The present day ethnobotanic study begun in 1873 with the work of Stephan Power who used the term “Aboriginal botany”, which elucidated the total aboriginal dependence on plants for food and medicine. The term ethnobotany was first introduced by Harshberger (1895) as “The study of plants used by primitive and aboriginal people”. Before the introduction of the term “Ethnobotany”, the study of traditional botanical knowledge was focused almost entirely on the applications and economic potential of plants by native people. At this time the subject included mere identification and cataloguing of plants used by the primitive people. In 1916, Robins Harrington and Feiro Marreco promulgated the broad definition of ethnobotany and considered, it as a study and evaluation of the knowledge of all phases of plant life amongst primitive societies, and of the effects of vegetal environment upon the life, customs, beliefs and history of the people of such societies. Later in middle of the 20th century anthropological and ecological aspects were also included with it. Ethnobotanical study was escalated during 1980's and the subject became multidisciplinary (Cotton, 1996). Since time immemorial man has used various parts of plants in the treatment and prevention of many ailments. (Chah et.al. 2006).

Ethnobotany is the science simply defined as “the existing interrelationship between plant-animal, animal-human and plant-human”. In last few decades ethnobotany has become an important thrust area of research for the documentation and preservation of historical traditional knowledge at tribal level as well as to develop resource management, conservation of biological diversity at genus, species, ecosystem, forest type and regional level. On other hand Ethnobotanical knowledge has been described so far as variety of terms that can be each interpreted in slightly different ways. Indigenous Traditional Knowledge (ITK) and Indigenous Botanical knowledge (IBK) are some of the terms used recently for the description of the information with reference to ethnobotanical importance.
Introduction

With the advancement of ethnobotany, many definitions have been given for the term, from time to time. Some of the popular definitions are:

a. Aboriginal botany: The study of all forms of vegetation which aborigines use for commodities such as medicine, food, textile, and ornaments (Power, 1873).

b. Ethnobotany: The study of plants used by the primitive and aboriginal people- (Harshberger, 1895).

c. Not just a record of plant use but the traditional impressions of the total environment has revealed through custom and ritual. - (Robbins et.al. 1916).

d. The study of the relations which exist between humans and their ambient, vegetation. (Schultes - 1941).

e. The Study of interrelations of primitive man and plants- (Jones 1941).

f. As an ecological science capable of forging a link between Geography, Botany and Ecology. (Carter 1950).

g. The Study of direct relationship of humans and plants - (Ford 1978).

h. All studies (concerning plants) which describe local people's interaction with the natural environment. (Martin 1995).

i. Total natural and direct interrelationship between man and plants and his domesticated animals - (Jain - 2002).

Ethnobotany deals with the direct relationship of plants with man. The term has often been considered synonymous with either economic botany or with traditional medicine. Early origins of traditional medicine must have had their roots in ethnobotanical folklore, but today traditional medicine incorporates several well organized, distinct systems of diagnosis and cure. In India alone, three traditional systems of medicine namely Ayurveda, Siddha and Unani are distinguished. Further, ethnobotany includes study of foods, fibers, dyes, and tans, other useful and harmful plants, taboos, avoidances and even magico-religious beliefs about plants (Jain, 1967a, Ford, 1978).

The basic aspect of any ethno-botanical study is the recognition that humans form biological population and are dependent on culture (Ford 1978). Ethno-botanical terms include the classification of plants and human psychological disposition.
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towards them. This will then determine how vegetation will be manipulated and what the consequences of human utilization. Cultural beliefs determine the conditions of human existence and the biological properties of human population define the quantity of plants that must be obtained. Together they form the human ecology of ethnobotany (Ford 1978).

Ethnobotany is a rapidly expanding science. In the last three decades, it has considerably expanded, both in its concept and scope. Beginning with study of plants used by tribals for food, medicine and shelter, now it includes studies like conservational practices of tribals, ethno-pharmacology, ethno-pharmacognosy, ethnomusicology, ethno-gynecology etc.

Tribals or ethnic groups are world wide in distribution with a population of 250 million. The term ‘ethnic’ pertains to human racial groups, native to a particular geographical region, in contrast to the populations that are either immigrant or much influenced by the influx of civilization. The prefix ‘ethno-’ is used in various contests related to the ethnic groups, to deal with their traditional culture, covering all aspects of their lives such as gods, rituals and festivals, customs, language, dress, agriculture, food, medicine, dwellings, etc. Ethnic races inhabit in five continents (Asia, Africa, Europe, North America, and South America and Australia) out of six continents of the world. In Asia about 150 million people reside in forest areas, while the Indian sub-continent is inhabited by over 53 million tribal people belonging to over 550 tribal communities which belong to 227 ethnic groups (Anonymous, 1992). These constitute about 7.7% of India's population. Tribal communities live in remote and inaccessible parts of the country. Tribes are distinct ethnic groups, usually confined to definite geographical areas with a common dialect, are culturally homogeneous and adopt a unifying social organization. The Ethnic groups or tribes known all over the world have their own culture, customs, social and religious rights, taboos, totem, legends, folklore, folk tale, songs, rituals, myths food and medicine practices. Forests and the plants play an important and vital role in their life style.

According to Gupta (1987), the word ‘Tribe’ is now here defined in the constitution of India; rather it has been a content to declare in its Article 342 that the scheduled tribes are the tribes or tribal communities which the president may specify
by public notification. He further states that tribal people in India live in forests, hills, plateau and naturally isolated regions and are differently termed as Adivasi (original settlers), Adim Niwasi (Oldest ethnological sector of the population), Adimjati (primitive caste), Aboriginal (indigenous), Girijan (hillsmen), Vanyajati (forest caste), Vanavasi (forest inhabitants), Janjati (folk community), Anusuchit Janjati (Scheduled Tribes) and several such other names, signifying - either ecological, economic, historical or cultural characteristics. Among these terms, the most popular is Adivasi, while the constitutional name for them is Anusuchit Janjati (Scheduled Tribes).

There are some tribes in India which are recognized as most primitive human societies in the world, depending fully on the forest for their survival and live in perfect harmony with the nature. Such primitive tribes include Onges, Jarawas, Sentineles, Kobo and Shompens of Andaman & Nicobar Islands. Abhujhmaria, Baiga, Pahari Korwa, Kamar and Birhors, the five tribes residing in Chhattisgarh are also declared primitive tribes by the Government of India. Some of these primitive tribes are at the verge of extinction. The Constitution of India provides special care for the ethnic people under Article 46 (Sinha 1996).

Ethnic groups of various regions of the world are the real custodians of nature’s wealth and experts in herbal medicine. The traditional indigenous knowledge transferred orally for centuries is fast disappearing because of the technological developments and changing culture of ethnic groups (Ganasen, et.al. 2004). In spite of all these disturbances the indigenous phytocure methods are restored amongst the tribes, as it is a part of their culture. Moreover, the people in ethnic tribes are averse to change the mode of their life and traditions. But this traditional medical knowledge slowly diminishing, so it is to be procured and preserved in various form for future generation (Burmol and Naidu, 2007). The indigenous groups posses their own distinct culture, religious rites, food habit and a rich knowledge of traditional medicine (Harsha et.al. 2001, 2003).

The man plant relationship can be broadly classified into two groups, viz. (a) Abstract (b) Concrete (Jain, 1989).

a) Abstract relationship: It includes faith in the good or bad powers of plants; taboos; avoidances; sacred plants; worship and folklore. The folklore includes
not only fables or verse about, or having references to plants but also similies and metaphors based on plants.

b) Concert relationship: It includes mainly the material use such as in food, medicine, house building, agricultural operations, other domestic uses, trade, plants in aesthetics paintings, carvings, house decoration and the act of domestication, conservation, improvement or destruction of plants. All relationships between man and plants first divided into material, cultural or (spiritual) relations and then further divided into four categories:

a) Relationship useful both to man and plants.

b) Relationship useful to man harmful to plants.

c) Relationship useful to plants, harmful to man.

d) Relationship harmful both to man and plants.

With the development of Science and Technology during the 18th and 19th century, useful plants were over-exploited by the human being. When the gradual decrease in plant resources lead to the harmful effects due to environmental degradation, man started paying attention towards its conservation and sustainable use. Today in urban areas, human beings are removed from the benefits of plants, whereas in tribal areas people still live with much dependence on plants. Bastar is one such area in Chhattisgarh, where tribals live with nature in total harmony. The health and livelihood security of tribals is much depended on plants. They know the importance of plants and forest for their survival, hence practicing sustainable use of plant resource.

The growing interest in ethnobotany is due, at least in part, to changing attitudes towards traditional people. During the middle of the twentieth century, when it seemed that the world's indigenous people were about to disappear, traditional societies and their knowledge attracted widespread scholarly attention, primarily as part of an anthropological rescue operation.

Since the early ethonobotanical studies in aboriginal plant use, the scope of the subject has expanded enormously, encompassing the botanical aspects of a numbers of ethno scientific fields including ethnomedicine, ethnotaxonomy and ethnoecology as well as the anthropological and botanical study of material culture and subsistence
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mode, For the sake of clarity six major fields of investigation are distinguished like ethnoecology, traditional agriculture, cognitive ethnobotany, material culture, traditional phytochemistry and palaeoethnobotany.

Main areas of modern ethnobotanical investigation constitute a diverse field of study which examines all aspects of the reciprocal relationships between plants and traditional peoples. It is, by necessity, multidisciplinary in its approach and draws from a broad range of subject areas. Ethnobotany has much expanded and diversified from last 25 years and developed into a multidisciplinary field of natural science combining the archeology, anthropology, ecology and molecular biology. Recently there has been an increasing awareness of the practical and social value of traditional knowledge and many workers are becoming involved in Applied Ethnobotany. The practical application of ethnobotanical data is done in areas such as biodiversity prospecting and conservation biology by the study of tribe, plant diversity and habitat conservations (Rajasekaran & Warren 1994).

Ethnobotanical data is utilized by economic botanists for discovering new plant resources, for fresh ideas to environment planners, a tool for basic selection of plant species for development of drugs by pharmacologists, phytochemists and clinicians, as a new source of history of plant names phytochemists and, clinicians, as a new source of history of plant names for linguists, a source for locating new germplasm for agriculturists, etc. This science has now emerged as an interdisciplinary study which can involve, in addition to botany and ethnology, areas of archaeology, sociology, folklore, mythology, linguistics, literature, forestry, ecology, agriculture, medicinal sciences, economics, phytochemistry, pharmacology, veterinary medicine, etc. It is interesting to note that ethnobotanists have innovated identification of food materials from the dissection of human feces; this has proved to be a valuable tool, in the study of prehistoric nutrition. Though a variety of subjects have intentionally or even accidentally contributed to the objective of ethnobotany, yet this science has remained primarily an applied discipline of botany; this is evidenced by the fact that the tradition behind ethnobotany has been built largely by contribution of plant scientists.
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Ethnoecology is the study of local people's perception, interaction, and knowledge of sustained utilization and preservation of all aspects of their natural environment. The emphasis is on a locality, its indigenous (local, native) people of preferably a single community, and their traditional (or folk) knowledge, which is hitherto unrecorded and was being passed on from one generation to another, verbally. This is in contrast to acquired scientific knowledge which is the recorded outcome of research by trained people, in terms of established international procedures. The prehistoric man must have used plants as food, fuel, fodder and for curing his aliment since time immemorial. A variety of uses of plants are mentioned by Martin 1995.

Since those early days, and for many millennia, the knowledge has passed on from generation to generation predominantly through oral folklore, and in a very small measure through other means of preservation like the sign language on rocks, rock art, archeological remains, and in very recent times, through scripts. Till about thirty years ago, Ethnobotany was largely an area of academic pursuit with problems of food scarcity, and apparent exhaustion of known sources of food, recognition of limits or tolerance of human body to the effects of chemical molecules in allopathic medicine, man again turned to Mother Nature for newer sources for food and drugs, and thus intensive study of ethnobotany in the whole world has become inescapable.

The culture and the habitat of ethnic groups are both changing to urban patterns at quite fast rate. Hence their knowledge has been diminishing where it took birth. During the last 100 years the attention of ethnobotanist has been more on primitive people, many such societies have been studied, and elements of their knowledge systems documented. Otherwise much of this knowledge would have been lost. Even now the villages inhabited by the tribes are considered ideal for ethnobotanical studies and the field methods in literature are largely aimed towards their study.

There is practically no human activity in which plants do not play a direct and indirect role. Therefore, Ethnobotany has a linkage with almost every other science and field of knowledge. Recent development of Ethnobotany in India has been strongly oriented towards the promotion of documentation of traditional knowledge,
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traditional herbal medicine, traditional famine foods, traditional resource utilization, traditional sustainable use and management of natural resources, traditional conservation practices of natural resources etc. with applied approaches in the field.

Traditional home remedies and herbal medicine constitute prominent dimensions of local health tradition and unique heritage of district Bastar, Chhattisgarh. In Chhattisgarh, traditional home remedies and herbal medicines are administered both in remote rural areas as well as in urban areas where allopathic medicine is easily available. The health of the people of the state is determined by medical pluralism. Chhattisgarh, the premier herbal state of India upholds unique local health tradition interlinked with a large number of sacred groves and rich traditional knowledge base of thousands of folk healers, Baidyas, Guniyas and local knowledgeable person in tribal area of Bastar. The Traditional Folk Healers of Bastar Chhattisgarh have sustained a wide range of folk healing practices since generations together.

The issues of conservation of medicinal plants and their sustainable use are interlinked with these local treatments. The Government policies and programmes attach great priority on collaboration between allopathic and traditional remedies. The documentation of traditional indigenous knowledge has initiated path breaking ventures to bring about synergy between these two different streams of primary health care approach. A great majority of patients in rural area of this State have recognized the efficacy and wide use of traditional medicine. The community has recognized the potentiality for improving both the streams towards ultimate purpose of promoting health by developing a more holistic approach to health care. Initiatives for value addition, collection, processing, non-destructive harvesting and cultivation of medicinal plants for livelihood promotion and health security in district Bastar of Chhattisgarh have been encouraged.

The Traditional and primitive folk healing practices among tribals of Bastar normally involve medicine derived from plants and animals available within local agro climatic zones. Different studies have been conducted by scientists on folk healing practices in different districts of Chhattisgarh. It is evident that folk-logic including cultural, biological, historical, religious, and environmental factors that
significantly influence the folk therapy. The concepts of illness and healing are not universal. They vary from culture to culture. One third population of Chhattisgarh is tribal. They have their own value system and cultural interpretation of disease and treatment. They have a very different understanding of why people get sick, and how they can be treated. The Traditional healers of Bastar have been treating and rendering miraculous cure to thousands of patients annually. They claim to treat most complicated patients of bone fracture who have been refused by the hospitals in different cities. The ailments like infertility, cancer, malaria, diabetes, skin diseases are not beyond their expertise. These local practices have evolved a grass root mechanism for sustainable use and conservation of medicinal plants (MAPs) resources, since time immemorial. This dimension has been ignored by planners. There is a wide gap of understanding between these two streams of therapeutics. The doctors very often fail to understand this paradigm. Such misunderstanding leads to wide scale misinterpretation of folk healing traditional practices and the relevance for sustainable use and conservation of medicinal plants.

Green Consumerism drive and growing demand for plant derived drugs and food supplements all over the globe have stimulated the rising cost of herbal preparation and bio prospecting of new plant-derived drugs. In neo-colonial era, the medicinal plants play an important role as health aid. The wide spread use of herbal remedies and health care preparations derived from commonly used home remedies and medicinal plants in Bastar, Chhattisgarh has been traced to the occurrence of natural products with medicinal properties. The growing demand on specific medicinal plants grown in wild has led to over exploitation of habitat and extinction or loss of the genetic diversity. All over the world, not less than 40% of total medicinal consumption has been derived from folk medicine. In Japan; the demand for herbal medicine is greater than the pharmaceutical drugs. In other developed countries of the world like France, Germany, Hungary, Poland, Spain, Turkey, and the United Kingdom, the consumer demand for herbal products is growing high day-by-day. These countries are now turning to use traditional herbal remedies for daily maintenance of personal health and well being. The herbal raw materials have been widely used in cosmetic industries of these countries. These products are skin tissue regenerators, anti-wrinkling agents and anti-age creams, skin creams, skin tonics, etc. derived from medicinal plants that are grouped together as pharmaceuticals. Now-a-
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days, the scientists are exploring to develop herbal based drugs to treat old and emergent diseases such as malaria and AIDS. Different pharmaceutical companies in India as well as abroad are manufacturing a wide range of plant-derived dietary supplements, Phytochemicals and pro-vitamins which are prescribed by doctors for promoting immune system and maintaining good health. These herbal food supplements contain ingredient which are recommended as functional foods, nutriceuticals and nutraceuticals. The pharmaceutical industries in both developed and developing countries are investing huge chunk of fund for manufacturing and marketing of these products world wide. Such activities have led to over exploitation, extinction, environment unfriendly harvesting techniques, loss of growth habitats and unmonitored trade of medicinal plants. The Scientists have proved that a good number of medicinal plants possess penile potency properties and anti-cancer principles. These medicinal plants are widely exported to markets of Germany, France, Switzerland, Japan, the U.K., and the U.S.A.. The reports have revealed that such herbs used for preparation of anti-cancer drugs are exported from Southern India and Srilanka. Convention on International Trade of Endangered Species of Wild Flora and Fauna has delineated guidelines and protocols for preventing over exploitation of herbal habitats against such practices and losses. Unfortunately, these protocols and guidelines have not been implemented in good number of developing countries of the world for prevention of biopiracy.

Many people, especially in the poorer countries, rely on plants collected from the wild localities for food, construction materials, fuel wood, medicine and many other purposes. Today, there is often a decrease in the availability of wild plant resources, related to increased human populations and the effects of competition with other forms of land use. An ethnobotanical study of these aspects is basic to an efficient use of our plant resources. Such a study is very important, because often the same species is used for different purposes; the uses in one area are unknown in another or in the civilized areas. Integrated information on various uses of a particular species enhances the economic potential of the species. Ethnobotanical studies can help local communities define their needs for plant resources more clearly, thus assisting them to state their cases for continuing access to certain areas of land or for provision of alternatives to wild gathering, if needed (Martin, 1995).
Traditionally, local communities worldwide are extremely knowledgeable about local plants and other natural resources, on which they are so immediately and intimately dependent. Much of this wealth of knowledge is rapidly becoming lost as traditional cultures become eroded, which is a serious concern that prompts ethnoecological studies. Ethnobotanists can play a useful role in rescuing the disappearing knowledge and returning it to the local communities. This will help conserving at least a part of ethnobotanical heritage, as a living-cultural ecosystem, helping to maintain a sense of pride in local cultural knowledge and practices, and reinforcing links between communities and the environment, so essential for biological conservation (Hamilton, 1995). Ethnobotanical studies can also help identify conservation issues, such as cases where rates of harvest of plants exceed rates of re-growth.

One important current concern of ethnobotanical research is the potential use of plants as medicine, a knowledge that is often exclusive to the specific communities and linked to the local flora. As repeatedly emphasized in different contexts, the importance of plants in our lives, in addition to being a source of food, is their therapeutic potential; every culture in the world developed its own practices of treating the diseased. The fund of knowledge developed over the millennia by thousands of ethnic groups, is largely unrecorded and faces the danger of becoming extinct. Our urgent concern is to preserve, refine and use this information for a more effective management of health.

Early in the human history, familiarity with plants capable of causing noticeable physical and psychological changes when taken in or applied to the human body, became associated with certain individuals, the ‘medicine men’ (or women). These “specialists” are usually the repositories of vast knowledge of plant properties, and gradually acquired great powers over the rest of the population, a characteristic that continues today in many primitive societies (Schultes and Reis, 1995). On the other hand, the general population (often the women) is also conversant with the medicinal use of their flora, an aspect that led to the concept of ‘folk medicine’, in contrast to the largely magical and exorcist practices of the medicine men and women. In many indigenous ethnic groups in the world, thus there are in effect, two systems
of indigenous medicine. In the first system, psychoactive plants, considered to have a resident spirit and therefore to be sacred, are used to communicate with the spirit world via visions and other hallucinations. Failing a diagnosis through this medium, the medicine man or woman has recourse to prescribing medicinal plants. The second system of medical practice is based wholly on general familiarity with medicinal plants knowledge amassed by experimentation over millennia and passed on orally from generation to generation (Schultes and Reis, 1995).

Man acquired knowledge on selective uses of plants through trial and error. The healing properties of certain herbs or their parts were discovered either through the domestic animals or by accident. Application of plant product was also influenced by the resemblance as white latex considered beneficial for poor lactation and twisted fruit of Maror fali (*Helicteres isora*) for griping stomach pain, jointed stem (*Cissus quadrangularis*) in broken bones etc. This knowledge was passed on from generation to generation mainly through oral folklore and to some extent through sign language on rocks and rock art or Pictography etc.

Since 20th Century traditional knowledge is being threatened. Firstly, due to destruction of forest with which native home of tribes and environment, where traditional knowledge took birth flourished and survived, is being destroyed. Secondly due to rapid acculturation affecting the ethnic culture due to this pressure and also the renewal of interest shown by many in natural foods and drugs has made ethnobotany an organized science in very short period (Jain 1995).

The first book published titled “aboriginal botany” (Power 1873) describe the botanical investigation of native plant use, a term which was readily accepted by the academic community over the next 25 years. However, as the nineteenth century drew to a close, interest in aboriginal botany began to broaden, particularly during preparations for the 1893 World's Fair which involved both anthropologists and archaeologists in the collection of traditionally useful plant products (Ford. 1978). Significantly, this exhibition included the hazard collection, a range of preserved plant products used by the ancestors of the Pueblo Indians in Mancos Canon in Colorado, and which was later sent to the University of Pennsylvania for analysis. There, botanist John Harshberger examined the collection, and in December 1895 he finally
delivered a lecture in which he described items of food, dress, household utensils and agricultural tools of plant origin preserved in the hazard collection; it was during this lecture the term ‘ethnobotany’ was first used (Harshberger 1896).

In the decades which followed, the study of ethnobotany entered a phase of rapid expansion and change. Only a year after his historical lecture, anthropologist Walter Fewkes introduced Harshberger’s term to the anthropological literature, where he emphasized Hopi Indian plant names and their etymology; in 1900 the first doctoral dissertation in ethnobotany, “The ethno-botany of the Coahuilla Indians of Southern California” was awarded to David Barrows by the University of Chicago. In 1916 ‘ethnobotany’ had expended to include not only how plants were used by indigenous peoples, but also how they were perceived and understood within deferent cultures (Robbins cited in Castetter 1944). This last point was later expended by American ethnologist Melvin Gilmore who argued both the need to interpret ethnobotanical data within its cultural context, and the important role of linguistics in ethnobotanical study.

Ethnobotanical studies are now in progress worldwide. Many projects are aimed at the documentation of traditional knowledge about plants. In Africa traditional agriculture knowledge is increasingly incorporated into rural development programmes while in Australia traditional methods of vegetation management are receiving considerable attention from the ecological community.

In India, since Ayurveda was a well developed and recorded system, the highly literate Baidyas with knowledge inherited either from the father or the teacher, took the lead in treating the sick, more particularly among the royalty, the gentry and the elite. By the power of a zealously guarded knowledge, and the social status of their clientele, the Baidyas constituted the top tier of medical practice, and became a very influential component of the society, a status which the doctors of our time too enjoy. The folk medicine of the illiterate but very knowledgeable, took the second place while the magic medicine, the third tier, was confined only to certain pockets. Thus, in India, and possibly in China, there have been three tiers of indigenous medical practice, although in most parts only two of them (tiers one and two or two and three) coexist. When in desperation, one would try everything. By all counts,
ancient cultures throughout the world, nurtured till recent times, vast amounts of knowledge pertaining to the uses of their flora. This knowledge, of great potential value to humanity as a whole, appears to be doomed to extinction in many regions due to rapid acculturation and westernization of indigenous people. The loss of this knowledge is especially detrimental to our efforts in seeking potentially valuable chemical constituents in the great number of species of unstudied plants, a major goal of ethnobotany and particularly ethnopharmacology.

Herbal medicine still occupies a very important place in the developing world. Exaggerated fake cures, and a severe abuse of herbal medical system that coincided with the development of sophisticated pharmaceutical chemical industry, have led to almost total disappearance of herbal medicine in the United States, but there has been a considerable revival of interest during the past few decades. In some European nations, herbal medicine has retained some popularity, as evidenced by the Culpepper shops of UK and the Paracelsus shops in Switzerland (Schultes and Reis, 1995) and by some very popular books in Switzerland (Fluck, 1988) and UK (Mabey, 1998). Right at present, herbal medicine and cosmetics ride a new wave of popularity, throughout the world.

Ethnopharmacology is a subdivision of ethnobotany (or ethnoecology). It is the study of aboriginal knowledge of the physical properties of plants their products and the accompanying familiarity with those components of the vegetal environment that permit indigenous peoples to use various plants for their presumed medicinal value. Ethnopharmacology is one of the most active and modern fields of ethnobotanical research. Its importance in human welfare is well recognized.

The origins, development and current status of different aspects of ethnopharmacology have been reviewed (Bruhn and Helmstedt, 1981; several authors in Schultes and Reis, 1995). The first successful multidisciplinary study on an ethnopharmacological problem is that of an arrow poison from *Strychnos nux-vomica*, Loganiaceae, which is well recorded (Holmstedt, 1995). In 1803, the French botanist Leschenault de la Tour collected samples of an arrow poison in Java, along with the detailed information of ingredients and preparation. A.L. de Jussieu, another French botanist, identified the major plant ingredient as belonging to the genus *Strychnos* and
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related it to the species nux-vomica. Leschenault gave samples of the poison to Magendie and Delile, who studied its effects on hens, rabbits, dogs and a horse. In 1809, they reported violent convulsions, asphyxia and death of the test animals in five minutes and discovered that its chief action was on the spinal cord. This is a very significant finding as, for the first time the action of a drug is associated with a particular organ. In 1824, Strychnine, the alkaloid responsible for the physiological effects, was isolated and characterized by Pelletier and Caventou. Later, strychnine was introduced into clinical medicine. In 1963, Woodward succeeded in the total synthesis of the alkaloid. Such complete successes of collaborative research programmes are rare but they are pointers to the need for, and the potential of, such studies.

Tubocuranine, the muscle relaxant compound in the traditional arrow poison from Chondrodendron tomentosum (Menispermaceae) from South America, is an indispensable aid in modern surgery. The studies on this species are hailed as an example of success of ethnopharmacology (Bisset, 1995). A number of arrow poisons that were investigated were discussed by Bisset (1995). Oliver-Bever (1986) has cited several examples of West African species of plants, including Erythroxylum coca, whose traditional therapeutic properties were evaluated pharmacologically. Rauvolfia serpentina, Cannabis sativa, Papaver somniferum, Gymnema sylvestre, Picroorrhiza kurroa, Azadirachta indica, Curcuma longa, etc., are some Indian examples of modern pharmacological confirmation of traditional uses of plants.

The Male fern (Dryopteris filix-mas) in Europe, the Kamala dye tree (Mallotus philippensis, Euphorbiaceae) in South Asia, the Gemma Agrimoniae (winter bud tree) (Hagenia abyssinica, Rosaceae) in East Africa, are all Botanically unrelated; yet they were used as teaniafuge in the traditional medical systems of these far off regions of the globe. Confirmation from pharmacological studies that all the four species contain similar phloroglucinol-type compounds with strong anthelminthic activity is a tribute to ethnomedicine. The past experience in this area emphasizes the great need for and the benefits of such studies.

As a concept, ethnopharmacology has been firmly established with high promise, as a means of scientific validation of traditional therapeutics and of
discovering new drugs. Nevertheless, there has been a considerable disagreement on
the definition of the term. Among the several definitions of ethnopharmacology, two
have come into general use. Rivier and Bruhn (1979) defined it as “the observation
and experimental investigation of indigenous drugs and their biological activities”. A
later definition is as “the interdisciplinary scientific exploration of biologically active
agents traditionally employed or observed by man” (Bruhn and Holmstedt, 1981).
These definitions are neither comprehensive nor effective, but for the time eying there
are no better alternatives.

Ethnobotanical, phytochemical, biochemical, in vivo physiological and
clinical studies of the traditional medicinal plants is an area of research that is
essential to promote our efforts in search of medicines. Today ethnobotany has
become an important and crucial area of research and development in resource
management, conservation of biodiversity of flora and fauna at ecosystem levels for
socio-economic development of the region. Either the appearing of new vistas of
ethnobotanical studies, the scope of ethnobotany has now greatly enlarged, both in
terms of its theoretical contributions to an understanding of plant human relationship
as well as for practical applications and utilization of biological knowledge of tribals
to their medicine systems along with multifarious ways.

Forest wealth or forest resources comprising of all plants, plant parts and their
products available in the forest areas have direct and indirect relationship with the life
of local population, tribals, forest dwellers and many other backward group
inhabitant. The sociological systems, customs, cultures and life patterns of these
groups are also closely related with forests. They utilized forest products for food,
fodder, medicine, fuel, gum, agriculture implements, aromatic oils, basketry works,
charcoal, decoration, defense equipment, dye, fencing, fishing, furniture, house
building, hunting equipment’s, implements, musical instruments, poison, rope,
sale/barter, smoking, socio-religious, timber, tools, utensils etc. for their sustenance,
daily needs and many other consumer products for self-sustenance, whereas
commercialization or collection and sale of forest products are mostly helpful
to the local inhabitants for their economy and day to day needs of livelihood
(Masih, 1990).
Forests are not only the source of major and minor forest products but it also provides and fulfils the basic needs and demands directly and indirectly in life pattern of tribals. They also use an enormous range of wild plants and have developed a unique understanding of the forest resources and passed on these traditions, taboos, totems, folklore, traditional medicinal remedies and knowledge etc. by word of mouth from one generation to other generation. They also have the key to understanding, utilizing and conserving the plant resources. The storage of ethnobotanical traditional knowledge of plants and animals origin in memory is really a God gift for a resource person in each tribal group. Each tribal group has different ethnobotanical knowledge than its neighbors, which is either acculturated or lost with the knowledgeable person of that tribe.

The present century has witnessed the emergence of Ethnobotany as a distinct academic branch of the natural science. All over the world, these has been an increasing interest in the scientific study of man-plant interaction in the natural environment which is clearly visible among various indigenous people commonly designated as Aboriginal, Natives, Autochthonous, Adivasi, Vanyaajati, Forest dwellers, Adimjati, Janjati, Tribals etc.

Recent development of Ethnobotany in India has been strongly oriented towards the promotion of documentation of traditional knowledge, traditional herbal medicine, traditional famine foods, traditional resource utilization, traditional sustainable use and management of natural resources, traditional conservation practices of natural biological resources etc. with applied approaches in the field.

More than 300 million indigenous people live in more than 70 countries in habitats ranging from Arctic to the Rainforests of Asia and Africa, South America, China. Indian Union only together has more than 150 million indigenous and tribal people. According to the World Health Organization estimates, the present demand for medicinal plants is about US $ 14 billion a year and projected demand by the year 2050 is US $ 5 trillion. Medicinal plant related trade in India is estimated to be around Rs. 550 crores per year, while the value of global trade in medicinal plants has been put at over US $ 60 billion per year, Indians total turnover of Rs. 2300 crores of Ayurvedic and herbal products, major over-the-counter (OTC) products contribute
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around Rs. 1200 crores. Other formulations fetch around Rs. 650 crores and classical Ayurvedic formulations contribute the remaining Rs. 450 crores. With world demand growing at 1% annually, the export market for medicinal plants appears to be growing faster than the Indian domestic market.

India is sitting on a gold mine of well recorded and well practiced knowledge of traditional herbal medicine. But unlike China, India has not been able to capitalize on this herbal wealth by promoting its use in the developed world despite their renewed interest in herbal medicines. This can be achieved by judicious product identification based on diseases found in the developed world for which no medicine or only palliative therapy is available; such herbal medicines will find speedy access into those countries.

It seems unlikely that medicinal plants will decrease in importance anytime soon. For one thing, the number or people demanding greater access to herbal remedies in the industrialized countries seem likely to go on increasing. For another, the healing plants will continue as the primary means of preventive and curative healthcare in the developing countries. Indeed, rising population growth and falling economic levels will probably make these plants more important than today.

The present time, therefore, offers a unique opportunity to work with developing countries in implementing policies to regulate medicinal plant conservation, cultivation, processing, and marketing. At this pioneering stage, in which norms and standards for the healthcare of billions of people in the developing nations are going to be rapidly set, a strategy for the future should be developed. This will be far from easy; the medicinal plant business is fluid, undocumented, and largely unregulated. Much about it is unclear, and will remain that way for some time. But, regardless of the difficulties, a beginning must be made to address this important but neglected area.

Any strategy should maintain the long-term view. In principle at least, medicinal plants could contribute substantially to the overall management of natural resources. Indeed, if given research and policy support, they could potentially become high-value components of many agriculture and rural development programs, perhaps providing upscale alternatives to low-value food crops.
At present, the farming of medicinal plants is small, scattered, and largely informal. Given the increasing global population and consequent rise in demand for medicinal plants, one strategy option is to regard medicinally important species as underutilized crops.

Cultivation of these species is not only an alternative to collecting plants from nature; it could help conserve the wild types by relieving some of the pressure on them. Cultivation also permits production of uniform material from which standardized production of uniform material from which standardized products can be consistently obtained.

Commercialization of the medicinal plant sector as it stands now is unplanned, unmonitored, poorly understood, grossly inequitable and opaque. What is needed is a process fully participated by all the major actors, down streamed to the lowest possible level in the production to consumption and marketing (PCM) continuum and equitable, ensuring fair benefits to the local people, specially the collectors.

The Medicinal plant specialist group met in September 1996 in Nairobi, and resolved to identify ‘Top 50’ medicinal plant species for conservation action (Cunningham et al., 1997). These groups listed five steps to identify both global and regional priority species. The Indian subcontinent plant specialist group that met in January 1998 identified the following species of medicinal plants for detailed study and protection: Abrus precatorius, Adhatoda vasica, Centella asiatica, Costus speciosus, Gloriosa superba, Rauvolfia serpentine, Saraca asoca, Streblus asper, Tribulus terrestris and Withania somnifera.

The following species of medicinal plants from India have been considered to be endangered and threatened for over a decade: Acorus calamus, Alpinia galangal, Commiphora wightii, Dendrobium nobile, Dendrobium pauciflorum, Dioscorea deltoidea, Diplomeris hirstuts, Gentiana kurro, Nelumbo nucifera, Paphiopedilum druryi, Podophyllum heuxandrum, Rauvolfia serpentina, Santalum album and Saussurea lappa. A very large number of other species of medicinal plants can be added to this list, as for example Saraca asoca, Picrorrhiza kurroa, Costus speciosus, Berberis aristata, Gloriosa superba, etc.
On a sensitive and important issue like medicinal plants, we need very accurate data regarding the past and present distribution, plant population density in various localities, the current commercial demand and future projections, practices of collection, the factors that affect the population survival etc. There is hardly any systematic information on these lines. There have many estimates on the commercial demand and the costs of Indian medicinal plants but these were not based on any uniform or scientific criteria. Nevertheless, they indicate that the demand is very heavy and detrimental to species survival.

Forest resources have an economic value, with local, regional, national and international implications. Consequently, biodiversity is often an issue of economics and so of politics. Biodiversity has also an alternative value, an intrinsic value (Pearce and Moran, 1994), which is academic / scientific, that is unrelated to direct human use. However, the intrinsic value studies form the basis for economic valuation and exploitation. The significant point regarding medicinal plants is that they are used to support arguments for conserving entire biological resources in the third world, though the actual relevance is difficult to justify. On the one hand it is argued that if genetic engineering procedures become more successful, they would replace plant based research. On the other hand it is said that since the knowledge of medicinal plants is very limited, not paying adequate attention to them the soonest, may prove disastrous in the long run, as they may be lost for ever.

It is relevant to mention here that India is a ‘very fertile’ area for ethnobotanical studies, mainly for three reasons (a) rich diversity in flora (b) many distinct ethnic groups and (c) very large sections of society still traditionally dependent on bio-resources.

Chhattisgarh has a rich and varied flora due to its diversified topography and variable climatic condition. 20-25 tribes are living isolated or in combination in four different zones like Central, Eastern, Western, Northern and Southern zones respectively. The Gonds constitute the largest tribe amongst the other tribes of the state. District Bastar is located in the southern zone of Chhattisgarh. Gonds, Bhatara, Muriya, Mariya and Halba are the main tribes of Bastar and they have unique
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identification in the country. Bastar is a tribal district where about 70% of the total population is tribals and which constitutes 26.76% of the total tribal population of the Chhattisgarh state. Each tribal group has their own culture and each of them is following their own traditional living ways. These tribal groups are having different spoken languages and they differ from each other in their costume, eating habits, customs, art, living ways etc. Some of the tribals are still living in interior forests and they do not like to come to the outer world and mingle with the modern civilization and are unaware of what is happening in the world.

Dense forest and tribal culture of Bastar have been fascinated the ethnobotanists of the world as well as India since a long time. In 1949 Grigson has described the numerous ceremonies called ‘Pandum’ connected with inauguration of agricultural operations, harvests, onset of fruiting on trees and felling of forest trees, Ghotul etc. amongst the Maria Gonds of Bastar. He has also described preferences of these tribals for certain timbers for making their Gods arid shrines. Elwin (1943) has described the trees preferred or avoided by these Adivasis in committing suicide by hanging.

The present investigation entitled “Ethnobotany in relation to health and livelihood security of district Bastar of Chhattisgarh state” is the task to investigate the existing traditional knowledge of local tribal communities, forest villagers inhabiting in the areas of district Bastar of Chhattisgarh state as well as the status of livelihood promotion through collection, conservation and value additions of non timber forest produces (NTFPs).

The significance of the present work is documentation of traditional knowledge of tribals and to promote their upliftment programme, brings awareness about their surroundings, rights, to promote them for active participation in World Bank Scheme and their development programmes). In conservation of natural resources, techniques of tribals and their traditional knowledge about their habitat can also be adopted.
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This study has been done with following objectives:

**Objectives of the present studies:**

1. Survey of the Study area:
   - Personal survey of people and interview them with a questionnaire to record:
     1. Socio economic status of the tribals in district Bastar.
     2. Ethnobotanical knowledge of the plants.
   - Documentation of local health traditions of district Bastar.
   - Identification of specific health problems amongst the various tribal communities.
   - Botanical identification of medicinal plants.
   - To document specific formulation, methods of medicine preparation and dose administration.
   - Herbarium preparation for medicinal plants.
   - Livelihood assessment of Tribals in district Bastar of Chhattisgarh state.
   - Brief study on livelihood promotion through ethnobotany.
   - Collection assessment and potential market survey of non timber forest produce of Bastar.
   - To identify the rare, endangered and endemic medicinal plants.
   - To study the important commercial, medicinal plants for socioeconomic upliftment of tribals.
   - To educate rural people to conserve natural habitats of important medicinal plants.
   - Conservation practices of the Tribals.

2. Photography of the plants in study area.

3. Photography of the activities related to ethnobotany.

4. Listing of plants of ethnobotanical importance with their medicinal use.

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