meshu |
| | | | Ovande | |
| Leguminosae-Mimosoideae | Calpocalyx | dinklagei | Ovande | Vileh-nouh |
| Ochnaceae | Lophira | alata | Basho | Untoh |

| | **SHADING FOR YOUNG COCOA** | | |
|---|---|---|---|
| Bombacaceae | Ceiba | Pentandra | |
| Burseraceae | Dacryodes | Edulis | |
| Cecropiaceae | Musanga | Cecropioides | |
| Combretaceae | Terminalia | Ivorensis | |
| Leguminosae-Mimosoideae | Albizia | Ferruginea | |
| Leguminosae-Papilionoideae | Pterocarpus | Soyauxii | |

**NON BURN SPECIES**

| | | | | | |
|---|---|---|---|---|---|
| Anisophylleaceae | Poga | oleosa | Nburnmat | Mangarh | NTFP |
| Anisophylleaceae | Poga | oleosa | Nutmat | Monyorh | Cracked and eaten raw |
| Annonaceae | Annickia | chlorantha | Nburkek | Kakeleng | Medicinal value |
| | | | Nburnbas | Kekwoh | Medicine a. additive to local wine |
| Bombacaceae | Ceiba | pentandra | Nburkek | Bokom | Ancestral spirits are to be living in this tree |
| Bombacaceae | Ceiba | pentandra | Nburnbas | Mbohmoh | Cultural considered as the guardian of the forest |
| Burseraceae | Santiria | trimera | Nburnbas | Netale | This species is protected because of its medicinal value |
| Burseraceae | Santiria | trimera | Nusekek | Camom | |
| Cecropiaceae | Musanga | cecropioides | Nusekek | Okobe | |
| Combretaceae | Terminalia | ivorensis | Nburnmat | Ikeh | Timber |
| Euphorbiaceae | Ricinodendron | heudelotii | Nburkek | Ngoge | NTFP |
| | | | Nburnbas | Kechi | NTFP |
| | Tetracarpidium | conophorum | Nutmat | Mogaseh | boiled and eaten <cashew> |

| | | | | | |
|---|---|---|---|---|---|
| Guttiferae | Garcinia | kola | Nburnbas | Mmiale | NTFP and medicine |
| | | | Nburnmat | Mmiale | NTFP |
| Huaceae | Afrostyrax | kamerunensis | Nburkek | Kalor | NTFP |
| | | | Nburnbas | Kevale | NTFP |
| | | | Nburnmat | Eloweh | NTFP |
| Irvingiaceae | Irvingia | gabonensis | Nburkek | Ejeb | NTFP |
| | | | Nburnbas | Meshi | NTFP |
| | | | Nburnmat | Iweh | NTFP |
| Leguminosae-Caesalpinioideae | Distemonanthus | benthamianus | Nburkek | Olongeh | Devils are believed to inhabit this tree |
| | | | Nusekek | Olongeh | Because it is believed that devils live in this tree |
| | Anthonotha | cladantha | Nburning | | |
| Leguminosae-Papilionoideae | Pterocarpus | soyauxii | Nburkek | Upuh | Because its used in canoes ;talking drums and to care belts for hunting dogs. |
| Leguminosae-Papilionoideae | Angylocalyx | talbotii | Nburnbas | Fechwa-cho | Woman believe that when this tree is burned during land preparation, their coco yams will rot when planted and so their harvest will be poor |
| Sterculiaceae | Cola | acuminata | Nburnbas | Mepie | NTFP |
| | Matpro1 | | Nburnmat | kesha | Timber |
| | Matpro2 | | Nburnmat | motou | Timber |
| | Matpro3 | | Nburnmat | Kefekeh | Timber |
| | Matpro4 | | Nburnmat | Kwongwat | Timber |