Introduction
SURVEY AND DOCUMENTATION OF ETHNOMEDICINAL PLANTS OF NEDUMANGADU TALUK, KERALA

CHAPTER - I

1.1 INTRODUCTION

Ethnobotany is the study of different uses of plants in day to day life of the ethnic communities. The word ethnobotany was first used by Dr. John Harsberger of the University of Pennsylvania to describe the study of plants used by primitive and aboriginal people during 1895 and was widely accepted and first time adopted by J. Walter Fewnes in 1896. The subject of ethnobotany is divided into many sub disciplines according to sub groups of plant kingdom like ethnoalgalogy, ethnomycology, ethnobryology, ethnopteridology, ethnolichenology etc and special aspects of botany like classification systems, medicinal uses, palaeobotany, ecology etc are termed as ethnotaxonomy, ethnomedico botany, palaeoethnobotany and ethnoecology respectively (Jain, 1987).

Even from the pre-historic era almost all civilizations have employed plants in the treatment of human sickness. The sages of India had unparalleled knowledge of the medicinal plants. “Rig Veda”, has the oldest repository of medical knowledge, which can be traced back to 4500 to 1600 BC. “Rig Veda” was followed by “Atharva Veda”, in which, various medico-religious uses of plants have been cited. Over the years, the traditional Indian medicine has become rather well codified in a holistically oriented practice or system of health care as “Ayurvedic medicine”.

India enjoys the benefits of a varied climate, from Alpine in the Himalayas to the tropical wet areas in the south and arid regions in Rajasthan. Such climatic
conditions have given rise to rich and varied flora in the Indian sub continent (Rawat and Uniyal, 2003).

According to Rajasekharan (2002) India officially recognizes over 3000 plants for their medicinal value. It is generally estimated that over 6000 plants in India are in use of traditional, folk and herbal medicine, representing about 75% of the medicinal needs of the third world countries. Medicinal herbs have been in use in one form or other, under indigenous systems of medicine like Ayurveda, Siddha and Unani (Kumar and Singh, 2001).

Deforestation has already created irrecoverable damage to the source of medicinal plants. Moreover, the sudden change in the climate due to deforestation has become a threat to the valuable asset of medicinal plants as well.

Plant products have been used as medicines since ages to treat a number of ailments. The last couples of decades have brought the plant based medicines back into the focus of research as well as value added product development (Alagesaboopathi et al., 1999).

During the last few decades, all over the world they are paying great attention to the studies of a newer branch of science, “Ethnobiology”, especially to Tribal medicine or Ethnomedicine. In India also scores of scientists and scholars are working in these new fields of knowledge. Since the 1960s, this study has been intensified. India, with her 45,000 plant species and 550 tribal communities belonging to 160 linguistic groups, inhabited in varied geographic and climatic zones, with diversified plant species, varied culture, rich traditional knowledge system and wisdom, possesses an Ethnobotanical emporia.
Our knowledge of medicinal plants has mostly been inherited traditionally. Use of plants for curing various ailments are not confined to the doctors only but has been known to several households as well. There are many interesting and sometimes astonishing things to learn from the collectors of medicinal herbs. Spreading and preserving this knowledge on medicinal plants and their uses has become important for human existence.

There is a growing tendency all over the world to shift from synthetic to natural products mainly due to their exponential availability and cheap expenditure. The side effects of synthetic medicines sometimes have been more serious than the disease itself. Moreover they are very costly. Again, even if such costly medicine is applied, it gives often only partial cure. So the cure of the same diseases cannot be made sure off.

In modern medicine, the active principles are extracted from the medicinal plant species showing specific activities to discover new therapeutic agents for a number of diseases. These plant species are screened and tested in different systems for the development of therapeutically valid products. For this very purpose, the “Central Drug Research Institute” (CDRI), Lucknow is engaged in screening of medicinal plants to validate the ethnic claims and considers them as a priority area under the regular biological screening programme.

In modern medicine also, plants occupy a very significant role, as raw material for some important drugs, although synthetic drugs and antibiotics brought about a revolution in controlling different diseases. But these synthetic drugs are out of reach to millions of people. Those who live in remote places depend on traditional healers, whom they know and trust. Judicious use of medicinal herbs can even cure deadly diseases that have long defied synthetic drugs.
More than 100 medicinal plants are used in modern system of medicine. Plants used in traditional systems of medicine are of over 500 different types. Most of the raw materials for traditional medicine of pharmaceutical houses are collected from wild sources.

Many of the medicinal plants are cultivated commercially now-a-days for extraction of some important active constituents for use in modern medicine. For steroidal hormones which are synthesized from diosgenin, hecogenin and salasodine different species of *Dioscorea, Solanum* and *Agave* are cultivated. *Costus speciosus* is also a source of diosgenin. *Papaver somniferum* is a source of different types of alkaloids, out of which morphine, codeine, papaverine and nascopine are used in medicine. Various species of *Cinchona* also contain large number of alkaloids in the bark and the most important are quinine and quinidine.

Different species of *Datura, Hyoscyamus, Atropa, Duboisia, Scopolia* and *Physochlaina* contain tropane alkaloids which include hyoscyamine, hyoscine, and atropine are commonly used in modern medicine. *Digitalis lanata* is an important plant which contains digoxin and lanatoside-C-glycocides. *Rauvolfia serpentina, Rauvolfia canescens* and *Rauvolfia vomitoria* contain reserpine, resinamine and deserpidine respectively.

*Catharanthus roseus* has become important in modern medicine and contains more than 100 alkaloids of which Ajmalicine (Ranbasine) is of considerable importance. Leaves of this species contain two anticancer alkaloids like Vincristine and Vinblasline. *Camelia sinensis* is caffeine yielding plant and *Erythroxyllum coca* yields cocaine.
Nature has created plants in the world for every ailment; and there is a cure for every disease, which man has to find out. Tribals are, in general, the followers of animism. It leads to the belief that diseases and death are caused by certain spirits or supernatural powers. Sometimes bigotry in faith and the belief in spirits who live with living bodies etc. have a great influence on their attitude and psychology about the ailments. In tribal life they have to take steps to counteract the inimical influence of the so-called hidden powers, to pacify, propitiate or satisfy some God and do fight and punish others like witches. Such superstitions give rise to the origin of some of the holy or sacred incarnations, invocations, recitations, offerings, sacrifices, amulets or talisman which are regarded as efficacious in the tribal faith.

Living close to the nature, the tribal communities are custodians of unique traditional medical system and wisdom about the ambient flora and fauna and heritage of phytomedicine, viz ethnomedicine. Schulters (1995) of the Harvard University, United States of America is of the opinion that “India with her many living groups of people, having diversified ethnic culture, history of rituals and performance, who are more or less isolated from modern world and are closely associated with their ambient vegetation is the emporia of ethnobotanical research”.

Indian traditional systems of medicines and their practices have been transmitted to the present society because the medicinal aspects of enumerable number of plants lay hidden in the mind of traditional vaidyars. It should be elicited out for the welfare and well-being of modern society. Indigenous knowledge is the collective wisdom of individuals, families, tribes, communities and societies living in the specific geographic locations on a wide spectrum of human activities in relation to their immediate environment.
The tribal traditions are fast disappearing due to urbanization, rapid industrialization and changes in economy (Janaki Ammal, 1956). The Botanical Survey of India (BSI) made an initial ethnobotanical survey in various states of India. Kerala has a wide tradition of using plants for primary health-care and the indigenous knowledge regarding the dietary and medicinal properties of plants is very rich. There are altogether 427 tribal communities all over India. According to 1981 Census, Scheduled tribes population in the country was 53.8 million constituting about 7.5% tribal population (Regupathy and Mahadevan, 1991). As per 2010 Census, Scheduled tribes population in the country was 84.3 million. (Ministry of Tribal Affairs, Statistics division, Govt. of India, 2010)

It is a matter of great pride that among the 18 hot spots known for rich flora in the world, two are located in India. They are the Eastern Himalayas and the Western Ghats (Khoshoo, 1996). The hill chain of Western Ghats recognized as a region of high level of biodiversity is under the threat of rapid loss of genetic resources (Gadgil, 1996). A perusal of the available literature reveals that till date there is no comprehensive survey, documentation and enumeration of wild medicinal plants used by the tribe Kanis inhabiting the Nedumangadu Taluk located in the South-Eastern slope of Western Ghats, Kerala. Hence, in the present study an attempt is made for the survey, documentation and enumeration of wild medicinal plants in the study area. The present study focuses on the dependence of the Kanis on herbal medicines and attempt at an exhaustive analysis of the therapeutic values of medicinal plants used by the Kanis.

Nature has blessed the Nedumangadu Taluk, Kerala State with a very rich botanical and ethnomedicinal wealth that has been exploited continuously by the
tribals. Kanis are the major inhabitants of this Block. As The Kanis have so far asserted their ethnic identity and practiced the traditional ethnomedicine. This is a standing example of the dependence of tribal people on plants for their health care from time immemorial. If it is documented and intellectual rights are guaranteed to them, not only the Kanis but also the whole nation would benefit.