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ETHNOBOTANICAL AND FLORET STUDIES ON TWELVE SPECIES OF THE FAMILY ASTERACEAE IN ILE-IFE, OSUN STATE, NIGERIA

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ABSTRACT

Ethnobotanical and floret studies were carried on 12 species of family Asteraceae in Ile-Ife, Osun state, Nigeria. The aim was to access the extent of use of medicinal plants by the tribal and local people and to determine the importance of floret number in the taxonomy of the members of family Asteraceae, Data were gathered through interviews and structured questionnaire to show that the local people utilize different plant species for treatment of diseases. In this study, 12 species with ethnobotanical values were identified as being used by local people as food, fuels and medicine. Floret study was done by studying 25 capitula each from 20 individuals of each species. Capitula at anthesis were harvested randomly from the species planted in garden and screen house. Each capitulum was dissected by means of a pair of forceps and mounting needle to detach the florets from receptacle. The detached florets were counted to count the number of florets contained in each capitulum. Data generated were subjected to One Way Analysis of Variance (ANOVA) with Post hoc test for significant differences among the species at $p<0.05$. The result indicates that the 12 species of the family Asteraceae studied were commonly used as food, fuel and medicines. Similarly, there was significant difference in floret number among the species. Mean floret number of the species ranges from 16.60 in *Vernonia amygdalina* to 91.64 in *Crassocephalum crepidiodes.* It was observed that the availability of these plants were decreasing at a significant rate. This observation also reveals that habitat destruction, over exploitation and unplanned agricultural practices were the reasons for depletion of medicinal plants.

Keywords: Anthesis, Ethnobotanical, Capitula, Floret and Receptacle.

INTRODUCTION

Ethnobotany is the study of relationship between plants and people. From 'ethno'- study of people and 'botany'- study of plants. The focus of ethnobotany is on how plants have been or are used, managed and perceived in human societies and includes plants used for food, medicine, divination, cosmetics, dyeing, textiles, for building, tools, currency, clothing, rituals and social life (Rahman, 2009).

Ethnobotany, in its totality, is virtually an old field with new dimension of research. And if this field is investigated thoroughly and systematically, it will yield results of great value mixing the ethnologists, archaeologists, anthropologists, plant-geographers, ethnobotanists, botanists and linguists and ultimately to pharmacologists and

phytochemists. It will appear to be a bridge between botany and medicinal plants but in fact, it is much more. It starts as step before ever in the sense supplies the 'idea' and the basic material for botanical research and study. It then takes us to the usefulness of medicinal plants. It goes a step further to help us in the application of the knowledge about the medicinal plants among the primitive people by rapport through the medicine men. (Jain, 1996).

Medicinal plants have been used as traditional treatment for numerous human diseases for thousands of years and in many parts of the world (Palombo, 2011). *Emilia praetermissa* which belongs to the family of Asteraceae is a useful plant of West Tropical Africa utilized generally as food and medicine for general healing (Burkill, 1985). *Emilia praetermissa* has been established as an anti-ulcerogenic plant producing complete mucosal cytoprotection at a dose of 500mg/kg (Tan *et al*., 1997).

Ile Ife in Osun state, Nigeria is very rich in ethnocultural heritage and traditional use of plant materials that may be of special interest in ethnobotanical informations. During ethnobotanical field studies in the study area, we came across a large number of indigenous people who are using wild and semi-wild plants for medicine and other purposes. They are very experienced in traditional medicine and are actually prescribing these plant materials for cure of different diseases.

Consequently, Isawumi, (1996) employed micro characters of florets for purpose of distinguishing two species of plant which are *Tithonia diversifolia* and *Tithonia rotundifolia*. He observed that *Tithonia diversifolia* is an erect, shrubby perennial herbaceous plant that can reach 3m or more depending on the growing conditions. There are 2-3 bundles of veins with ducts in a lobe beside those on the margins in *Tithonia diversifolia* whereas there is only one bundle in each lobe in *Tithonia rotundifolia* in the veins of disc corolla tubes. The disc styles are bifid with hispidous hairs at the tip of the branches with single narrow stigmatic surface at the base usually swollen with distinct small cells regularly shaped in *Tithonia diversifolia* whereas such cells are lacking in *Tithonia rotundifolia*.

Adedeji and Olawale (2008) studied the biosystematics of *Tridax procumbens.* They were able to identify and documented the important morphological features, vegetative and floral characters including the floret numbers, measurement, colour and shape.

Therefore, this paper is restricted to the medicinal uses and floret studies of 12 of such plants. The objectives of this study are to investigate the present ethnobotanical status of the species in the family Asteraceae; document the species of the family Asteraceae being used for medicine in the study area; assess the extent of use of medicinal plants by the tribal and local people and determine the importance of floret number in the taxonomy of the family Asteraceae.

MATERIALS AND METHODS

Ethnobotanical studies

This is mainly based on information gathered from the interview with the "Tribal and local people" on the plants that are of economic importance to them. Relevant plants were collected from the study area, identified and preserved at the herbarium (IFE Herbarium) of the Department of Botany, Obafemi Awolowo University, Ile-Ife, Osun state, Nigeria.

First step was interviewing the "Tribal and local people" about the plants they used in daily life. These included plants that have some economic importance as fruits, vegetables, furniture, drug etc. Collections were made throughout the year and special care was taken not to miss the flowering stages or the fruits. In all cases, multiple sets of collections were made. During collection, attempts were made to know the local names of the plants. All field data e.g. date, collection number, habitat, uses and distribution were recorded. Herbarium sheets were prepared in

multiple sheets and flowers were preserved in 70% alcohol for future study.

Publications of Agharkar (1991), Ahmed (2008), Alam (1992), Anisuzzam (2007) Koche *et al*. (2008), Khan et al (2008), Rahman (2008, 2009, 2010, 2011,) Roy et al. (2008) were consulted for identification and information about medicinal uses of the taxa.

For this present investigation, interviews were conducted with"Tribal and local people" in the study area covering different aspects, i.e. (a) Holding number.(b) Owner of the house. (c) Family members and age groups. (d) Sources of income. (e) List of plants used by them. (f) Purpose of use. (g) the quantity used. (h) Method of use, (i) place of collection (j) Abundance of the plants.

Determination of Floret Numbers.

Capitula at anthesis were harvested randomly from the species planted in garden and screen house. Twenty-five capitula from twenty plants of each species were used during each investigation for assessment of number of florets per capitulum. Each capitulum was dissected by means of a pair of forceps and mounted needle to detach the florets from the receptacle. Floret numbers were subjected to Analysis of Variance (ANOVA) for significant differences among the species at $p<0.05$.

RESULTS

Table 1: Twelve species in the family of Asteraceae studied and their geographical locations

SPECIES	LOCATIONS	COORDINATES
Ageratum.conyzoides Linn.	Pharm. Dept., O.A.U. Ile-Ife.	N 07^0 31.162, E 004^0 31.580, 267m
Ageratum.conyzoides Linn.	Civil Engr. Dept, O.A.U. Ile-Ife.	N 07^0 31.248, E 004^0 31.593,287m
Ageratum.conyzoides Linn.	Pharm. Dept., O.A.U. Ile-Ife.	N 07^0 31.162, E 004^0 31.580, 267m
Ageratum. conyzoides Linn.	Botanical Garden. O.A.U. Ile-Ife.	N 07^0 31.248, E 004^0 31.593, 280m
Ageratum. conyzoides Linn.	Food Sci. & Tech Dept, O.A.U. Ile-Ife	N 07^0 31.248, E 004^0 31.593, 280m
Aspilia africana (Pers) C.D. Adams.	Back of Botany Dept. O.A.U. Ile-Ife.	N 07^0 31.249, E 004^0 31.562, 273m
Aspilia africana (Pers) C.D. Adams.	Behind Conf. Centre, O.A.U. Ile-Ife	N 07^0 31.420, E 004^0 31.836, 269m
Aspilia africana (Pers) C.D. Adams	Along First Bank, O.A.U. Ile- Ife	N 07^0 30.993, E 004^0 31.367, 268m
Aspilia africana (Pers) C.D. Adams.	Pharm. Dept., O.A.U. Ile-Ife.	N 07^0 31.162, E 004^0 31.580, 267m
Aspilia africana (Pers) C.D. Adams.	Botanical Garden. O.A.U. Ile-Ife.	N 07^0 31.248, E 004^0 31.593, 280m
Bidens pilosa Linn.	White house car park, O.A.U. Ile-Ife.	N 07^0 31.141, E 004^0 31.289, 285m
Bidens pilosa Linn.	Behind Conf. Centre, O.A.U. Ile-Ife.	N 07^0 31.420, E 004^0 31.836, 269m
Bidens pilosa Linn.	Pharm. Dept., O.A.U. Ile-Ife.	N 07^0 31.162, E 004^0 31.580, 267m
Bidens pilosa Linn.	Along First Bank, O.A.U. Ile-Ife.	N 07^0 30.993, E 004^0 31.367, 268m
Bidens pilosa Linn.	Back of Social Sci., O.A.U. Ile-Ife.	N 07^0 31.293E 004^0 31.314, 305m
Chromolaena odorata (L) K. &Robinson.	Conf. Centre, O.A.U. Ile-Ife.	N 07^0 31.421, E 004^0 31.835, 271m
*Chromolaena odorata (*L). K. & Robinson.	Old Bukateria O.A.U. Ile-Ife.	N 07^0 31.299, E 004^0 31.207, 298m
Chromolaena odorata (L) K. &Robinson.	Back of Soc. Sci., O.A.U. Ile-Ife.	N 07^0 31.293E 004^0 31.314, 305m
Chromolaena odorata (L) K. &Robinson.	Zoological Garden, O.A.U. Ile-Ife.	N 07^0 31.292, E 004^0 31.375, 291m
Chromolaena odorata (L) K. &Robinson.	Rd 7 gate Area, O.A.U. Ile-Ife.	N 07^0 30.790, E 004^0 32.922, 259m
SPECIES	**LOCATIONS**	**COORDINATES**
Crassocephalum crepidiodes (Benth) S. Moore.	Olonade street, Ile-Ife.	N 07^0 31.145, E 004^0 31.643, 275m
Crassocephalum crepidiodes (Benth) S. Moore.	Along Rd 8. O.A.U, Ile-Ife.	N 07^0 31.151, E 004^0 31.693 274m

Crassocephalum crepidiodes (Benth) S. Moore	Rd. 7, O.A.U. Ile-Ife	N 07^0 30.789, E 004^0 32.923, 251m
Crassocephalum crepidiodes (Benth) S. Moore	Rd. 7, O.A.U. Ile-Ife.	N 07^0 30.787, E 004^0 32.924, 261m
Crassocephalum crepidiodes (Benth) S. Moore	Olonade street, Ile-Ife.	N 07^0 31.145, E 004^0 31.643, 275m
Emilia praetermissa Milne-Redhead	Geology Dept., O.A.U. Ile-Ife	N 07^0 31.254, E 004^0 31.284, 263m
Emilia praetermissa Milne-Redhead	Bot. Garden. O.A.U. Ile-Ife	N 07^0 31.248, E 004^0 31.593, 280m
Emilia praetermissa Milne-Redhead	Rd. 7, O.A.U. Ile-Ife.	N 07^0 30.789, E 004^0 32.923, 251m
Emilia praetermissa Milne-Redhead	Chem. Engr. Dept. O.A.U, Ile-Ife .	N 07^0 31.151, E 004^0 31.693, 274m
Emilia praetermissa Milne-Redhead	Conf. Centre, O.A.U. Ile-Ife.	N 07^0 31.420, E 004^0 31.836, 269m
Launaea taraxacifolia Willd	Bot.Garden. O.A.U. Ile-Ife	N 07^0 31.248, E 004^0 31.593, 280m
Launaea taraxacifolia Willd	Conf. Centre, O.A.U. Ile-Ife.	N 07^0 31.420, E 004^0 31.836, 269m
Launaea taraxacifolia Willd	Ajose Lecture Theatre, O.A.U. Ile-Ife.	N 07^0 31.260, E 004^0 31.594, 278m
Launaea taraxacifolia Willd	Back of Bot. Dept. O.A.U. Ile-Ife.	N 07^0 31.251, E 004^0 31.594, 284m
Launaea taraxacifolia Willd	Parks & Garden, O.A.U. Ile-Ife.	N 07^0 31.404, E 004^0 31.823, 263m
Synedrella nodiflora Gaertn.	Back of Bot. Dept. O.A.U. Ile-Ife.	N 07^0 31.249, E 004^0 31.562, 273m
Synedrella nodiflora Gaertn.	Chem. Engr. Dept. O.A.U, Ile-Ife.	N 07^0 31.151, E 004^0 31.693, 274m
Synedrella nodiflora Gaertn.	Back of P.H.E Dept. O.A.U. Ile-Ife.	N 07^0 31.045, E 004^0 31.329, 273m
Synedrella nodiflora Gaertn.	In front of Oduduwa Hall, O.A.U. Ile-Ife.	N 07^0 31.142, E 004^0 31.291, 275m
Synedrella nodiflora Gaertn.	Parks & Garden, O.A.U. Ile-Ife.	N 07^0 31.404, E 004^0 31.823, 263m

SPECIES	**LOCATIONS**	**COORDINATES**
Tithonia diversifolia (Hemsl) A. Gray	Chem. Engr. Dept. O.A.U, Ile-Ife.	N 07^0 31.151, E 004^0 31.693, 274m
Tithonia diversifolia (Hemsl) A. Gray	Parks & Garden, O.A.U. Ile-Ife.	N 07^0 31.404, E 004^0 31.823, 263m
Tithonia diversifolia (Hemsl) A. Gray	Civil Engr Dept. O.A.U. Ile-Ife	N 07^0 31.362, E 004^0 31.913, 294m
Tithonia diversifolia (Hemsl) A. Gray	Rd. 7 gate Area, O.A.U. Ile-Ife.	N 07^0 30.811, E 004^0 32.915, 255m
Tithonia diversifolia (Hemsl) A. Gray	Back of Bot. Dept. O.A.U. Ile-Ife.	N 07^0 31.249, E 004^0 31.562, 273m
Tridax procumbens Linn.	Along First Bank, O.A.U. Ile-Ife.	N 07^0 30.993, E 004^0 31.367, 268m
Tridax procumbens Linn.	In Front of Oduduwa Hall, O.A.U. Ile-Ife	N 07^0 31.142, E 004^0 31.291, 275m
Tridax procumbens Linn.	Behind Chem. Engr. Dept. O.A.U, Ile-Ife.	N 07^0 31.151, E 004^0 31.693, 274m
Tridax procumbens Linn.	Front of Civil Engr. Dept. O.A.U. Ile-Ife.	N 07^0 31.362, E 004^0 31.913, 294m
Tridax procumbens Linn.	Parks & Garden, O.A.U. Ile-Ife.	N 07^0 31.404, E 004^0 31.823, 263m
Vernonia amygdalina Del. Cent	Farm along Rd.7 gate O.A.U. Ile-Ife	N 07^0 30.787, E 004^0 32.924, 261m
Vernonia amygdalina Del. Cent	Farm along Rd 7 gate,, O.A.U. Ile-Ife.	N 07^0 30.811, E 004^0 32.915, 255m
Vernonia amygdalina Del. Cent	Back of Bot. Dept. O.A.U. Ile-Ife.	N 07^0 31.251, E 004^0 31.594, 284m
Vernonia amygdalina Del. Cent	Parks & Garden, O.A.U. Ile-Ife.	N 07^0 31.404, E 004^0 31.823, 263m
Vernonia amygdalina Del. Cent	Old Bukateria O.A.U. Ile-Ife.	N 07^0 31.299, E 004^0 31.207, 298m
Vernonia cinerea Linn.	Chem. Engr. Dept. O.A.U, Ile-Ife.	N 07^0 31.151, E 004^0 31.693, 274m
Vernonia cinerea Linn.	Along First Bank, O.A.U. Ile-Ife	N 07^0 30.993, E 004^0 31.367, 268m
Vernonia cinerea Linn.	Back of Bot. Dept. O.A.U. Ile-Ife.	N 07^0 31.249, E 004^0 31.562, 273m
Vernonia cinerea Linn.	Along First Bank, O.A.U. Ile-Ife.	N 07^0 30.993, E 004^0 31.367, 263m
Vernonia cinerea Linn.	In Front of Oduduwa Hall, O.A.U. Ile-Ife.	N 07^0 31.142, E 004^0 31.291, 275m

LEGENDS:
Bot. - Botany/Botanical
Chem. – Chemical
Conf. - Conference
Dept. – Department
Engr. – Engineer/Engineering
O.A.U. – Obafemi Awolowo University
Pharm. – Pharmacy
P.H.E. – Physical and Health Education
Rd. – Road
Sci. –Science
Tech. –Technology

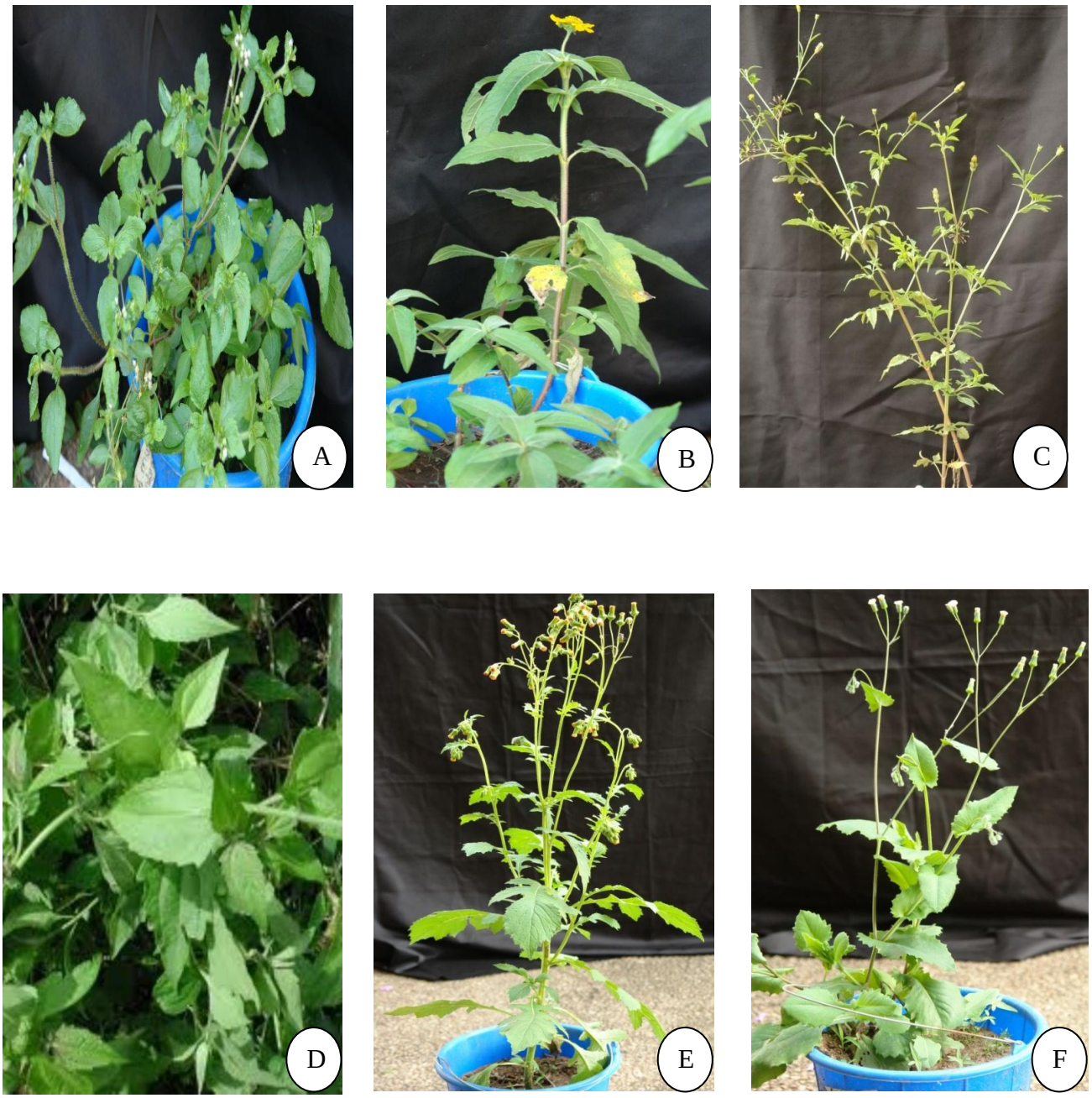

PLATE 1: The Cultivation of Species Studied

A- *Ageratum conyzoides*. **B-** *Aspilia africana*. **C-** *Bidens pilosa*.
D- *Chromolaena odorata*. **E-** *Crassocephalum crepidiodes*. **F-** *Emilia praetermissa*.

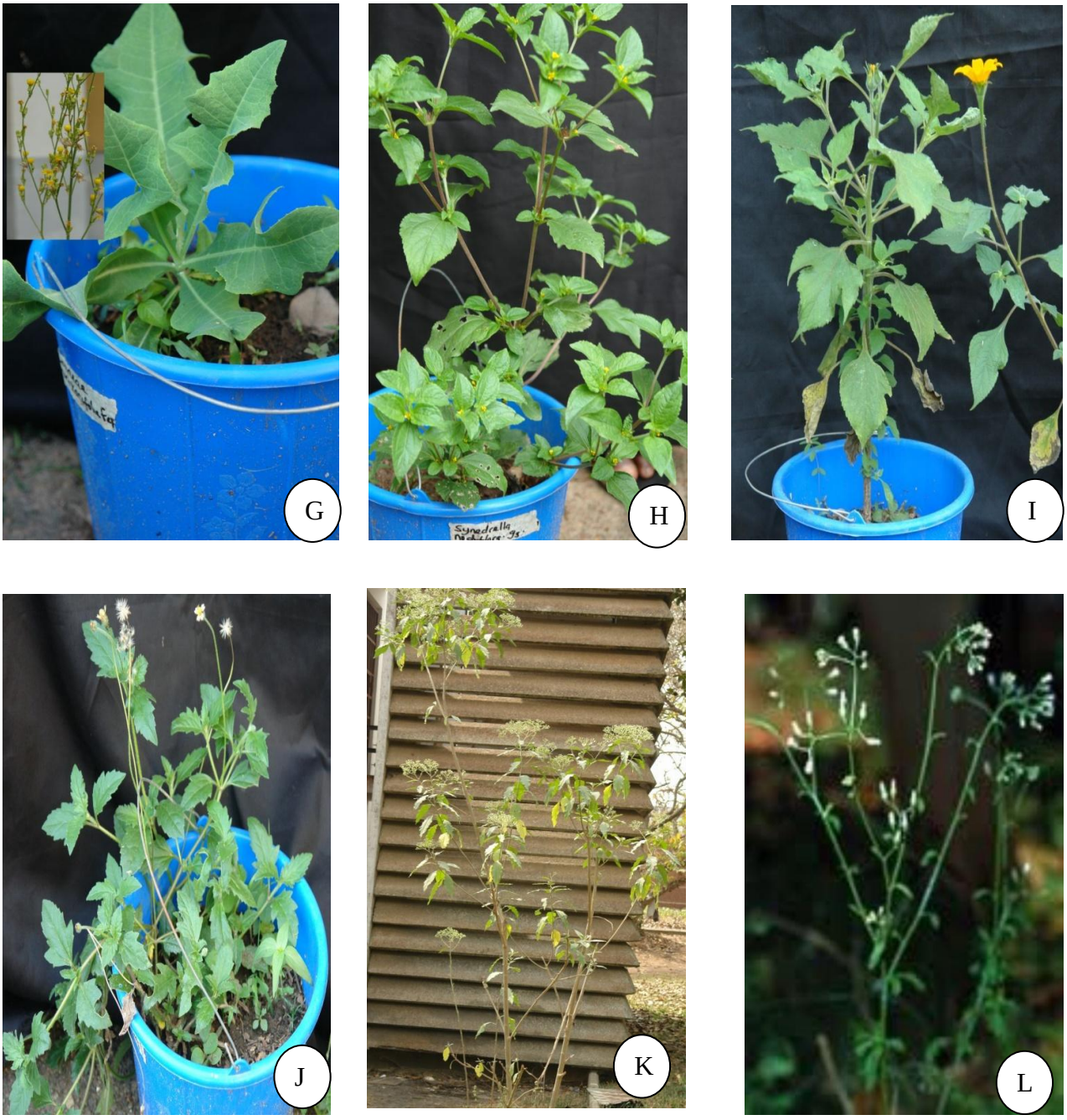

PLATE 2: The Cultivation of Species Studied

G- *Launaea taraxacifolia***. H-** *Synedrella nodiflora* **. I-** *Tithonia diversifolia***.**
J- *Tridax procumbens* **K-** *Vernonia amygdalina.* **L-** *Vernonia cinerea*

Floret studies of the 12 species in the family *Asteraceae*

The result of the floret count in the genera studied is shown in Table 2. There were significant differences among the species in the number of florets contained in each capitulum. The low variability trend in the number of florets per capitulum within each species is noteworthy. Statistical analysis using Analysis of Variance reveals that floret number of the species studied is significantly different and species-specific. Mean floret number of the species studied ranges from 16.60 in *Vernonia amygdalina* to 91.64 in *Crassocephalum crepidioides*.

Table 2: Mean floret number in the species studied in the Family *Asteraceae*

Species Studied	Mean Floret Number	Range
Ageratum conyzoides	47.12	31 – 63
Aspilia africana	53.96	44 – 69
Bidens pilosa	38.44	30 – 46
Chromolaena odorata	27.84	26 – 31
Crassocephalum crepidioides	91.64	75 – 104
Emilia praetermissa	87.60	76 – 102
Launaea taraxacifolia	20.16	17 – 24
Synedrella nodiflora	18.68	14 – 20
Tithonia diversifolia	51.52	41 – 59
Tridax procumbens	53.64	42 – 68
Vernonia amygdalina	16.60	16 – 19
Vernonia cinerea	20.84	16 – 25

Ethnobotanical data have been gathered on the traditional uses of plant species especially for blood pressure, cough, chickenpox, constipation, dysentery, diarrhea, diabetes, eczema, fever, headache, heart, menstrual disease, worm.

By applying survey interview, collection and identification methods, different ethnobotanical and ethnomedicinal information were accumulated. The check-list of information about the plant materials collected from the study area are described in the table below:

TABLE 3: ETHNOBOTANICAL VALUES OF THE TWELVE SPECIES STUDIED

Species	Local names	Habit	Part of Plant	Uses
Ageratum conyzoides Linn	Apasa Arusansan Imi-esu	Annual herb	Leaf Stem Root Whole plant	Treatment of leprosy, stomach disorder, skin diseases. Heals wound Fuel
Aspilia africana (Pers)C.D. Adams	Yunriyun Yonyon-aghute	Perennial herb	Leaf Root Whole plant	Stop internal bleeding in women Fodder for livestocks, rabbits and guinea pigs Cures gonorrhea and scorpion stings Treatment of rheumatic pains
Bidens pilosa Linn	Abere oloko Aganmoyan Akisan	Annual herb	Leaf Root Shoot Flower Whole plant	Treatment of inflammation Immunological disorders, digestive disorders, infectious diseases, cancers, metabolic syndrome, wounds, snake bites, diarrhea
Chromolaena odorata Linn. Kings & Robbinson	Akintola	Annual or Perennial herb	Leaf Root Whole plant	Treatment of dysentery, cures malaria, burns, cuts, toothache, diarrhea, skin diseases
Crassocephalum crepidioides (Benth) S. Moore	Ebolo	Annual herb	Leaf Root Whole plant	Used as vegetables in soups and stews, Treatment of indigestion, swollen lips Eaten by livestocks as useful green fodder for poultry The scent is a snake repellant
Emilia Praetermissa Milne-Redhead	Odundun odo	Perennial herb	Leaf Root Whole plant	Eaten as spinach Treatment of disorders, external sores, colic in babies Used as eye drops
Launaea taraxacifolia Willd	Yanrin	Annual or perennial herb	Leaf Root Whole plant	Eaten fresh as a salad or cooked in soups and sauces, vegetables in soup Treatment against vomiting, teeth pain, diabetes Rubbed on the limits of children to aid walking
Synedrella nodiflora Linn. Gaertn	Aluganbi Ponripon-eluju Tanna-poso	Annual herb	Leaf Root Whole plant	Cattle fodder Fuels Cures leprosy, Prevents tetanus if applied to wound

Tithonia diversifolia (Hemsl.) A. Gray	Agbale Ogbo	Perennial weed	Leaf Root Whole plant	Treatment of malaria, constipation, stomach pains, indigestion, sore throat, liver pains, wounds Mosquito repellant Fuel
Tridax procumbens Linn.	Igbalode Eekule Muroagun Muwagun	Perennial herb	Leaf Flower Whole plant	Cure bleeding, piles, kidney troubles, muscular pains, ear ache, opthalmia, stomach ache, lessens inflammation, scabies, eye diseases, Blood purifier, treats scorpion and snake poisoning. Leaf juice and powder is applied on cuts and parts of skin. Fuels
Vernonia amygdalina Del. Cent	Ewuro Ewuro jije	Woody shrub	Leaf Root Whole plant	Laxative, fertility inducer, Placed on wounds as substitute for iodine, Brewing beer as substitute for hop, Cures stomach ache, ringworm, malaria, diarrhea, dysentery, hepatitis, cough, Use as toothpicks, chewing sticks, Fuel
Vernonia cinerea Linn	Bojure Ewe-oghan	Annual herb	Flower Root Seeds Whole plant	Cures diarrhea, stomach ache, cough, colic pain, wounds, sores, conjunctivitis, eaten as potherb, use in seasoning of food Killing head lice, eczema and ringworms Fuel

DISCUSSION

Studies on Floret Number of the Species studied

Floret number displayed low variability within each species and is statistically species-specific, and thus considered of great diagnostic value in taxonomic evaluation within the tribes of the family Asteraceae. Numbers of floret counted in each species are generally low inspite of variation occurring in capitulum.

The attributes of the florets have been emphasized by plant taxonomists in classification and identification of the Asteraceae (Burtt, 1977). The constancy of the characteristics of florets. Inspite of variation occurring in capitulum character was one reason for the outstanding success of the Asteraceae (Burtt 1977). Klasssen (2009) also reported that the presence or absence of ray florets prove to be one of the most important characters used in delimiting the species in the genus *Pentatrichia* (Asteraceae). Floret number was useful to differentiate and separate some species in the genus *Vernonia* (Ayodele, 1995).

Ethnobotanical Studies

The growing interest in ethnobotany is due, at least in part, to changing attitudes towards traditional people. For during the middle of 12th century when it seemed that the world's indigenous people were about to disappear, traditional societies and their knowledge attracted widespread scholarly attention, primarily as part of an anthropological rescue operation (Burch and Ellanna, 1994). Since then, however, many scientists have begun to realize the practical and academic values of ethnobotanical data, and are beginning to acknowledge that traditional people have much to teach Western science. The present study provides information on the indigenous uses of 12 species belonging to Asteraceae family. The important objective of this study was to record the indigenous uses of these plants used by the local people for various purposes.

Ethnobotanical data were gathered on the traditional uses of plant species especially, cough, diarrhea, fever, diabetes, leprosy, sore throat, hepatitis, conjunctivitis, indigestion, sex problem, inflammation, scorpion stings, kidney stones, headache, malaria, skin disease, itches, snake-bite, wound, vomiting, worm and others. They have faith in the effectiveness of these species studied. An ethnobotanical study of twelve species in the family Asteraceae in Ile-Ife, Osun state, Nigeria was carried out from January 2011 to December 2013. Information gathered through structural questionnaire and interviews shows that in the study area, indigenous people mostly use different plant species for their diseases and ailments. The survey also revealed that different parts of the 12 species are used as medicine for treating various diseases. Leaves of all species studied and roots of 7 species namely *Ageratum conyzoides, Aspilia africana, Crasocephalum crepidioides, Emilia praetermissa, Synedrella nodiflora, Vernonia amygdalina* and *Vernonia cinerea*; the stems of 2 species (*Ageratum conyzoides* and *Vernonia amygdalina*); shoot of 1 species (*Bidens pilosa*); flower of 3 species (*Bidens pilosa*, *Tridax procumbens* and *Vernonia cinerea*) whole plant of 11 species except *Chromolaena odorata* were used in folk medicine. The findings in this study is in consonant with the reports of Ipek Suntar (2014), Lakshman *et al*., (2014).

The indigenous people are out of reach of modern system treatment for their diseases. They largely depend on these plants for traditional system of treatment. These plants are a source of interaction between the people and natural resources of the area. They also depend on family healers, it was noted that people have alternative plants for the treatment of the same disease, it was also observed that many factors are involved in order to access modern healthcare practices in the treatment of diseases of rural areas like, lack of communication facilities, lack of trained doctors, nurses as well as medicines. It is very important that the precious ethnobotanical knowledge about these plants should be transferred to the younger generations. The data may be valuable in the future for pharmacological studies

CONCLUSION

Asteraceae is an important family for being a valuable and a potential source for the natural products possessing values for healing various source of ailments. This study including ethnonotanical researches and floret studies (biological activity studies) will be useful in providing an ethnopharmacognostical approach for drug discovery and development.

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