REVIEW OF LITERATURE
Ethnobotany may be defined as the total natural and traditional relationship and with the interactions between man and his surrounding plant wealth or the study of association and inter-relationship of human societies, especially primitive human societies like tribals and aboriginal communities, with the surrounding flora. Stephen Powers (1874) coined the term "Aboriginal botany" to describe the study of all forms of the vegetable world.

Harshbeger (1895) for the first time coined the word Ethnobotany to indicate the plants used by the primitive and aboriginals. Robbins et al. (1916) presented a broad definition of ethnobotany as the investigation and evaluation of the knowledge of all phases of life amongst the primitive societies and the effect of plant environment upon life, customs, beliefs and history of the tribals.

Heiser (1995) defined ethnobotany as the study of wild and cultivated plants in relation to people, while Plotkin (1995) defined it as the study of tribal people and their utilization of tropical plants.

Vestal and Schultes (1939) considered ethnobotany as a part of economic botany. Jones (1941) confined it to "the study of interrelationship of primitive man and plants". An authority on ethnobotany Schultes (1962) pointed out that "it is a science which requires an inter-disciplinary approach and might be pursued through several avenues, viz., an examination of literature of missionaries and travellers and systematic survey of the notes on herbarium labels, through analysis of fossilized plants or by investigation of the use of plants in the field in archaeological sites or in tribal areas. These definitions and concepts that had evolved during the century gave a broad dimension to the field of ethnobotany."
It is evident from the above concepts of definitions that ethnobotany is an inter-disciplinary science drawing different aspect of anthropology, archeology, botany, ecology, economics, medicine and several other disciplines.

The ethnobotany of North America was studied by Robert (1985), Western Washington by Gunther (1945) and prehistoric food plants of Eastern Europe by Ren Frew (1973).

Jain and Sharma (2000) review of the parallel or unique indigenous uses of 25 plants on India and some African countries.


Diallo et al. (1996) reported 60 frequently used plants from Malian Gourma, West Africa. The most frequently used in household were Cassia italica against constipation, Maerua crassifolia for stomachache and Acacia nilotica against diarrhoea and cold.

From Nigeria, Gill and Nyawaiame (1994) reported 103 leguminous plants used in ethnobotanical practices, Gill et al (1993) reported 80 plants and Karatela et al. (1991) reported that 32 plant species were found to be used by Okpameri tribe.

Edward F. Anderson (1986a) described the Akha tribe culture, environment and the use of 121 medicinal plants of Northern Thailand. Edward F. Anderson (1986b) reported 68 species and the medicinal uses Lahu hill tribals of Northern Thailand. Among these 21 species are not previously reported as having therapeutic value.

Secoy and Smith (1983) studied the use of plants in the control of agricultural and domestic pests. The noteworthy plants are Deris, Tephrosia and Chrysanthemum.


The use of plants as medicines antedates history. Herbal system of medicine represents probably the first, and certainly the oldest system of health care. The Indian system of Ayurveda is probably 5,000 years old. On the basis of the knowledge contained in the Rigveda and Atharvaveda, the treatises Charaka Samhita (900 BC) and Susruta Samhita (500 BC) dealing with Ayurvedic pharmacopeias were compiled. The Chinese system is equally ancient. The Graeco-Arabic and Tibetan systems date back to 3,000 years.

From a historical perspective, botany as a science had its origin in the use of herbs as medicines. Methods of healing was known to us, after the publication of De Materia Medica of Discorides in the first century AD. There were several 'Physic gardens' containing collections of important healing herbs all over Europe. During 15th and 16th Century, historically termed the age of exploration. Europeans sailed to different parts of the world in search of economic products and carried back with them the knowledge of healing practiced in distant lands.

Ethnobotany in India

Historical account on ethnobotanical works has been presented state-wise manner with latest work in the beginning.

Ethnotherapeutics in drug developing is gaining much importance in these days. Some of the most potent remedies used today are atropine, artemisin, asperin, codeine, camptothecin, digoxin, ephedrine, cocaine, huperizine, forshkolin, podophyllotoxin, reserpine, vincristine and vinblastine are all derived based on ethnotherapeutics.

India is one among the 12 megabiodiversity countries of the world and having 47,000 species of plants (excluding aquatic forms) (Anon, 1997). Traditional systems—such as Ayurveda, Unani and Siddha are reported to make use of about 2,500 species.
ORISSA

Dhal et al. (2000) reported *Plumbago indica*, commonly known among the Jani-tribes of Orissa for its abortifacient properties, effectively use this plant as an oral contraceptive.

Satapathy and Brahmam (1999) reported 42 wild and domesticated species which might give some clue for evolving new drugs in near future. Dash and Mishra (1999a) reported 85 species belonging to 78 genera and 48 families from Narayanapatna hills of Koraput district, out of which 65 plants are used in local traditional medicine which covers the treatment of 22 ailments from minor cuts to diabetes, 15 species are sacred and religious, underground parts of 4 species are edible, 13 species are used as leafy vegetables, flowers of 5 plants are used as vegetable, fruits and seeds of 10 plants are edible, sap of 3 plants are used as liquor and 20 plants are used for house construction and making agricultural implements. Misra and Dash (1999b) reported 249 species for utilization of minor forest resources in clusters of tribal villages on eastern ghats of Orissa, out of which 45 species used for food, 16 species for other economic purposes, 3 as stimulants and 17 as sacred plants. Nayak and Choudhury (1999) reported 107 potential medicinal plants collected from western Orissa with special reference to Kalahandi district. Girach et al. (1999) reported 38 plant species in traditional treatment of skin diseases in Bhadrak district. Mohanty and Rout (1999) described the cultural significance of plant *Careya arborea* in religious rituals, and beliefs has been gathered from different parts of Orissa state. Nandita Sarkar et al. (1999) reported 45 plant species used in traditional medicine by the tribals inhabiting Baugriposis P S Mayurbhunj district. Panda and Das (1999) collected first hand information of 60 plants from the tribals of Baliguda sub-division of Phulbani district.

Brahmam et al. (1996) reported 54 medicinal plant species from Tanla of Malyagiri hills in Dhenkanal district. Seema Malik (1996) reported 17 plants and studied the age old empirical knowledge of folk medicine of the Lanjia Saora, a tribal community of southern Orissa. Satapathy and Brahmam (1996) reported ethnobotany of the tribals of Sundargarh district, out of 400 plants, 60 species were found to be promising plants for drug evaluation.

Girach et al. (1996) studied the native phytotherapy among rural population of Bhadrak district with less known or unknown medicinal uses. The use of commonly

Das (1995) reported the ethnobotanical observations of 49 plant species and their mode of usage by the tribes of Koraput district.


Mukhrjee and Namhata (1990) reported ethnobotanical information concerning 22 plants, collected from tribes of Oraon, Nunda, Bhaiyen, Dhanuar and Routia of Sundevgarh district. Brahman and Saxena (1990) reported 77 interesting species from Gandhamardan hills of Orissa. Hemadri and Rao (1989, 1990, 1991) reported 201 plants from folklore claims of Koraput and Phulbani districts. Saxena *et al.* (1988) reported 67 species of vascular plants from Similipahar forests area of Mayurbhanj district of Orissa, which are not recorded in the important published literature on the medicinal and other economic plants of the country. Tribedi *et al.* (1982) deals with the 50 species of medicinal plants collected from Mayurbhanj indicating their unrecorded local medicinal uses.

WEST BENGAL

Maiti and Manna (2000) studied some ethnomedicines used by the Santals of Baghmundi-Ajodhya hill region of Purulia district, in controlling fertility. Atleast 10 reports on interviews conducted with different medicine-men were recorded. Maiti and Mishra (2000) reported 13 plant species reported to have anti-venom drugs of Santalas, Savars and Mahatos of Midnapore district of West Bengal, India.

Archana Banerjee (1999) reported 39 plant species with their flowering time, frequency, and local uses from the eroded soil of Bribhum. Ghosh and Debabrata Das (1999) reported 55 species of anti-diabetic plants, out of these, 7 species
belongs to 4 monocot families, and 48 species belong to 25 dicot families. A few expected results of *Aegle marmelos* and *Cocculus villosus* have been recorded.

Debabrata Das (1999) reported 31 wild plants of Midnapore district that are used as food during the drought and flood, along with two Pteridophytes namely *Diplazium esculentum*, where leaves are cooked and eaten as salad and *Marselia minuata* leaves are steam cooked and eaten with rice. Saren *et al.* (1999) reported 78 plants in the Bankura district of West Bengal where tribal people depend on forest for daily needs as medicine, food, fibre, shelter, narcotic, contraceptive and treated the most common ailments like gastrointestinal problems, tuberculosis, skin diseases, goiter, sexual disorders and fever. Ashis Ghosh (1999) studied the ethnobotanical uses of plants in veterinary medicine by the tribals of Bankura district.

Goel *et al.* (1984) reported 225 plant species used for various purposes has been recorded under 330 field numbers from Santal Paragama. Details of the formulations of herbs, mode of administration, dosage, and effect of overdosage were also recorded.

Datta and Banerjee (1978) reported 158 weed species from rice fields of Hoogly and Midnapore districts, out of which 124 species possess economic importance in one way or the other. Jain (1985a, b), Jain and De (1984) reported 14 edible plants used by the tribals of Purulia, West Bengal.

**ASSAM**

Malakshmi Datta and Nath (1999) reported 71 plant species covering 76 prescriptions and 22 diseases. Most of the drugs are utilized in the fresh state as decoction, infusion, poultice, etc. Sharma (1999) reported that 36 plant belonging to 30 families of angiosperms and are commonly used by the Nepalese of Assam, and reveals that there is an urgent need of wide awareness campaign for conservation. The National Health Planners very often overlook the indigenous knowledge about herbal medicine. The universally accepted objective “Health for all by the year 2000 AD” will not be fulfilled unless the indigenous healing system is taken into a National Health Programme.

Bora (1999) studied 34 plant species of traditional folklore medicinal uses among the Bodo tribes of Sonitpur district of Assam, and reveals chemical
composition of the plant specimens which provide sufficient scope to the pharmacological research to find out many new informations. Kuntala Neug Barua et al. (1999) reported from ethnobotanical point of view, that about 11 plants are used as antidote or sedative against animal bites and 10 species as medicine in muscle pain or bodyache, 8 species to control diarrhoea, or dysentery, 6 species in impotency and 5 species are related exclusively to the problems of women.

Borthakur and Sarma (1996a & b) reported 45 plants and 32 prescriptions for ethnobotanical medicines among the Nepali immigrants and reported 155 wild edible plants in the markets of Assam.

Borthakur et al. (1996) studied herbal remedies of Nepalese in Assam and presented the use of 52 plants in traditional medicine of the people of Nepali ethnic origin of Assam in North-eastern India. Borthakur (1993) reported 13 plant remedies for child diseases and 21 for women diseases from Assam.

Tiwari et al. (1982) explored folklore information from Assam for family planning and birth control. Tiwari et al. (1980) collected folklore claim of Assam area including information on diseases like insanity, asthma, malaria, piles, jaundice, cancer, etc., and some other claims for temporary sterilization and abortion. Bhattacharjee et al. (1980) reported 28 plants used by local healers and herbalists of Assam.

SIKKIM

Birkumar Singh and Jain (1999) studied the ethnobotanical observation on the preparation of milled (Paspalum sp.) beer in Sikkim state.

ARUNACHAL PRADESH

Choudhery (1996) studied the ethnobotanical diversity and conservation of Arunachal Pradesh. More than 80% of the total population are primarily dependent on forest for day to day needs and collects many wild plants in the form of tubers, rhizome, shoots, and fruits / berries which are eaten raw or boiled or cooked or even roasted. A vast variety of other plants are used for fodder, fuel, building purposes, handicrafts, colouring agents, beverages and adhesives. Bhuyan (1994) reported 15 drugs of plant origin from Lohit district, commonly used in abortion and easy delivery.
MIZORAM

Lalramghinglova (1999) reported 116 species of food plant resources, which are arranged alphabetically with scientific names, family, local name, habit and parts used, mode of preparation, form of dietary and status are given against each species.

MANIPUR AND NAGALAND / NORTH EAST INDIA

Manoranjan Sharma et al. (1999) described 66 species belonging to 53 genera and 34 families. Mao (1999) reported five plants with symbolic uses and six plants with superstitious belief in the Mao Naga tribes of Manipur. Kumar Singh et al. (1999) reported 25 plants belonging to 13 families ranging from a mushroom to higher angiospermic plants used by the traditional Meitei singers of Manipur to enhance their vocalism.

Rao (1996) working with the Naga sub-tribes, has brought the ethnomedicinal uses viz., for tattooing (Strobilanthus sp. Stereospermum chelonoides), for washing hairs (Entada purseaetha), herbal medicines (Aphanamixis polystachya, Bauhinia purpurea, Calatropis gigantea and few others), as edible plants (Allium bakeri, Callicarpa arborescens, Castanopsis indica and few others) are discussed. Jamir (1991) reported 53 medicinal herbs used among the people of North-East India. The Information about the plants was gathered through local medicine-men during field trips to various places of the State. Verma et al. (1991) studied the use of edible fungi by the tribal people of the North Eastern hill region, particularly by Meghalaya and Manipur. Jamir and Rao (1990) studied 50 medicinal plants used by Zeliangs, a Naga sub-tribe of Nagaland.

Rao and Jamir (1982a) studied the use of plants for relief and cure of certain diseases among the 40 tribes from Nagaland. Rao and Jamir (1982b) studied 54 medicinal plants used by various sub-tribes of Nagas.

ANDAMAN AND NICOBAR ISLAND

Awasthi and Goel (1999) reported 71 plant species belonging to 60 genera of 42 families that are used by the Onges for various purpose in their day to day life. Ten species are in use as medicine, 20 species as edible, and 41 species for various other purposes. Dagar and Dagar (1999) reported 4 species of Pteridophytes, one species of gymnosperm, 53 species of dicotyledons and 9 species of monocotyledons.
aborigenes of Andaman and Nicobar Islands related to plants used for gynaecological, urino-genital, and other related diseases. These uses are important in view of ever increasing population and common gynaecological and other problems related to urino-genital systems in tropical regions of developing countries.

Sinha (1996) reported 24 plants of medicinal value from Bay Island (Andaman and Nicobar Island). The island consist of 320 Islands and Islets and harboured more than 2000 angiospermic plant. Out of 24, 11 are endemic and remaining 13 species extend to south-east Asia.

Yoganarasimhan et al. (1984) reported that the basic data on 210 species belonging to 191 genera of 79 families concerning medicinal uses of Andaman and Nicobar Islands.

Bhargava (1983) reported that 40 species have 52 uses which indicates that the "Onge" tribes of Andaman and Nicobar islands show certain similarities with other southeastern Asian "Negrito races".

BIHAR

Kaushal Kumar and Goel (1999) reported 10 ethnomedicinal plant species frequently used among the various tribal communities of Bihar with their documented uses for 30 ailments. Priya Ranjan (1999) reported 75 species of medicinal plants, which were collected from Indo-Nepal border area adjoining the districts of Madhubani and Sitamarhi and arranged alphabetically giving botanical and local names, habit, flowering period and parts used in the preparation of medicine. Raju Goel et al. (1999) reported 50 species belonging to 41 genera of 34 families for jaundice in Magadha region of central Bihar.

Ram et al. (1998) reported 15 medicinal plant species, which are used by the tribals as well as non-tribal people of Chhota Nagpur, Bihar in their daily life for the treatment of dysentery. Most of these plants are either cultivated or found growing in plains.

Sunita Mishra et al. (1996) discusses the plants in veterinary practices in Darbhanga district of North Bihar. Some cures mentioned here are already recognized and utilized in modern system of medicine. Some usages and practices however, are new for veterinary diseases. Mahato et al. (1996) reported 27 plant
species, which are being used to cure diarrhoea by the people of Singhbhum district of Chhota Nagpur. Jha and Verma (1996) reported medicinal uses of 58 common plants among Sauria–Paharia tribe inhabiting Rajmahal hills of Santal Paragana division of Bihar.

Ravindra Kumar and Pandey (1995) observed the different tribal dominant areas of Chotanagpur and are primarily dependent on forest produce. They earn their livelihood by selling different forest produce in local markets.


Jain and Tarafdar (1970) reported 373 plant species of Santals belonging to 93 families of angiosperms and 4 cryptogams (a review of P.O. Boddings work).

**Uttar Pradesh**

Khanna and Ramesh Kumar (2000) reported 50 plant species known among the Gujjar tribe of Saharanpur district of Uttar Pradesh. Comparison of these uses with concerned literature has indicated that 22 ethnomedicinal uses of plants have not been reported earlier.

Singh (1996) reported 38 plant species and practice of conservation among the tribals of Sonbhadra district in southern Uttar Pradesh. The preparation of ethnobotanical recipes, dosage, mode of administration and uses of plants have been discussed. Vinay Ranjan (1996) reported 18 ethnomedicinal plants used by the Saharia tribes of Lalitpur district, Uttar Pradesh for curing various ailments.

Singh et al. (1994) studied 82 medicinal plants, useful in the healthcare of Gonda tribals of Sonbhadra district. Singh and Maheshwari (1994) reported 63 plants used by the Tharus of Nainital district. Singh and Prakash (1994) studied tree wealth in the life and economy of the tribals of Uttar Pradesh. Siddiqui and Hussai (1994) reported 17 medicinal plants used in abortion, asthma, dysentery, fever, hydrocoel, gonorhhoa, menstrual cycle, tumour, piles, puerperal fever, etc., in Sitapur district.
Siddiqul and Hussain (1993) reported 36 species used for treatment in gonorrhoea in central Uttar Pradesh. Ethnobotany of five districts of Garhwal Himalayas in Uttar Pradesh was given by Negi et al. (1993). Gaur et al. (1992) have made an ethnobotanical study, in Himalaya region of Uttar Pradesh in relation to veterinary medicines. Badoni (1990) reported 108 plant species which are used as medicines, fibres in art and crafts, and in agricultural implements as reported from Pinswari community of Tehri district of Uttar Pradesh.


Maheshwari et al. (1980, 1981) reported 62 species used by Tharus of Kheri district of Uttar Pradesh as medicine.

Maheshwari et al. (1986) reported 250 plant species and specimens from Mirzapur district, Uttar Pradesh.

Paliwal and Badoni (1988) reported 124 different plant species by the tribals of Jads and Khos of Uttarakasi district which still use plants extensively as edibles and for the preparation of beverages.

HIMACHAL PRADESH / HIMALAYAN REGION


Aswal (1996) studied few important ethnomedicinal plants of Garhwal Himalaya with their therapeutic uses and suggested for their proper utilization, conservation and causes of threat to these species. Arvind Saklani and Jain (1996) studied the utility of cross-cultured ethnobotanical study to assess the credibility of folk claims in Northwest Himalayas and Northwest India. Ethnomedicinal uses of 13 plants by different ethnic groups of these two distant regions are given under 12 common ailments. Brij Lal et al. (1996) reported 50 species used as ethnomedicine by Gaddis of Himachal Pradesh for treating cattle and human beings. Singh (1996)
reported 64 wild plants which are eaten in part or whole by local people of Mandi
district of Northwest Himalayas.

Rana et al. (1996) reported strategies for sustainable utilization of plant
resources by the tribals of the Tous valley, western Himalayas. They presented 72
species, out of which 48 species are found to be medicinal, 11 species are edible,
and the rest are of miscellaneous importance.

Singh (1996) discussed ethnomedicobotany of Durds tribe of Gurez valley in
Kashmir, Himalayas and recorded 62 plants for treating various ailments. Gupta
medicinal plants from Garhwal hills.

Bhatt and Panwar (1990) reported efficacious parts of 35 plants of Garhwal
Himalayan region which were found positive for fertility regulation in respect of
spermicidal, semen-coagulation and abortifacent at 2% concentration level have been
discovered.

Atkinson (1882) published 12 volumes of the Gazetteer of North West
Provinces of India, out of which 3 volumes were concerned with Kumaon Himalayas.
Economic botany of plants used as food of man and animals, wild and cultivated
plants, plants used in pharmacy, oil, dyes, gums and resins have been dealt in the
second volume.

JAMMU AND KASHMIR

Goyal et al. (1997) studied and use of herbal oral contraceptives in Rishikesh.
_Butea monosperma, Lawsonia inermis_ and elephant faecal matter (EFM) have been
proved most potent against female fertility in human beings. The seed preparation of
_Butea monosperma_ and _Ricinus communis_ are very effective and powerful
contraceptives for years in a single dose to check the conceivements.

Siddique et al. (1995) studied the status of some important medicinal and
aromatic plants of Kashmir Himalaya. These plants not only provide raw materials for
the manufacture of drugs but have also served the hillman for decades and suit his
local medicinal system.

Kaul et al. (1991) studied ethnobotany of Padaris of Doda in Jammu and Kashmir and reported 68 species, 38 of which are used as food 24 as ethnomedicinal and 6 in magico-religious lore are presented.

RAJASTHAN

Katewa et al. (1999) studied the wild food plants from Aravalli hills of south-east Rajasthan. Wild food may be particularly important during certain seasons of the year and during major drought periods.

Tripathi (1998) studied the phytomedicinal diversity of western part of Rajasthan, the flora of this area provides many useful medicinal plants, whose proper scientific management can generate tremendous scope of employment opportunities for local inhabitants apart from their role in healthcare system. Singh and Pandey (1998) reported 610 species and their various uses by Rajasthan tribals.

Sharma (1990) enumerated the plant species used by tribals and rural people residing in the vicinity of the Mukundara ranges of Jhalawar district of south-east Rajasthan on herbal medicine for Guinea worms (Naanu) disease.

Sharma and Vyas (1985) studied the ethnobotanical importance of species of ferns and fern allies collected from different localities throughout Rajasthan. The tribal informations' are confirmed by Ayurvedic Vaidyas and Hakeems.

Prabakhar Joshi (1985) reported 8 species from the tribals of southern Rajasthan deals with some information from the oral-fores of the tribals regarding the forecasting of weather on the basis of particular changes appearing in certain plants. Sebastian and Bhandari (1984a) reported 17 plants exclusively used as veterinary medicines by Bhills of Udaipur district of Rajasthan. Sebastin and Bhandari (1984b) described 69 species of ethnobotanically interesting plants from Mount Abu, Rajasthan and enriching the traditional knowledge. Singh and Pandey (1980) presented medicinal plants of the tribals of eastern Rajasthan.
GUJARAT

Chandra Shekhar Silori and Avnish R. Rana (2000), studied the status of indigenous knowledge on medicinal plants and their use on Narayan Sarovar Sanctuary in arid district of Kachchh of Gujarat state reported 34 medicinal plants and their uses to cure host of diseases among which 27 species had multiple uses. Huai Huyin et al. (2000) studied the comparison of six commonly used medicinal plants of the Lahu people of Thailand and China and showed that even with the same cultural background the uses of medicinal plants differ. The diseases are affected not only by the characteristics of plant resources, but also by common local diseases.

Sharma and Singh (2000) reported less known ethnobotanical uses of 40 species used by traditional healers in different regions of Dadar and Nagar Haveli.

Pandit et al. (1996) reported 45 plant species belonging to 32 families from Maldharis tribe of Gir forest, as local remedies. Kakrani (1994) reported 55 plant species used as analgesic, anti-inflammatory, anti-rheumatic, anti-arthritic in rural regions of Kutch district. Kakrani and Saluja (1993) reported 24 medicinal plants used in Kutch district, for uterine disorders.

Vidya (1982) studied some medicinal plants from the flora of Gujarat and observed 33 medicinal plants.

Bedi (1978) studied plants used by aboriginal tribes of Ratan Mahal and surrounding hills of Gujarat. Some of the important food and medicinal plants restricted to these tribals of this region are discussed. Some of the uses have not been recorded earlier.

Shah and Gopal (1986) deals with the local pharmacopoeia and crude therapeutic methods of Vasavas, Gujarat, India and elucidated in a brief manner to fortify their traditional medicine.

MADHYA PRADESH

Singh et al. (1999) reported 85 wild plant species that are commonly exploited for fuel and charcoal by the tribals and rural population. Shrivastava et al. (1999) reported 20 preparations of herbal medicines used by the tribals of Bastar district and also discussed the mode of preparation of herbal drugs and methods of their administration along with dosage. Khare and Khare (1999) reported 21 medicinal
plants used by the rural people of Chhatarpur district. Swatisamvatsar and Diwanjii (1999) reported 91 plant species for rheumatism by the tribals of western Madhya Pradesh. Most of the plants used are for external application, and 28 plants are used internally, and few plants are used in both ways. Dwivedi (1999) enumerates the 40 ethnomedicinal plants among the tribals of Madhya Pradesh, out of which 20 herbs and 20 woody plants spread over to 26 angiospermic families. These species contain valuable chemical substances and are useful to cure various human ailments. Many valuable herbs like Abrus precatorius, Calonycton muricatum, Dioscorea opositifolia, Momordica dioica and Mucuna prurita. The species of Bauhinia purpurea, Bombax malabaricum, Diospyros melanoxylon, Saraca indica and Terminalia arjuna tend to become vulnerable and resulted in great loss to our ethnomedical wealth. Species like Aegle marmelos, Helicteres isora, Strychnus nux-vomica, Terminalia chebula and Terminalia bellerica need an urgent conservation before they are extinct. Ashok K. Gupta et al. (1999) reported 39 medicinal plants from the tribals of Amarakantak forests of Shahdol district, which are used by tribals for different conditions of the body and ailments such as acidity, asthma, cataract, digestion related problems, fever, jaundice, nocturnal emissions, skin diseases, stomachache and whooping cough, etc.

Datt (1996) studied ethnomedical resources of Chhatarpur district. They presented information on local uses of plants, based on their uses, categorizing ethnomedical resources into 9 major groups. Usha Shome et al. (1996) reported over 70 plants which are commonly used as household remedies either singly or in combination with other plants. Some of the effective remedies used regularly are powder of Mallotus philippinensis with honey or curd for deworming, Solanum nigrum leaves for liver enlargement in children, leaves of Phyllanthus fraternus, Boerhavia diffusa and Raphanus sativus roots in jaundice. Momordica charantia fruits, seed powder of Syzygium jambosa for diabetes and powder of Trachyspernum ammi seeds fried with "Hingu" and black salt for indigestion. Sikarwar (1996) reported 35 ethnoveterinary herbal medicines in Morena district, which have been used by the tribal and non-tribal rural folks for treatment of different kinds of ailments of their domestic animals. Sahu (1996) discussed the emergency food plants among the aboriginals of the Bastar district, in which three ferns, and one fungus. In addition to this the traditional and popular drinks / beverages are also consumed regularly as a part of their diet.
Khan et al. (1994) reported 13 species, whose barks are used as source of medicine and Ram Prasad and Pandey (1993) reported 133 plant species belonging to 49 families which are medicinally important in the Lammi and Achanakmar forests of Bilaspur district, Madhya Pradesh. Pandey and Shrivastava (1993) reported ethnobotanical observations of 48 plant species used by Bharia tribes of Patalkot in Tamia forest of Madhya Pradesh.

Hemadri and Rao (1989) studied folk medicine of Bastar. Ethnomedicine of Bhil tribe of Jhabua district in Madhya Pradesh was given by Maheshwari et al. (1986). Tribal welfare, diseases and treatment were discussed by Choudhary (1986). Peter Francis (1984) reported 165 plant species used as adornment articles of aboriginal groups and rural folks in India. Sahu et al. (1983) gave valuable information about the medicinal use of certain plants used against diarrhoea and dysentery amongst tribals. Oomachan and Khan (1981) enlisted medicinal plants in aid of family planning programme in Bhopal and Madhya Pradesh. Khan (1980) reported medicoethnobotany of eleven aquatic macrophytes of Bhopal in Madhya Pradesh. The information on 28 species and 11 genera which were used by the Bhat community for regulating fertility were described by Lal and Lata (1980).

Jain and De (1964) described 88 wild edible plants of Bastar district. Thereafter he concentrated on the musical instruments and medicinal plants of the tribes of central India.

Shukla and Shrivastava (1993) studied medicinal plants as an important tool for development of tribal economy. This will not only supply the sustainable raw materials to drug industries but will also generate employment to the landless labourers and marginal farmers of the state.

Jain (1963a) recorded the medicinal plants associated with the tribals of Madhya Pradesh.

NORTH INDIAN PLAINS / EAST INDIA

Dipesh Chaudhury and Hebgi (1999) reported 37 plants belonging to 34 genera and 15 families among Kasi and Chakma tribes of east India and highlighted the importance of leaf and roots in medicinal uses. Singh and Zaheer Anwar Ali (1996) reported 22 plants used by many tribal communities in India for birth control.
including abortion at initial stages, preventing conception, or by making either of the couple sterile. Banerjee and Pal (1996) reported 25 flowering plants used by the tribal communities inhabiting the regions of north Indian plains for hair and scalp preparations. Viswanathan and Singh (1996) discussed the plants used as household remedies in India. They presented 45 plants which are used for the treatment of the different diseases like jaundice, diabetes, stomach ailments, worms, pustules, sores, dermatitis, dog bites, scorpion stings, cold and cough, women disorders, etc. Jain and Saklani (1992) studied cross-cultural ethnobotanical studies in discovering similarity and dissimilarity in ethnobotanical uses of 25 plants among different ethnic societies in north India. Shah (1982) gave herbal-folk medicine in north India. Jain and Borthakur (1980) described plants used by Mikiris living in Karbi-Anglog district of northeastern India for food, medicine and other cultural as well religious needs. Jain et al. (1979) reported some ethnobotanical notes from northeastern India. Jain (1987) discussed the plants in Indian medicine and folklore associated in healing of bones. Arora (1981) studied the native food plants of the tribals of northeastern India.

CENTRAL INDIA

Saini (1996) reported 65 plant species in the welfare of women and children in certain areas of central India. The diseases of women mainly includes abortion, alopecia, conception, debility, galactorrhoea, gonorrhoea, gleet, leucorrhoea, menorrhagia, parturition difficulties, piles, rheumatism, sterility, stone problems and syphilis. The diseases of children includes apthae, bed wetting, cholera, diarrhoea, dullness of hearing, dysentery, facial paralysis, fever, jaundice, malaria, pneumonia, small pox, stammering, tetanus, and urinemia, etc. Ashok Jain et al. (1996) studied the Sahariya tribals of central India. The forest products and old agricultural practices are the main source of their livelihood. A large number of plants are used for medicine, food, fuel, fibre and agricultural purposes. The role of plants are also been observed in rituals and ceremonies. The women are fond of tattooing which is also done for curing certain diseases. Their names also concerned with plants, months and other environmental factors. A number of clans are named after plants and animals, which are conserved through faith and beliefs. Some uses of plants are rare and uncommon.
MAHARASHTRA

Kothari and Rao (1999) studied ethnobotany of Thane district and reported 30 plant species of economic value and 10 plant species of socio-religious belief. Kothari and Londhe (1999) studied ethnobotany in Human healthcare of Chikhaldara area of Amaravathi district and reported 44 species used medicinally by tribals and local people.

Kothari and Moorthy (1996) studied the ethnobotany of human welfare of Raigad district. The stress has been laid on medicinal plants used to cure blood pressure, diabetes, jaundice, skin diseases, stomach disorders, urino-genital diseases and as an antidote for snakebite or scorpion sting, etc. Kulkarni and Kumbhojkar (1996) reported the use of 51 plant species against pest by Mahadeokoli tribals.

Upadhye et al. (1994) studied ethnomedicobotanical survey of Gonda tribes of Chotta Nagpur and Godchiroli district and reported 26 plants used in medicine.

Vartak and Madavgane (1981) enumerated the medicinal plants from Karnala tribal area, Kolhapur district. They have enlisted 8 species for controlling fever, 12 species used for the control of dysentery, 6 species for treating jaundice, 8 species for bronchitis, 9 species for soothing rheumatic pains and 8 species for skin diseases. Ethnobotanical records on infectious diseases from tribals of Banda district was given by Saxena and Vyas (1981).

Kamble and Pradhan (1980) recorded folk claims of 13 plants used by Korukus in Maharashtra.

ANDHRA PRADESH

Raviupadhyay and Chauhan (2000) reported 60 plants collected from Koya tribe of Gundala Mandal of Khamman district region of Andhra Pradesh. Sagari R. Ramadas et al. (2000) observed ethnoveterinary remedies used in common surgical conditions in some districts of Andhra Pradesh and Maharashtra states. Hitherto unreported species used to treat wounds are Cryptolepis buchanani, Leucas stelligera, Pavonia zeylanica, Ximenia americana, Ziziphus rugosa. Sudhakar Reddy and Vatsavaya Raju (2000) studied biomedicines used in folklore veterinary practices prevalent in Nalgonda district (Telangana region) of Andhra Pradesh for crude drugs
pertaining to 66 species representing 58 genera and 37 families of angiosperms are enumerated.

Dharma Chandra Kumar and Pullaiah (1999) reported 31 plant species collected from Chenchus, Sugalis, yerukul tribal communities of Mahabubnagar district for ethnobotanical record. Sai Prasad Goud et al. (1999) presented ethnemedico botany of Kumool district of Andhra Pradesh and about 29 plants are enumerated with knowledge of the tribals for their medicinal uses in curing fever and malaria.

Reddy and Venkataraju (1999) reported 86 plants belonging to 72 genera of 41 families of angiosperms. Asclepiadaceae is the dominant family represented by a maximum number of species (9) used in veterinary medicine in Ananthapur district. Sudhakar and Vedavathy (1999) reported 67 wild edible plants belonging to 41 families and 59 genera used by the tribes of Chittoor district, roots of 5 species are eaten raw / boiled / pickled, Decalepis roots and fruits of Emblica are widely used in the form of pickles. Over 21 species are eaten raw or cooked as greens. The young flower buds of Bauhinia purpurea and Nelumbo are eaten by Yanadi tribes. Flowers of Madhuca indica are widely used in the preparation of alcoholic beverages by Irula and Nakkala tribes and over 35 species as edible fruits. Rama Rao et al. (1999) reported 32 plant based animal crude drugs like milk, curd, ghee, butter and urine in their indigenous therapy. The goats milk and buttermilk are most frequently used animal products in combination with plants. Sunita and Raviprasad Rao (1999) reported 40 major sacred groves in the Kumool district of Andhra Pradesh, extending over 20 ha area located in the forests and highlights the characteristics, distribution and the plant biodiversity of the sacred groves in Kumool district. Jeevan Ram et al. (1999) reported 53 species belonging to 48 genera which are used by the tribals of the eastern ghats of Andhra Pradesh to cure skin diseases. In addition to the above, the species like Aristolochia indica, Boswellia serrata, Buchanania lanzan, Butea monosperma, Clitoria ternatea, Lannea coromandelica, Ophiopogan intermedius, Sesamum indicum and Sphaeranthus indicus which were not reported by earlier workers. Suryanarayan et al. (1999) reported 104 plants from Yanadi tribes of Sriharikota island. The species like Butea monosperma, Capparis brevispina, Casearia esculenta, Dodonea viscosa, Gloriosa suberba, Polyalthia korintii and Vetiveria zizinoides, etc., are endemic and conservation measures are warranted.
Dharma Chandra Kumar (1997) reported ethnobotanical uses of 21 plants of Mahabubnagar district.

Hemambara Reddy et al. (1996) studied 6 Rutaceae plants i.e., Aegle marmelos, Atlantic monophylla, Limonia acidissima, Naringi crenulata, Pleiospermum alatum and Toddalia asiatica which are used by tribes of Chenchus, Sugalis, Yanadis and Yerukulas of Andhra Pradesh for curing different diseases. Balaji Rao et al. (1996) explained the ethnobotanical medicinal uses of 27 plant species used by the local people for dental disorders in Thirumala hills of Chittoor district. Vedavathy and Mrudual (1996) examined the traditional medicine practice by Yanadi tribes. Folk medicine practiced by Yanadis can be divided into two aspects viz, physical and magico-religious in Andhra Pradesh. Sai Prasad Goud and Pullaiah (1996) reported edible, medicinal, fibre, dye and gum yielding plants, which are used by Chenchus in Kurnool district. Sai Prasad Goud and Pullaiah (1996b) reported 41 plants used in ethno-veterinary medicine of tribes of Chenchus, Sugalis and Yerukulas in Kurnool district. Venkata Raju (1996) carried out phytochemical screening of 12 medicinal plants used by Chenchus of Nallamalais. Madhukar Reddy (1996) studied Semicarpus anacardium from the point of view of ethnomedicinal uses. The information was collected through direct interaction with the people and folk medicinal practitioners.

Vedavathy and Rao (1995) recorded the information from the herbal folk practitioners of herbal therapies of conjunctivitis, diabetes, chronic fever, malaria, typhoid, pneumonia, menorrhagia, leucorrhagia, whooping cough and infective hepatitis. Sudarsanam et al. (1995) reported 106 plant species exclusively used by herbalists, for different diseases of their domestic animals in Rayalaseema. Sudarsanam and Balaji Rao (1994) studied 31 plant crude drugs used by the Yanadi tribe of Nellore district.

Imam et al. (1992) discussed folk medicines used for snakebite in different forest areas of Andhra Pradesh. Ravisankar and Henry (1992) reported the uses of 14 potential medicinal plant species from Adilbad.

Krishna Mohan and Bhaira Murthy (1992) reported 37 selected plants which are used as medicine by tribes of the Prakasam district. Nisteswar (1992) reported medicinal plants used in the Ramapachodavaram tribal area for curing various...
diseases like fever, cold and cough, skin disorders, worm infestation and constipation. The Knowledge of tribal people of Andhra Pradesh on nutritional and medicinal herbs was dealt by Hemadri (1992).


Basi Reddy et al. (1989) reported a few drugs available in and around Anantapur and currently used by herbalists for treating various diseases.

Jain et al. (1973) studied the medicinal and food plants of Chenchu, Reddi, Valmiki and Gonda tribes in Andhra Pradesh and Saora and Lough tribes in Orissa.

TAMIL NADU

Yoganarasimhan (2000) compiled 1474 (including 6 gymnosperms) medicinal plants from Tamil Nadu State. A total number of 491 drugs are found to be used in Siddha system of medicine which is commonly practiced throughout the state, beside 592 number of drugs in Ayurveda which is practiced to a lesser extent.

Balu et al. (1999) reported 30 folklore botanical remedies for diabetes in the Cauvery delta of Tamil Nadu and also studied the method of preparation. Rosakutty et al. (1999) reported 74 plant species belonging to 64 genera and 43 families of Kanyakumari district and interviewed vaidyas, naturopaths, and local people, who use them as home remedies and preparations like Suranum, Lekium, Kashayam, Thailam, Kulisai, powder form, etc. Sundaresan and Jhon De Britto (1999) studied the preliminary phytochemical screening and paper chromatic separation of flavonoids in 5 medicinal plants, which contains aminoacids, sugars, phenolic groups, steroids, alkaloids, flavone, tannin and saponin. Suresh Baburaj et al. (1999) reported 66 species in 61 genera of the Nilgiri district and are found to be useful in the Homoeopathic system of medicine. Alagesabooopathi et al. (1999) dealt with the
ethnobotanical observations of the tribals of Shevaroy hills and reported 23 species of plants and their mode of usage.

Cyril Nayagam and Pushparaj (1999) reported *Mimosa pudica* as a tribal medicine of the Nilgiris in Tamil Nadu and all over India. The plant is used by different tribes as a drug for abortion, toothache, headache, fracture, sores and boils, snakebite, swellings, and cutaneous outgrowths and arthritis. It is a blood purifier and induce sound sleep. Dwarakan and Alagesaabooopathi (1999) reported 25 plants and the use of human and livestock medicines in Salem district. Rajendran and Aswal (1999) reported 31 plant species belonging to 29 genera of 25 families by the tribals of Nilgiri hills, and gathered information from the older women of different tribal hamlets about the method of preparation of herbal cosmetics from plant parts and their mode of application, doses and duration of use and purpose of utility of the cosmetic products, etc. Subramanian (1999) reported 106 plant species belonging to 91 genera and 54 families which were collected from different areas of Chitheri hill ranges covering an area of 640 sq km in Dharmapuri district and discussed the medicinal importance of these plants. The plant is reportedly used in Ayurveda and Unani system of medicine and mode of use has been reported by Kirtikar and Basu (1935).

Banumathy and Parvathi (1999) reported that more than 120 medicinally valuable plants remain unknown to the world. A total of 50 species of angiosperms belonging to 20 families was recorded from Rock city.

Balasubramanian and Prasad (1996) studied total of 159 species in use as an ethno-medicine by the Irulas and also collected 40 species from the Coimbatore division. Further, they enumerated 6 new species used in ethnomedicine hitherto which were not reported in literature. Prasad and Balasubramanian (1996) reported that 26 ethnic groups of Nilgiris Biosphere Reserve and 321 species are reported to be used by these tribes. About 25 species are promisingly found to be exploited commercially.

Rajendran and Henry (1994) reported 41 plants species used by Kadar tribe in Annamalai hills of Tamil Nadu.
Mahadevan (1991) reported 54 species used for food, wood, medicinal, ritual and other economics by Irulas, one of the primitive tribes distributed in the coastal areas of Thanjavur district.

Abraham (1981) presented ethnobotanical notes on the Todas, the Kotas, and the Irulas of Nilgiris. Ramachandran and Nair (1981) reported the traditional uses of 138 species belonging to 119 genera of 52 families in the Irulas of Tamil Nadu. Raghunathan (1976) studied 5 tribes of Nilgiris and reported some medicinal and economic plants.

WESTERN GHATS (KERALA)

Nair and Jayakumar (1999) reported 113 species of hill-Pulayas in the Chinnar wildlife sanctuary, western ghats, India, deals with the traditional life style of hill-Pulayas, ethnobotanical species, their habit, part used, tribal uses, distribution in different settlement areas and also key-stone species identified for artificial regeneration and rehabilitation of the biodiversity of the sanctuary. Jery Thomas and John De Britto (1999) studied the 53 common weeds of medicinal importance belonging to 48 genera and 34 families. The western ghats contains 3,500 species of angiosperms out of which 1250 are endemic. But these plants are not widely used so far in this area. If these plants are used for medicinal purposes that itself is an effective method to harness these weeds economically. Kishore Kumar et al. (1999) reported 104 shola (Tropical montane) forest species of Kerala state, south India and dealt with 34 species used for various medicinal purposes, 16 species as food and food supplement, 9 species as fodder, and 2 species as fish poison. Twelve species are collected solely for sale to the dry flower industry and also described Dodonea viscosa for headache—leaves are stuck on head, for backache—leaves are spread over cots. Leaves boiled with water used against swellings, backaches, coughs and cold leaves are also used for making roof of huts, cattle sheds, etc.

Henry et al. (1996) reported 125 potential medicinal plants of the southern western ghats, India have provided refuge for a racially varied set of microcultures, ranging from Negrito groups to the Todas of the Nilgiris, whose survival depends on the natural resources of this tract. Jawahar and Raveendran (1996) studied lesser known edible plants collected from the 14 tribes of Kerala. Out of the 19 species Cissus discolor and Cleome gynandra have been reported earlier as dible plants from
areas of the western ghats other than Kerala. Rajendran and Mehrotra (1996) studied the ethnomedicinal applications by Kadar, Madavar, and Sunkan tribals of Parambikulam, Kerala, and reported 18 angiosperms species.

Radhakrishnan et al. (1996) reported wild edible plants of Kerala. Pushpangandan and Atal (1984, 1986) reported the ethno-medicobotanical investigations of the primitive tribals of western ghats and Travancore in Kerala. The role of mind and auto suggestions in the efficacy of magico-religious practice of tribal medicine was discussed. Ramachandran and Nair (1981) reported ethnobotanical notes on 90 species from the tribals of Cannanore district of Kerala.

KARNATAKA / TUMKUR

Kshirsagar and Singh (2000a) deals with the 33 medicinal plants which are being used traditionally in Malekudiya tribes of Coorg district, Karnataka state are not well known from other areas for 24 medicinal uses claimed for them.

Kshirsagar and Singh (2000b) reported 25 medicinal plants which are being used traditionally in Jenukuruba tribe of Mysore district, southern India and claims 21 medical uses.

Seetharam et al. (1999) have brought out Folk Medicine and Ethnobotany of North Eastern Karnataka.

Harish R. Bhat (1998) reported 307 plants from Devarayanadurga, out of which 167 are of medicinal value.

Kushalappa (1996) has reported that, this district has 901 plant species belonging to 488 genera and 137 families. Out of these, 464 species of plants of known medicinal importance.

Bhandary et al. (1995) have studied the customs, culture and traditiona luse of plants from the tribes of Siddi of Uttara Kannada district of Karnataka and in 1996, they worked on the ethnobotany of 'Gowlis of Uttara Kannada District of Karnataka State'.

Hosagoudar and Henry (1991) reported cultural aspects of well known fodder and fuel tree, *Prosopis cineraria*, especially in religious pursuits and beliefs as practiced in northern Karnataka.
The medico botanical study of 143 species of Tumkur district of Karnataka was reported by Yoganarasimhan et al. (1982) with details of locality of occurrence, local names and chemical constituents of these plants.

Singh (1988) reported systematic account of 969 species for the entire eastern Karnataka.

The Ayurvedic therapeutic properties of a few selected preparations and their usage in some diseases of 50 drugs/plants with phytochemical constituents of 177 plants from Mysore district was presented in detail by Yoganarasimhan et al. (1985).

According to WHO, as many as 80% of the world inhabitants are dependent on plants for primary health care. The tribal communities in India use over 7,500 species of plants for medicinal purposes (Pushpangadan, 1994).

India is one among the 12 megabiodiversity countries of the world and having 47,000 species of plants (excluding aquatic forms) (Anon, 1997). Traditional systems such as Ayurveda, Unani and Siddha are reported to make use of about 2,500 species.