Ethnobotany, an interdisciplinary science, is both a fascinating and rewarding study, albeit a challenging one. Powers (1874) used the term “aboriginal botany” which meant a study of the plants used by aboriginals for food, medicine, shelter, textiles, fabrics, ornaments etc. Harshberger (1896) for the first time used the word ethnobotany to indicate the plants used by the primitive and aboriginal tribes. Robbins et al. (1916) gave a broad definition of the area of ethnobotany as the investigation and evaluation of the knowledge of all phases of life among the primitive societies and the effects of the plant environment upon life, customs, beliefs and history of the tribal people.

Vestal and Schutes (1939) considered ethnobotany as a part of economic botany. Jones (1941) confined it to the study of the interrelationship of primitive man and plants. The well known ethnobotanist, Schultes (1962) pointed out that the ethnobotany is a science which requires an inter-disciplinary approach and might be pursued through several avenues.

Hernandery (1570-75) studied the flora and fauna of Mexico in relation to man and wrote a comprehensive account of 16 folio volumes. This is the first official record of a scientific expedition in history and still is a useful source of a study (De, 1968). In North America, considerable amount of work was done among the Red Indians. In South America some work was done in Peru. Amongst the recent workers of USA the works of Schultes (1941, 1956, 1960, 1962, 1963, 1967); Vestal and Schultes (1939), Jones (1941), Lipp (1971), Weiner (1971), Dolders and Lattore (1977) are noteworthy.

El-Kamail and Khalid (1996) reported the use of 68 plant species of most commonly prescribed medicinal plants in the Central Sudan.

**Ethnobotany in India**

The curative or healing properties of many herbs are mentioned in Rig Veda. This seems to be the earliest record of use of plants in medicine or surgery. Detailed account on medicinal plants are also found in Chikitsasthanam of Sushruta Samhita, written between 600 BC and 300 AD (Jain, 1967b). Atkinson (1882) published 12 volumes of the Gazetteer of Northwest Provinces of India. Bodding (1927) published his notes on the system of medicine practiced by Santals. Bodding's work is particularly significant in the sense that he spent thirty years with Santals. Majumdar (1927) made an exhaustive scrutiny of literature on Indian medicine. Kirtikar and Basu (1935) and Chopra et al., (1956) published books on Indian medicinal plants.

Janaki Ammal (1954) stressed the scope and need for seeking the help of the aboriginals in the tribal regions of Assam, the Himalayas, Andaman and Nicobar Island, and the Western Ghats, for ethnobotanical findings. The pioneering works of Jain (1963 a,b; 1965; 1967a; 1991) earned India an important place in the world map of ethnobotanical studies.
The ethnobotany of the tribals of Purulia was studied by Jain and De (1964). Santals, Bhumijas and Kora are the inhabitants of Purulia district. Yoganarasimhan and Dutta (1970) reported the medicinal plants from Orissa. Venkataram et al., (1975) reported the identity and therapeutic claims of "Sanjeevinee" which possess miraculous panaceal properties and sold in certain parts of Karnataka and Maharashtra. Raghunathan (1976 a,b,c) reported economic plants used by the tribes of Andaman and Nicobar Islands, the tribes of the Ladakh region and six tribes of the Nilgiris. Janaki Ammal and William Jabhadas (1978) studied the ethnobotany of the Kanikars of South India and enumerated sixty plants along with their local names and uses.

Arora (1978) studied the native food plants of the tribals of North-Eastern India. Medicinal uses of 15 species belonging to Apocyanaceae from Varanasi have been described by Gupta (1979). Economic uses of 48 plants from North Eastern India were described by Jain and Dam (1979). Maheshwari et al., (1981) reported 62 species used by Tharus of Kheri district (U.P.) for medicine. Medicinal plants used by tribals of eastern Rajasthan were reported by Singh and Pandey (1980) along with their medicinal use collected from herbalists, forest officials and local Vaidyas.

Observations on 20 species under 19 genera and 16 families for folklore claims by the Kondha, Murdha, Oraon, Santal and Lodha tribes of Bihar, Orissa and West Bengal for veterinary medicine were discussed by Pal (1980). The classical work of Jain (1981a) created a flurry of interest among Indian botanists in ethnobotany and a large volume of data was published from north and northeastern India (T.N. Srivasta et al., 1981b).


Joshi (1982) reported the ethnobotanical uses of eight plants and superstitions associated with these plants used by the Bhils of Dungapur and Banswara district of Rajasthan. Rao and Jamir (1982a) studied the uses of plants for relief and cure of certain diseases among the 40 tribes from Nagaland. Rao and Jamir (1982b) studied the botanical and local names of 54 medicinal plants used by various sub-tribes of Nagas. Shah (1982) gave herbal folk medicine in North India. Tiwari et al. (1982) explored the folklore information from Assam for family planning and birth control. Khan and Chaganti (1982) reported ethnobotanical uses of some plants used for curing skin diseases. The ethnobotanical survey of Tumkur district of Karnataka was made by Yoganarasimhan et al. (1982).

Nair et al., (1983) reported some medicinal plants of Kottoor forests in Trivandrum district. Lal and Yadav (1983) studied folk medicine of Kurukshetra district in Haryana. Sabins and Bedi (1983) studied ethnobotanical uses of Dadranagarhaveli and Daman, 52 plants have been listed. An account of ethnogynaecology in relation to plants has been given by Tarafdar (1983a,b).
Srivastava et al. (1988) enumerated medicinal plants during the ethnomedico-botanical exploration of Gurez valley, Kashmir. Lakshmanan and Narayanan (1988) presented folklore medicines in the remote hamlets of Anikutty hills used by the local tribes for epilepsy, fever, gout, jaundice, snake bite, stomachache and wounds. S.P. Jain (1989) enlisted 21 medicinal plants, commonly used to treat various ailments by the tribal people of Sarada forest, Bihar. The information on 23 plants, which were used by the tribals of Arunachal Pradesh was gathered and reported by Chandra (1989).

Joshi reported (1989) herbal drugs from child birth to child care in tribal Rajasthan. Singh and Maheshwari (1989) studied 40 plants used by Tharu tribes of Bahraich district, Uttar Pradesh. Thirty-three medicinally important plants used by the local inhabitants of Madhubani-North Bihar, have been recorded by Jha et al. (1989). Jamir and Rao (1990) studied 50 medicinal plants used by Zelangs, a Naga sub-tribe of Nagaland. Maheshwari and Singh (1990) presented 20 herbal remedies used by the Bhoxa tribes of Nainital.

Mukherjee and Namhata (1990) gave ethnobotanical information concerning 22 plants collected from tribals namely oran, munda, Bhaiyan and Dhanuar and Routia of Sundargarh district, Orissa. Verma et al. (1991) have studied the use of edible fungi by the tribal people of the north eastern hill regions. An ethnobotanical survey of medicinal plants and other useful plants from Northeast India was given by Rao and Haridasan (1991). Folklore and tribal medicine of Koraput and Phulbani district of Orissa State was studied by Hemadri and Rao (1991). Singh and Maheshwari (1992) studied less known medicinal uses of 30 plants among the Tharus of


Hosagoudar and Henry (1993) reported fertility and antifertility plants used by Sugalis of Biligirirangana Betta in Mysore district of Karnataka. The traditional use of 45 species for scorpion string and snake bite by the tribals of Noradehi sanctuary park of Madhya Pradesh were reported by Jain and Sahu (1993). Rai (1993) studied plants used against snake and scorpion bite of Chindhwara district. Siddiqui and Hussaian (1993) reported 36 species used for treatment of gonorrhoea in central Uttar Pradesh. Ethnobotany of five districts of Gharwal Himalayas in Uttar Pradesh was given by Negi et al., (1993). Kapur (1993) reported the ethnobotanical uses of 136 plant species used by the local people of Kangra valley (Himachal Pradesh). Singh and Maheshwari (1993) studied phototherapy for Diphtheria by the tribe Bboxas of Nainital district, Uttar Pradesh. Studies on medicinal plants of Khasi and Jaintia hills in North eastern region of India were presented by Tiwari et al. (1993).

Karuthapandi and John De Britto (1993) explored the ethnomedical properties of 62 plants in Cheranmahadevi hills of Tirunelveli
district in Tamil Nadu. Borthakur (1993) studied native phytotherapy for child and women diseases from Assam. Tiwari and Padhye (1993) made an ethnobotanical survey of Gond tribe of Chandrapur and Gadchiroli districts of Maharashtra indicating that 26 plants are being used as medicine. Ethnomedico-botanical investigation of western Maharashtra was carried out by Upadhye et al., (1994). Herbal remedies for worm infestation in Kashmir was studied by Singh (1994). Chhettri (1994) reported 36 medicinal plants used by Khasis in Khasi hills in Meghalaya. Plants used for medicinal purpose by tribals of Panchmahals district, Gujarat have been enumerated by Painuli and Maheshwari (1994). Rajendran and Henry (1994) reported 41 plant species used by Kadar tribe in Anamalai hills of Tamil Nadu.


the medicinal plants from Naryanaptna region, Koraput district of Orissa. Radhakrishnan et al., (1996a) enumerated the edible plants of Kerala. Radhakrishna et al., (1996b) studied the less known ethnomedicinal plants of Kerala State and their conservation. Ethnobotanical studies of some plants used by the Tania of Malyagiri hills in Dhenkanal district, Orissa State were reported by Brahman et al., (1996). Ethnobotanical studies on the medicinal plants of the Kani and Malapandaram tribes of South Kerala were carried by Jawahar (1996).

Plants used for edible purpose by the tribals from Bhadrak district of Orissa have been enumerated by Girach et al. (1997). V. Singh (1997) studied the less known wild edible plants of Zonskar (Ladakh) Himalaya. Katewal et al. (1997) studied 30 plant species belonging to 23 families and their importance in folk medicine from Udaipur district of Rajasthan. Birkumar Singh et al., (1997) studied 30 medicinal plants used by the Tripuri tribes of Tripura for the treatment of different ailments.

**Review of Ethnobotany in Andhra Pradesh**

The first recorded study on ethnobotany in Andhra Pradesh was by Jain et al., (1973) who studied 32 medicinal and food plants used by Chenchu, Reddi, Valmiki and Gond tribes in Andhra Pradesh and Orissa. Medicinal plants growing in the districts of Andhra Pradesh through which the river Godavari flows was discussed by Raghunathan (1976d). Observations on ethnobotany of Araku valley, Visakhapatnam district were recorded by Banerjee (1977).

Arunee Kumar et al., (1979) reported hydrophytic medicinal plants of Rajahmundry, East Godavari district. Seshagiri Rao and Hemadri (1979) gave details of medicinal plants of Andhra Pradesh. Uses of plants
as medicine in the nearby villages of Tirupati was given by Reddy et al. (1979). Hemadri et al. (1980) reported 80 folklore claims, mostly of therapeutic value gathered from the tribals and villages of Andhra Pradesh.

One hundred and eighty nine drug plants along with their available Sanskrit, Hindi, Telugu and Unani names and important uses of Karimnagar district of Andhra Pradesh have been dealt in detail by Kaplan and Kapoor (1980).


Hemadri (1981) reported 21 tribal and other folklore medicines used for rheumatism gathered from the aboriginals and villages of Andhra Pradesh. K.K. Singh et al. (1981) published a report on survey of medicinal plants from Mannanur forest, Mahaboobnagar district. Some folklore medicines of Addateegala in East Godavari district of Andhra Pradesh has been described by Kumar and Nisteswar (1983).

Rao and Hara Sreeramulu (1985) gave authentic data on the medicinal plants growing in the Srikakulam district of Andhra Pradesh. An ethno-medicobotanical exploration of tribal belt of East Godavari district was
carried by Sudhakar and Rao (1985). In this study 98 species of medicinal plants belonging to 92 genera and 44 families have been evaluated for their medicinal importance. Raja Reddy and Sudharsanam (1987) enumerated fifty seven plants exclusively used by the tribal and non-tribal people for different diseases of their domestic animals in Chittoor district of Andhra Pradesh. Plants used by the traditional healers in Chittoor district of Andhra Pradesh for treating jaundice were discussed by Raja Reddy (1986).

Basi Reddy et al. (1988) discussed sixty four medicinal plants used by the Chenchu tribes, inhabited in the forest of Nallamalais, Andhra Pradesh. The folklore uses for some medicinal plants of Sarakallu hills near Chittoor was reported by Madhava Chetty and Rao (1989). Raja Reddy et al. (1989) in one of their ethnobotanical exploration studies in Chittoor district reported the use of 125 plant crude drugs currently used by the tribals for different diseases.

A few drugs available in and around Anantapur and currently used by herbalists for treating different diseases were reported by Basi Reddy et al., (1989). Nagaraju and Rao (1989) have explored the Rayalaseema region of Andhra Pradesh for antidiabetic plant species from tribal, nontribal and herbalists who were acquainted with the methods of preparation and dosage and administration of crude drugs. Venkanna (1990) made a preliminary survey of medicinal plant wealth of Krishna district.

The medicinal plants which are being used by the village folk of Rayalaseema area for curing kidney ailments were reported by Vedavathy and Rao (1992). Nagaraju and Rao (1990b) highlighted the ethno-medical uses of 37 antiviral hepatitic plant species present in Tirumala hills of Chittoor district.

Antipyretic activity of six indigenous medicinal plants of Tirumala hills, Andhra Pradesh has been recorded by Vedavathy and Rao (1991). The mode of administration and dose were also reported. Some of the important plant species used as abortifacient by the tribals of Rayalaseema region were recorded by Vedavathy et al. (1991). Krishna Mohan and Bhiravamurthy (1992) reported 37 selected species of plants which are used as medicine by tribals of the Prakasham district.


Herbal plants in Mannanur forest was surveyed by Pullaiah and Dharmachandra Kumar (1996) for medicinal plants and they reported medicinal uses of twenty one species of Mahabubnagar district. Sai Prasad Goud and Pullaiah (1996a) have reported 40 wild edible plants consumed chiefly by tribal inhabitants of Kurnool district. Sai Prasad Goud and Pullaiah (1996c) reported forty-one plants used in ethno veterinary medicine by tribals

Gupta et al., (1997) carried out ethno-medico-botanical studies at Paderu forests of Araku valley in Andhra Pradesh. Imam et al. (1997) studied folk-herbal medicines from the tribal pockets of Adilabad district. R.V. Reddy et al., (1997) studied 17 interesting crude drugs used by tribals of Cuddapah hills in Andhra Pradesh with special reference to ephemeral fevers and anthrax in cattle. Ethnobotanical studies were carried out by Rajendran et al., 1997 in some parts of Andhra Pradesh and Tamil Nadu to identify orchids reported to have medicinal properties and to study their botanical distribution. This was resulted in the recording of 9 orchids used by the local populations. Madhava Chetty et al. (1998) identified 39 species belonging to 36 genera and 26 families used by tribals and villagers to cure numerous ailments. Savithramma and Sulochana (1998) enumerated six endemic and medicinal plants used by the tribals and non-tribal inhabitants of Chittoor district of Andhra Pradesh for treating different diseases.

**METHODOLOGY**

**Ethno-Medicobotany**

The approaches and methodologies for ethnobotanical work, suggested by Jones (1941), Schultes (1962), Jain (1964, 1967b, 1987, 1989), Croom. (1983), Bellany, (1993), Chadwick and Marsh, (1994), and Martin (1995) were followed in the present study. Emphasis was given mainly on intensive field work in selected habitations of the tribes and those habitations were given priority which are isolated from urban centres or situated deep interior into the forest.
Plants employed in material culture and plants associated with folk songs, folk tales, worship, mythology, taboos, magic-religious beliefs, ceremonies etc were studied in addition to the local plant names. In this respect the ethnobotanical aspects suggested by Schultes (1960), and Jain (1964b, 1967b, 1987, 1989) were followed. Ethno-medicobotanical surveys were undertaken during 1997-98. Interviews were conducted with tribal Chenchus, Sugalis, Yerukalas and others at their dwellings in Guntur district of Andhra Pradesh. The knowledgable informants were taken to the field and along with collection of plants for the voucher specimens, the use of the plants as given by the tribal informants was recorded. Information regarding the folk medicinal practices was collected for 110 plants.

Information on plants used by the tribals for food, construction of huts, for fibres, preparation of alcoholic drinks, magico religious beliefs has also been collected. The original information given by the tribals was noted in the field note book. Vernacular names or local names used by the tribals were recorded in the field note book.

**Herbarium Methodology**

As per the information given by the tribals plant specimens have been collected. Every plant was collected in quadruplicates either with flowering or fruiting stage. Immediately after cutting the twigs of about 30 cm in length they were placed in a polythene bag to avoid further desiccation and to protect from withering. Folk uses and local names were recorded immediately in the field note book. Field numbers were given for every specimen collected and the above information was recorded in the field itself. The collected specimens were poisoned, pressed, dried and stitched on herbarium sheets according to the methodology described by Jain and Rao (1976).
The collected specimens were poisoned by dipping the whole twig in saturated mercuric chloride in ethyl alcohol solution and then the poisoned specimens were placed between blotting papers with the help of forceps. These were properly tied in iron pressers with the help of ropes. After 24 hours the blotting papers were changed and the specimens were spread properly. Some leaves are placed upwards and some downwards to show the characters on both surfaces. These spread specimens were once again placed in other dried blotting sheets and tied again in iron pressers. This process was continued till the specimens were completely dried.

The poisoned, pressed and dried specimens were pasted with glue on thick mount boards measuring 42 x 28 cm and stitched with thread. Labels with all relevant information such as name of the plant, family, locality, altitude, date of collection, salient notes and collector’s name were affixed on the right hand bottom corner of the mounted sheets.

**Identification**

The identification has been done by the detailed in depth analysis of flowers by dissecting it under binocular stereomicroscope. Preliminary identifications were made by checking the specimens with the help of "Flora of Presidency of Madras" (Gamble and Fischer, 1915-1935), Hooker's "Flora of British India" (1872-1897) and "Flora of Andhra Pradesh" (Pullaiah et al., 1997). Later the identifications were confirmed with the help of latest monographs, floras and comparing with authentic specimens in the Sri Krishnadevaraya University, Botany Department herbarium. All the identified specimens are deposited in the herbarium of Botany Department, Sri Krishnadevaraya University, Anantapur.
Enumeration of Medicinal plants

The families are broadly arranged according to Bentham and Hooker's (1862-1883) system with certain exceptions to accommodate recent modifications. All the genera in a family and all the species under genus are given in alphabetical order. Nomenclature of each species is brought up-to-date according to International Code of Botanical Nomenclature.

Citation

The correct and valid name is given at first, followed by its author name and place of publication. For Gamble, the page number in parenthesis represent the 1957 edition whereas the page number outside the parenthesis represents original edition.

Phenological Data

Vernacular name, locality in which the plant collected followed by collector's name and with field number.