2. REVIEW OF LITERATURE :

1 Baskaran M. And Krishnan S. (2005).

A high frequency plant regeneration system was developed for the production of high yielding elite clones of *Garcinia indica* via direct organogenesis Choisy, an endemic plant to Western Ghats of India, belongs to the family *Clusiaceae* and is popularly known as kokum (Shetty and Kaveriappa 2001). The fruit rind contains bioactive compounds of medicinal importance such as hydroxycitric acid (HCA) and garcinol (Jena *et al.* 2002, Jayaprakasha and Sakariah 2002).

2 Bory Se´verine, Michel Grisoni, Marie-France Duval, Pascale Besse. (2008)

The genus Vanilla belongs to the Orchidaceae family and Vanilla planifolia, probably endemic from tropical forests in Eastern Mexico, is the main source for commercial vanilla. There has recently been an important number of publications covering Vanilla taxonomy, particularly using molecular genetics, but the taxonomy of the genus is still unclear and numerous synonyms remain. Recent studies showed that inter-specific hybridization and perhaps even polyploidization played an important role in the evolution of the genus. There has also been an important increase in the knowledge of the genetic diversity and reproductive biology orchid.


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.


Ethnobotanical surveys were carried out to document herbal remedies used in the management of HIV/AIDS. The information provided forms a strong basis for conservation of
the reported remedies, considering that a greater percentage of the plant parts used were roots and stem/bark. Continuous unsustainable harvesting of these plant parts may eventually lead to disappearance of these invaluable resources if early conservation measures are not taken. In future, there would be a need to engage in value adding and standardization of the herbal preparations by developing the necessary dosages and packaging of the herbal formulations.

Deshmukh, B. S.(2010),

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.

Garg Rakesh, Sanjeev Kalra, Nanjain Mahadevan, Shivali, Dhar VJ.(2011)

*Polygonum nepalense* Meissn. is a medicinal herb used in swelling, colds, influenza, hemorrhoids, diarrhoea and rheumatism. It is also used as an abortive and diuretic. The current study was carried out to provide requisite pharmacognostic details about the plant for the correct identification. Transverse section of the leaves showed dossiventral structure, anomocytic stomata, glandular trichomes and calcium oxalate dneses. Microscopical diagnostic characteristics, physicochemical properties and qualitative phytochemical measures were established. The results of the study could be useful in setting some diagnostic indices for the identification and preparation of a monograph of the plant.


This ethnobotanical study aims to describe the domain of wild edible plants in Gorbeialdea (Biscay, Iberian Peninsula), and to assess the cultural importance of the different species and food categories. Field work was conducted between 2008 and
2010, interviewing 103 informants about the traditional use of wild plants for food. The edible use of 49 species was recorded, 45% of them gathered for their fruits. The most important species coincide with those registered in other regions in the north of the Iberian Peninsula.


The bark is used to treat various ailments in folk medicine. There are no previous reports on pharmacognostical study on this plant. This is the first report of pharmacognostical evaluation of *Ougeinia ooejinensis*. The pharmacognostical studies include macroscopical, microscopical, proximate analysis like ash values, extractive values and fluorescence analysis gives valuable information about the plant. It is helpful for correct identification of this plant for the future reference.


Traditional medicine is the synthesis of therapeutic experience of generations of practicing physicians of indigenous systems of medicine. Throughout the history of mankind, many infectious diseases have been treated with herbals. The traditional medicine is increasingly solicited through the tradipractitioners and herbalists in the treatment of infectious diseases. Among the remedies used, plant drugs constitute an important part. A number of scientific investigations have highlighted the importance and the contribution of many plant families.

10 Hoareau Lucy. (1999)

Interest in medicinal plants as a re-emerging health aid has been fuelled by the rising costs of prescription drugs in the maintenance of personal health and well-being, and the bioprospecting of new plant-derived drugs. Several issues as well as a range of interests and activities in a number of countries are dealt with. Based on current research and financial investments, medicinal plants will, seemingly, continue to play an important role as an health aid.

The present ethnobotanical study was carried out among the ethnic groups (Korku tribe) in the Chikhaldara, Achalpur and parts of Morshi in Amravati district of Maharashtra, India. 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, migraine, menstrual problems, fertility problems, urinary problems, piles, wounds and poison bites. The medicinal plants used by the Korku tribe are arranged alphabetically followed by family name, herbarium number, local name, parts used, mode of preparation and medicinal uses.

Moringa oleifera, or the horseradish tree, is a pan-tropical species that is known by such regional names as benzolive, drumstick tree, kelor, marango, mlonge, mulangay, nébéday, saijhan, and sajna. Over the past two decades, many reports have appeared in mainstream scientific journals describing its nutritional and medicinal properties. Its utility as a non-food product has also been extensively described, but will not be discussed herein.

A floristic survey of ethnomedicinal plants occurring in the tribal area of Rajasthan was conducted to assess the potentiality of plant resources for modern treatments. 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. The Aravalli hills of Mewar region of Rajasthan are inhabited by many tribes; Bhil, Garasia, Damor and Kathodia being the main ones.

The most interesting features were the presence of terminal sclereids in *Viscum cruciatum* and brachysclereids in *Korthalsella opuntia*. The terminal sclereids were present at the vein endings while brachysclereids were scattered on the periphery of the vascular bundle in the ground tissue. These parasitic species show variation in the invasiveness of
endophytic tissue of haustorium into the host vascular tissue. In *Cuscuta reflexa* haustorium forms connection to the phloem of the host more prominently than xylem.

15 Khan Mir Ajab, Tahseen Sharif, Mushtaq Ahmad, Muhammad Zafar1 And Rasool Bakhsh Tareen (2006)

Sacred groves are forest patches conserved by the local people intertwined with their socio-cultural and religious practice. These groves harbour rich biodiversity and play a significant role in the conservation of biodiversity. Population structure and regeneration status of woody species were studied during 2001–2002 in the four sacred groves of Manipur, a state in north east India.


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 form semi evergreen forests of central Western Ghats. The hot and cold extracts of leaves in different solvents namely petroleum ether, chloroform, ethanol and aqueous, were subjected for phytochemical screening for carbohydrates, proteins, tannins, saponins, terpinoids, flavonoids, steroids, glycosides, alkaloids, phenols and lignin. The glycosides and lignin were absent in all the extracts of young and mature leaves.

17 Krishnan Peringattulli Narayanan & Decruse S. W.(2011)

Climate change, alien species, and use of land for intensive farming and development are causing severe threat to the plant genetic diversity worldwide. Hence, conservation of biodiversity is considered fundamental and also provides the livelihoods to millions of people worldwide. Medicinal plants play a key role in the treatment of a number of diseases, and they are only the source of medicine for majority of people in the developing world. The tropical regions of the world supply the bulk of current global demand for “natural medicine,” albeit with increasing threat to populations in the world and its genetic diversity. India is a major center of origin and diversity of crop and medicinal plants.
This study documents indigenous medicinal plant utilization, management and the threats affecting them. The study was carried out in Mana Angetu district between January 2003 and December 2004. Ethnobotanical data were collected using semi structured interviews, field observations, preference and direct matrix ranking with traditional medicine practitioners. The ethnomedicinal use of 230 plant species was documented in the study area. Most of the plants (78.7%) were reportedly used to treat human diseases. The most frequently used plant part were roots (33.9%), followed by leaves (25.6%).

Compositae which is used in various indigenous systems of medicine from ages as folk medicine. The survey of literature reveals its diverse potent biological activities which were proved through several in vitro and in vivo animal studies. The chemical constituents isolated from compositaewere shown several pharmacological activity including immune diseases, neuronal diseases, inflammatory and gastric protective effects, hepatotoxic activities etc. Emerging science elucidated the active hytoconstituents present in this plant which exhibited anticancer, anti-inflammatory, gastro protective activities and the various extracts showed its anticonvulsant, anti-inflammatory,

This study analyses the effects of anthropogenic disturbance on plant diversity and community attributes of a sacred grove (montane subtropical forest) at Swer in the East Khasi Hills district of Meghalaya in northeast India. The undisturbed, moderately disturbed and highly disturbed stands were identified within the sacred grove on the basis of canopy cover, light interception and tree (cbh $ 15 cm) density.

Ethnobotanical pharmacopoeia is confidently used in disease intervention and there is need for documentation and preservation of traditional medical knowledge to bolster the
discovery of novel drugs. The objective of the present study was to document the indigenous medicinal plant utilization, management and their extinction threats.


The effect of fragmentation on different life forms within tropical forest plant communities is poorly understood. We studied the effect of degree of fragmentation and surrounding matrix on trees, lianas, shrubs and epiphytes in tropical forest fragments of Kodagu, Western Ghats, India. These fragments exist as sacred groves amidst a highly modified agricultural landscape, and have been preserved by the religious sentiments of local communities. Plants were sampled at two sites in continuous forests and 11 forest fragments.

23 Panwar N.L., Surendra Kothari and Rathore N.S. (2009)

Adoption of greenhouse technology can improve yield and productivity of medicinal crop in off season cultivation. The study was conducted with two medicinal crops viz: Withania somnifera and Psoralea croylifolia to evaluate cultivation performance and compare with field condition. The experimental results shows that mean plant height of Withania somnifera and Psoralea croylifolia in greenhouse condition was 78.9 cm and 125 cm whereas it was 2802 cm and 50 cm in field condition respectively.

24 Patel Kanika, Neelesh Kumar, Sharma N.K. (2011)

In the present study leaves of Bryophyllum Pinnatum (life plant) were subjected to pharmacognostical studies such as determination of epidermal cell, parenchyma cell, cambium, xylem, phloem, stomata. Quantitative microscopy including stomatal number, stomatal index, vein islet and vein terminations were determined by using fresh leaves of the plant and results were observed.


An ethnobotanical survey was carried out among the ethnic community (Didayi) in Malkangiri district, Orissa The present study revealed that a total of 53 plants belonging to 34 families have been documented for their therapeutic use against 26 diseases. Among
them22 were herbs, 15 were trees, 9 were climbers and 7 were shrubs. Medicines were prepared in the form of paste, decoction, infusion, juice, powder, pills and water extract.

26 Pandey Anjula, Singh Rakesh, Shashi Kant Sharma. (2010)

Assessment of diversity in cultivated and wild useful Crotalaria L. distributed in different phytogeographical regions of India was made. Sites of germplasm collection were depicted on maps to facilitate planning and execution of collection and conservation programmes. In the present communication, information on useful and potential species of Crotalaria in India has also been documented for widening their scope in plant genetic resources management.


Ashoka is the most ancient tree of India, generally known as a “ashok brksh”, botanist known as a Saraca asoca (Roxb.), De.wild or Saraca indica belonging family Caesalpinaceae. Medicinal herbs are moving from fringe to mainstream use with a great number of people seeking remedies and health approaches free from side effects caused by synthetic chemicals.

28 Qureshi Rahmatullah , Muhammad Maqsood, Muhammad Arshad, And Abdul Khaliq Chaudhry. (2011)

Plants are customarily used for fulfilling daily life requirements of the inhabitants of Khushab. No reference exists on the ethnobotany of Tehsil Khushab. Therefore present study was designed to record valuable information regarding multifarious medicinal uses of native plant species. This work will serve as baseline information for carrying out detailed survey in future.


In Togo, a long history of fonio cultivation and tradition coupled with high landraces diversity has led to important amount of indigenous knowledge. For the producers, fonio is
more than a staple food crop. Its production and consumption are highly linked to the socio-cultural live of the people. Because of diverse constraints, production of fonio millet is decreasing. For the crop to be promoted there is a need to develop modern harvesting technologies and provide women with adequate husking machine.

30 Samuel Anbu Jeba Sunilson John, Kalusalingam Anandarajagopal, Chellappan Dinesh Kumar.(2010)

A qualitative ethnomedical survey was carried out among a local Orang Asli tribe to gather information on the use of medicinal plants in the region of Kampung Bawong, Perak of West Malaysia in order to evaluate the potential medicinal uses of local plants used in curing different diseases and illnesses.

31 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.

32 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.

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

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

34 Singh Manish Pal and Sharma Chandra Shekhar (2010)

In the study of different market samples of *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 *Syzygium cumini* or *Eugenia jambolana* Linn belongs to the family myrtaceae. The leaves of *Syzygium cumini* is considered as an antibacterial and also used to strengthen the teeth and gums in folklore medicine.


More contamination was observed with basal nodes, but they had the best shoot organogenic response. Initial experiments with different concentrations and combinations of BA and NAA revealed that BA alone was sufficient to initiate growth of apical and axillary meristems, but NAA was required for shoot elongation and multiple shoot formation on nodal explants. Shoot regeneration in all cases was followed by various degrees of bulging and subsequent callus formation from the cut basal end of the explants.

37 Tsu-Shing Wang, Chong-Kuei Lii, Yuan-Ching Huang, Jen-Yun Chang and Fang-Yue Yang, (2011)

*Dioscorea* plants have been widely used as traditional medicine and food for health benefits. Several therapeutic properties such as anti-cough, anti-diabetic, anti-diarrhea, and anticancer have been reported. Although the steroidal saponins (such as diosgenin) account for some of Dioscorea’s activity, there is little information on the effective components.

38 Upreti Dalip K., Divakar Pradeep K., And Nayaka Sanjeeva (2005)

Since ancient times, lichens have been a household item in India. Lichens collected from the
temperate regions of the Himalayas are used indigenously and also exported. The Himachal Pradesh and Uttarakhal hills are the main areas of lichen collection in India. Few ethnic groups in the central Indian region of Madhya Pradesh and in certain localities of the western Ghats also collect these plants.


Traditional medicine based on herbal remedies has always played a key role in the health systems of many countries. In India the native people are exploiting a variety of herbals for effective curing of various ailments. The plant parts used, preparation, and administration of drugs vary from one place to other.

Vermani Archa, Navneet, Prabhat and Chauhan Avnish (2010)

All human beings require a number of complex organic/inorganic compounds in diet to meet the need for their activities. The important constituents of diet are carbohydrates, fats, proteins, vitamins, minerals and water (Indrayan et al., 2005). Every constituent plays an important role and deficiency of any one constituent may lead to abnormal developments in the body. Plants are the rich source of all the elements essential for human beings.