2. REVIEW OF LITERATURE:


Much work is done in plant Dioscorea was carried out in order to supplement our present taxonomic knowledge of the four members of this genus. Dioscorea alata, D. cayenensis, D. domentorum and D. rotundata were collected from farmland within Kogi State University Campus. Five leaf samples of each species were harvested, from which cuticular samples were prepared by maceration, stained and mounted on slides. The possibility of the use of these parameters in taxonomic delineation was discussed.


Biodiversity in India is perhaps the richest repository of traditional knowledge on the medicinal uses of plants. Ethnobotany records the history and current state of human kind, even while foretelling the future. A diversity of living things provides subtle needs; people enjoy picnicking, visiting seashores and a variety of other recreational activities. Our homes, air live stock, vegetables, fruits and grains are all products of diverse and healthy ecosystems.


The aim of this study was to optimize a high performance liquid chromatography (HPLC) method for the simultaneous quantification of the four main compounds geniposide, berberine, baicalin and crocin present in the Traditional Chinese formula Huanglianjiedutang (HLJDT).


In the study of Pharmacognostic evolution of Mimusops elengi’s bark and seed powder for extractive value, fluorescence analysis, ash analysis, treatment with strong acids, phytochemical and element analysis. Highest extractive value for seeds and bark were found with water, with more or less same residual nature.

The present review aims to compile data generated through the research activity using modern scientific approaches and innovative scientific tools. In recent times, focus on plant research has increased all over the world and a large body of evidence has collected to show immense potential of medicinal plants used in various traditional systems. More than 13,000 plants have been studied.


The study of Ethno-medicinal rare endemic plant species are facing threats for their existence. Conservation, enhancement and sustainable utilization of plant resources are recognized as one of the vital segment in the natural resource management. The present work deals with the experience and efforts of promoting propagation and conservation of some selected plant species from of Western Ghats Maharashtra. Western Ghats region is one of the important Hot-spot of the world, situated in Sahyadri ranges of Maharashtra.


Plant *Diodia scandens* Sw is a straggling herb with a taproot, slender stem and compound leaves used for treatment of various diseases such as dysentery, diarrhea, asthma, convulsion, epilepsy, oedema, gout, swelling and it is said to be anti-abortifacient, antidotes, antimicrobial, anti-inflammatory in Nigeria and other countries. The phytochemical screening of the leaf extract revealed the presence of saponins, tannins, cardiac glycosides and absence of flavonoids, phlobatannins, alkaloids and anthraquinones.

8 Faiza Khan, Zubaida Yousaf1,2*, Sumaria Rani and Farah Khan. (2011).

Identification of medicinally important arboreal flora is important for sustainable and effective utilization. However phenotypic markers are insufficient for correct identification. The present study concluded that leaf epidermal anatomical markers could be utilized significantly in delimiting the closely related taxa of medicinally important arboreal flora of tropical and sub tropical regions.


One of the most critical complications of diabetes is post-prandial hyper-glycemia (PPHG).
Glucosidase inhibitor and α-amylase inhibitors are class of compounds that help in managing PPHG. Low-cost herbal treatment is recommended due to their lesser side effect for treatment of diabetes. Two plants with significant traditional therapeutic potential, *Gnidia glauca* and *Dioscorea bulbifera*.


The most important plant *Tectona grandis* Linn. commonly known as “Sagwan” belongs to the Verbenaceae family and, traditionally used in diabetes, bronchitis, constipation and in various skin ailments. Present work is related to standardization of *Tectona grandis* by using pharmacognostic (macroscopy, microscopy and physical constants) and phytochemical investigation on stem bark.

11 Jagtap S.D.a, Deokule S.S. b, Bhosle S.V. b.(2006)

A field survey of the study area was carried out during 2000–2004 to document the medicinal utility of plants occurring in this area by Korku tribe. Traditional uses of 66 plant species belonging to 40 families are described under this study. The documented ethnomedicinal plants were mostly used to cure skin disorders, diarrhea, jaundice, tuberculosis, stroke, fertility problems, urinary problems, wounds and poison bites.

12 Jaleel Cheruth Abdul, Gopi Ragupathi, Gomathinayagam Muthiah and Panneerselvam Rajaram.(2008)

Plants were raised in pots and exposed to salinity stress (80 mM NaCl) with or without 5 mM CaCl2. NaCl-stressed plants showed decreased protein and total sugars, and increased free amino acid and proline content. When NaCl treatment was combined with CaCl2, overall plant metabolism was altered, with increased antioxidant enzyme activity, paving the way for partial amelioration of oxidative stress caused by salinity.

13 Jin-Jie MA1, Li-Ping Kang, Wen-Bin ZHOU, He-Shui YU, Ping LIU And Bai-Ping MA.(2011)

The possible fragmentation pathways were proposed on the basis of MSE data. In results, 13 saponins, including two unknown compounds, were identified and they were divided into two
groups on the basis of mass spectral analysis.

14 Kalidass C. and Mohan V.R. (2010)

The plant “Gur-mar” in India and Vietnam well known for masking sweet taste. It is widely used in indigenous system of medicine for treatment of Diabetes mellitus. The aim of the present study was focused on the pharmacognostical, physico and phytochemical properties were carried out, which would like to facilitate quick identification and selection of the drug from various adulterates.


The information on medicinal uses of plants is based on the exhaustive interviews with local physicians practicing indigenous system of medicine, village headmen, priests and tribal folks. A categorical list of plant species along with their plant part/s used and the mode of administration reported to be for effective control in different ailments is prepared.

16 Kaushik Sunil, Ahmad sayeed and Sharma Paras. (2011)

The current study was therefore carried out to provide requisite pharmacognostic details about the stem of *Nicotiana tabacum*. Pharmacognostic evaluation included examination of morphological and microscopical characters; physicochemical properties, phytochemical analysis, and HPTLC fingerprint. The powder microscopy showed the presence of Scalariform vessels, Group of fibers, Parenchymatous cells, Spiral xylem vessel, Brownish matter and Phloem fiber.


The plant study of *Ficus* spe. important ingredients in many Ayurvedic and traditional formulations. The barks are considered to be very effective in various treatments, such as diabetes, skin diseases, ulcers, and nervous disorders. During market research, we observed that various species of *Ficus* barks were sold in Indian market under traditional names, such as Plaksah, Udumbarah, Asvatthah, and Vatah.

The plant *Memecylon umbellatum* Burm., a medicinal plant belongs to the family Melastomaceae. The plant is used in the treatment of diabetes, herpes, gonorrhea, leucorrhea and skin diseases. The young and mature leaves were collected from semi evergreen forests of central Western Ghats. Phytochemical screening for carbohydrates, proteins, tannins, saponins, terpinoids, flavonoids, steroids, glycosides, alkaloids, phenols and lignin.

Krunal V. Nagani, Jignesh Kevalia and Sumitra V. Chanda. (2011)

The medicinal plant “Bone setter”; plants are reported to have great medicinal value. The present investigation was therefore undertaken to determine the requisite pharmacognostic standards for evaluating the plant material. The macroscopic features of the *Cissus quadrangularis* L. stem were observed under magnifying lens. Microscopic characters and powder analysis were determined under microscope.


An endangered medicinal plants. It is used in medicinal preparations like kumaryasavam and sudarsanasavum used as tonic. Entire plant, roots and root bark are used for fever and stomach disorders. The plant is useful in treatment of skin diseases and inflammations. Phytochemical investigations were carried out using *in vivo* and *in vitro* plant material of *C. grandiflora* collected from Dandeli, Uttara Kannada district, Karnataka state.

Lucy Hoareau. (1999)

The use of traditional medicine and medicinal plants in most developing countries, as a normative basis for the maintenance of good health, has been widely observed (UNESCO, 1996). Furthermore, an increasing reliance on the use of medicinal plants in the industrialised societies has been traced to the extraction and development of several drugs and chemotherapeutics from these plants as well as from traditionally used rural herbal remedies.

Maroyi A. and van der Maesen L. J. G. (2011)

The study of plant *Gloriosa superba* L.gives an overview of medicinal uses and poisonous properties of, the available literature related to these aspects drawn from studies done in areas
where the species is utilized as traditional medicine or reported as poisonous. A list of 45 ethnobotanical applications practiced in 31 tropical African and Asian countries was drawn.

23 Mishra Manish and Kotwal P. C.(2011)

The objective of the study is to determine the anomaly in the small harad (Terminalia chebula.) market sample and adulteration problems existing in the local market. Prevalent malpractices adopted by various stakeholders in the study area are mixing of broken fruits of baheda(T. bellerica) and big size Harad, coloring of fruits. Paper suggests various ways and means to combat quality problem in the raw small harad trade.

24 Munisamy Anbarashan and Anbarashan Padmavathy.(2010)

Medicinal plant survey was carried out for the express purpose of discovering the kinds of herbal remedies used by the local populations. It resulted in about 33 medicinal plants for the treatment of several diseases either in single or in combination with some other ingredients.


The medicinal plant Neem leaf meal up to 15% in the diet of female rabbits do not have adverse effects on linear growth and reproductive tract morphometry. It is therefore concluded that further detailed research on pathophysiology of the ovary of rabbit does fed neem leaf meal based diet be investigated.

26 Milind Pande and Anupam Pathak.(2010)

In the family mimosa the plant Mimosa pudica Linn (Mimosae) roots are reported to have great medicinal value. Pharmacognostic evaluation including examinations of morphological and microscopic characters, ash value, powder analysis, and extractive values were carried out. Phytochemical screening including qualitative chemical examinations was also carried out.

27 Milind Pande and Anupam Pathak.(2010)

In the study of Pharmacognostic evaluation including examinations of morphological and microscopic characters, determination of leaf constant, ash value, powder analysis, and extractive values were carried out. Phytochemical screening including qualitative chemical
examinations was also carried out.

28 Pansa Monkheang, Runglawan Sudmoon, Tawatchai Tanee, Kowit Noikotr, Nat Bletter and Arunrat Chaveerach.(2011)

The plant *Senna* in Thailand was studied by Larsen and Larsen (1984) who state that there are three native Thai species including *S. siamea, S. timoriensis* and *S. garrettiana* and fifteen exotic species. This may be because they are not culturally popular, rarely seen, or they have disappeared from Thailand.


The present investigation has been carried out to determine the requisite anatomical features of root, rhizome, stem, leaf, petiole and phytochemical analysis for evaluating the *Oxystelma esculentum*, important medicinal plant used in the traditional systems of medicine.

30 Prajapati Dharmesh kumar, Patel Natvarlal M .(2010)

In the study of *Tecoma stans* “Yellow elder” is currently being used in the treatment of various disease conditions without standardization. The standardization of a crude drug is an integral part of establishing its correct identity. Before any crude drug can be included in a herbal pharmacopoeia, pharmacognostic parameters and standards must be established.

31 Pratima H* and Pratima Mathad.(2011)

In the physic-chemical and Pharmacognostic evaluation of *Cajanus cajan* L. leaf powder for ash analysis, organoleptic characters, fluorescent analysis, elements and phytochemical analysis. The highest extractive values are found with alcohol and lowest in chloroform. These are sticky to powder in nature and bitter to pungent in taste.

32 Rao Korlepara NagaVenkateshwar , Padhy Sai Krushna, Dinakaran Sathis Kumar, Banji David, Madireddy Saikiran, Avasarala Harani.(2010)

In the present study, the leaves of *Amaranthus tricolor* were collected, dried and subjected to size reduction to get uniform coarse powder. The powdered drug was subjected to pharmacognostic evaluation in terms of organoleptic, microscopic and
physical characteristics.

33 Rawat Yashwant S. and Everson Colin S.(2011)

The medicinal plant *Inula racemosa* Hook. f. (Manu), a critically endangered medicinal herb, was studied in terms of its uses and cultivation practices and problems in the cold desert environment of the Lahaul valley in the North Western Himalaya. The roots of *I. racemosa* are used in traditional medicine, but are also of great economic importance due to the large demand by the pharmaceutical industry.

34 Rout S.D., Panda T. and Mishra N.(2009)

Mayurbhanj, a hilly district, is rich in ethno medicinal plants. In the present paper 58 plant species belonging to 34 families used in folk medicine have been documented. Due to poor condition of modern healthcare facilities and poverty, indigenous people of the district fully or partially depend on local medicinal plants. An attempt has been made to document traditional knowledge.

35 Sandhu Navdeep Singh, Kaur Sarabjit, Chopra Divneet.(2010)

In the study of pharmacognostical were carried out on the sterile stems of *Equisetum arvense* Linn, which showed the presence of xylem vessels, cortex, parenchyma, stomata, and silica granules. The loss on drying was found to be 12.5 % w/w. Foaming index calculated was found to be 100. These investigations will be helpful in correct identification and standardization of plant and to differentiate it from the closely resembled species.

36 Seid Mohammed Adefa and Tsegay Berhanu Abraha.(2011)

A systematic random sampling was employed for selection of 9 study Kebeles and 67 informants. Ethnobotanical data were collected using semi-structured interview, field observation and group discussion. Data gathered were analyzed using descriptive statistics, Informant consensus factor, preference ranking, direct matrix ranking, fidelity level index and simple linear correlation coefficient.

37 Sharma Ajay, Namdeo Ajay G., Kakasaheb R. Mahadik.(2009)

The plant *Nothapodytes nimmoniana* (J. Graham) Mabberly (Icacinaceae) is an endangered
A medicinal plant that contains alkaloid camptothecin and 9-methoxy camptothecin. The cellular target of camptothecin is DNA topoisomerase I. Camptothecin inhibits HIV replication \textit{in vitro} and is also shown to be effective in the complete remission of lung, breast, uterine and cervical cancer.

38 Singh Manish Pal and Sharma Chandra Shekhar.(2010)

In the study of different market samples of \textit{Terminalia chebula} fruits evaluated by Pharmacognostic parameters compare with standard data. All three samples carried out microscopic characters, ash values, extractive values, T.L.C., & chemical tests. All the data of three samples were compared with standard data, the sample no-1 was more authentic than among all the three samples.


The scientific name of Jamun is \textit{Syzygium cumini} or \textit{Eugenia jambolana} Linn belongs to the family myrtaceae. The leaves of \textit{Syzygium cumini} is considered as an antibacterial and also used to strengthen the teeth and gums in folklore medicine.

40 Woratouch Thitikornpong, Thatree Phadungcharoen and Suchada Sukrong.(2011)

Study of Pharmacognostic standards for \textit{Lagerstroemiaspeciosa} leaves. These evaluations were performed according to the WHO guidelines and the Thai Herbal Pharmacopoeia (THP) for herbal standardisation. No other reports are available on the pharmacognostic evaluation of the leaves of \textit{L. speciosa} (L.) Pers. Organoleptic, and we thus reported the anatomical and microscopic characteristics, physico-chemical properties, preliminary phytochemical screening, and TLC, fingerprinting profiles for this plant. Corosolic acid, an active compound of \textit{L. speciosa} leaves, was also analyzed.