SUMMARY AND CONCLUSION

It is hoped that this work will help to preserve and conserve the fast declining medicinal plants of Dangs. The aboriginal medicinal practices are preserved and be useful for not only the people of Dangs but also for all those who look for herbal therapy.

With the help of reliable and known persons the investigator met 42 well known medicine persons from 25 villages scattered in different parts of Dangs (See Figure1). Though initially they were reluctant to share their knowledge, slowly and gradually they shared their Ethnic knowledge on gaining trust and confidence. They have shared their knowledge and informed the name of the plants and their parts used for a particular sickness.

The Bio data of the healers, together with their photographs and address are numbered and recorded in the forgoing pages in order with an opinion that they can be contacted if need arises. The particular number given will be referred again in the result of the thesis with an asterisk (*) sign. Information regarding treatment with different plant parts is given with Botanical name, local name and the parts used. The preparation and dosage or application for each treatment was enquired from the individual healers and systematically documented.

Therapeutic and Ethanobotanical investigation brought a detailed study of various diseases that are treated by the medicine men of Dangs. The therapeutic investigation is presented into 21 titles and with its sub titles. The therapeutic practice under the title of aches and pains has 15 sub titles such as stomach ache, left side stomach pain, headache, migraine, toothache, body pain, backache, arthritis (joint pain), burns, cuts, wounds, fractures, sprains, massage oil for all kinds of pains & fractures, for all kinds of ailments. Under the title of Urinary problems’ subtitles are painful micturition, burning during micturition, urine: excessive yellow colouring, urine: colour turning from red to yellow, kidney stone. The title Blood related problems subtitles are lohi tutavu, low blood count, blood clots, diabetes. The title Heart and chest problems’ subtitles are heart attack, uneasiness in the chest, chest pain, cough, congested chest, asthma, tuberculosis, The title Common ailments’ subtitles are dysentery, acidity, gas trouble, constipation, vomiting, cholera and certain other contagious diseases, worms in stomach, worms in the wound, rainy season itching on the feet (chikali), pain on the nail of the toes or fingers,
sleeplessness, sun stroke, The title **Eye and E.N.T. Problems**’ subtitles are Eye problems watering in the eye, blurred vision, white dots in the eyes, sore eyes, styes on the eyelids, ear pain, cold, throat. The title **Various types of fevers** subtitles are Common fever chicken pox, measles, cholera & prevention from contagious diseases, falling sick after going to the forest, The title **Skin diseases**’ subtitles are Eczema allergy, scabies, burns, leprosy, lukoderma. The title **Swellings blisters boils**, subtitles are ulcer, blister in the mouth big boils on the body, boils on the head, **big boils on the neck**, boils in the stomach, boils under the arm (pata rog), pimples, mumps, The title **Women’s problems** subtitles are excess bleeding and irregular menstruation, white discharge, pain during menstruation, enhancing lactation, breast abscess, lumps on the uterus, problems after delivery (backache stomach ache heaviness and bleeding etc), back problem of pregnant women, The title **Men’s problems** subtitles are Impotency (mega rog), sterility, swelling, boils, The title **Infants’ problems** subtitles are jalanther rog (hand and leg thin with big stomach), patta rog (hand leg very small), rahvas rog (small leg hand and big stomach), lagut rog (stomach swelling in small children), cold and cough, fever, trisuva rog (eyes going upward and crying), indigestion, breathlessness, dabha rog, Abnormal behaviour, The title **Bites & stings** subtitles are Dog bite, snakebite common snake bite, cobra bite, podsi bite, asariya snake bite, maner snake bite, scorpion sting, The title **Animal health, cattle** subtitles are Enhancing lactation, lack of proper appetite, fracture, wounds, boil on the body, sterility and medicine for the small chicks. Besides these there are medicinal practices for **Sterility in men & in women, Piles, Lumps** (Lumps on the neck or ear (chokipui)), **Paralysis, Epilepsy (khech)**, **Jaundice, Cancer** is given in separate title. Under each title and subtitle there are ways of curing which are referred by different medicine men. They are numbered in Roman alphabets along with the names of the plants how to prepare the medicine and its application. In order to mention the person who has given the information the medicine man’s number is shown with a star. Treatments for various ailments are given along with its page numbers in **Table 2**.

Besides the therapeutic practices ethnobotanical information for 195 plants that are referred by the medicine men also are identified and documented in **Table 1** with **Botanical names, Family** which they belong to, local names, habit, uses and the useful parts for each species. The 195 identified plants include, 80 trees, 45 herbs, 32 shrubs, 28 Climber, six Grasses, two Orchids and two Parasites.
These 195 identified plants belong to 67 different families. The list of families and their corresponding number of species for which medicinal uses are recorded in Appendix I. Here the family **Fabaceae** outstands for its medicinal uses, even without including its subfamilies Mimosaceae and Cesalpinaceae. Fabaceae alone has seventeen species. The other dominant families are its sub family, Mimosaceae and Caesalpiniaeae with six species each. The families Poaceae, Euphorbiaceae, Apocynaceae, are also with six species. Then the families like Verbinaceae, Rhamnaceae, Moraceae, Malvaceae etc. are used in high rate.

These documented plant’s root, rhizome, bulb, tubers stem, bark, leaves, flowers, fruits, seeds, gum, latex, or gun etc are used to remedy most of their common and serious problems, are shown in Table 1 with the botanical names, family, local names habitat of the plant and the parts of a particular plant is used.

Same plant having different names on one side there were two different plants having the same name. In most parts of Dangs **Bryophyllum calycinum** is known as **Dham pan**. It is also having the names like **Lagpan, Panputti, Elcho** etc. When the same Bryophyllum was shown to the popular healer one (Thukarambhai Ramubhai Chauhan) in Shamghan village and other one (Sukriyabhai Janibhai Chaudhar) in Dhumkal village they did not agree that Dhampan is Bryophyllum. Both of them reported Dhampan is an aquatic plant which occurs only in pure water. However, neither of them could show the specimen as it was not available during the investigation. White flowered Keusa (Polas), **Butea sp.** and Saver, **Bombax sp.** are also used as medicine. But they are not a common plant here.

The parasitic plants like **Dendrophoe falcata** and **Viscum articulatum** are also highly used in their therapeutic practices. It is also important, on which tree these parasitic plant grow. Regarding this is mentioned, both in therapeutic methods in chapter IV and in Table 1.

The plants which are used for many kinds of ailments are **Vetiveria zizanioides**, **Terminalia crenulata**, **Terminalia arjuna**, **Tecomella undulate**, **Sterculia villosa**, **Sterculia urens**, **Pterocarpus marsupium**, **Schleichera oleosa**, **Oroxylum indicum**, **Mucuna pruriens**, **Moringa concanensis**, **Mitragyna parvifoliam**, **Melia composita**, **Madhuca indica**, **Lannae coromandelica**, **Lagerstroemia lanceolata**, **Holarrhena pubescens**, **Hibiscus esculentus**, **
Hemidesmus indicus, Grewia hirsuta, Ensete superbum, Dregia volubilis, Dendropthoe falcata, Dalbergia volubilis, Cassia fistula, Carissa carandas, Careya arborea, Butea monosperma, Bombax ceiba, Bauhinia recemosa, Asparagus racemosus, Ailanthus excelsa, Aegle marmelos, Acacia polyantha, Vetiveria zizanioides etc. Most of these are trees. It is very important to conserve these medicinal plants through Germplasm or increase its propagation rate through tissue culture methods or any other Bio Technology method. There are a few nurseries in Dangs where the medicinally useful plants’ seedlings are conserved and maintained.

The Appendix I – III are the indexes of the documented medicinal plants, arranged according to title of Local names, Family and in Botanical names respectively, in separate indexes, and are arranged in alphabetical order, which will help one to find out a particular plant faster.

Pterocarpus marsupium is referred by 18 medicine persons, used for various titles especially for kidney stone and diabetes. Its bark is used mainly for medicine purpose so this plant should be protected and they are in great demand and its life is in danger. Similarly Sterculia villosa is referred by 13 medicine men and it is mainly used for bone fracture. It’s roots are in demand for medicine… so it is very difficult to find this plant in Dangs. We need to propagate these plants as they are endangered.

**CONCLUSION**

Therapeutic Ethnobotanical investigations in Dangs Dt. Gujarat give a clear picture of the traditional practices that are carried out by many medicine persons. Diseases that affect the people most frequently are documented in 21 titles with its subtitles. The medicine men have helped to identify the plants that are used for curing various ailments. Medicine men respect the nature and they consider all the plants as part of nature. So before taking the plant parts for medicine they worship the Dungar Devi (god) then they remove the plant parts and that too only what is needed for the treatment.
The increasing deforestation has raised the alarm. It has been a cause leading to the extinction of some of the endangered medicinal plants. It is very important to protect the endangered plants which ultimately help us maintain the equilibrium in our biodiversity.

List of the medicine men along with their medicinal knowledge given in the beginning of the thesis help the reader to understand the utilization of the medicinal plants in the day today life of the people of Dangs.

It is said that nature has its own remedies to cure many of the ailments and every plant has a medicinal property. It is important to test these plants to find out the chemicals that are useful for various diseases. The identified plants will give a clue to the reader about its family, botanical names and its common uses.

Photographs 96 plants given in the thesis help the reader to identify the plants.

This work helps to preserve Dangs’ Therapeutic Ethnobotanical heritage from one generation to the other. Over the time, the practice of herbal medicine has grown more complex. Science has enabled us to process natural substances into pills, tinctures and powders. However, the development of a market economy also has distanced consumers from the wild plants that are the source of medicines. This study will help to understand the frightening implications which loss of the deciduous forests would bring not only in terms of consequent loss of knowledge about tropical plants, but the consequent damage brought on by the loss of native medical practices in their entirety, as well as the damage to the earth's ecological health. Unfortunately, due to human factors which have influenced the ecological balance of these delicate ecosystems, we are presently faced with the possibility of losing our rain forests. A great deal of information about the traditional uses of plants is still intact with tribal peoples. But the native healers are often reluctant to accurately share their knowledge to outsiders. It is also important that the plants are processed and tested in studies completed by ethnopharmacologists, using state of the art laboratory equipment. The people of Dangs have developed their own traditional method of treatment using a wide variety of plants. The individuals involved in such kind of treatments are known as Bhagats. Normally these people derive this kind of traditional knowledge from their ancestors and pass it on from one generation to another. Some who had possessed rich herbal knowledge were vanished without revealing to anybody. Some claim to have herbal knowledge
through dreams where *Dungar Devi* revealed the uses of the plants. Some of the persons encountered in the present investigation also shared similar information. The medicine men of Dangs possess rich knowledge of medicinal use of various parts of plants such as root, rhizome, flower, leaf, latex, bark etc. These plants are used in a variety of forms like, paste, powder, decoction, extracted oil etc.