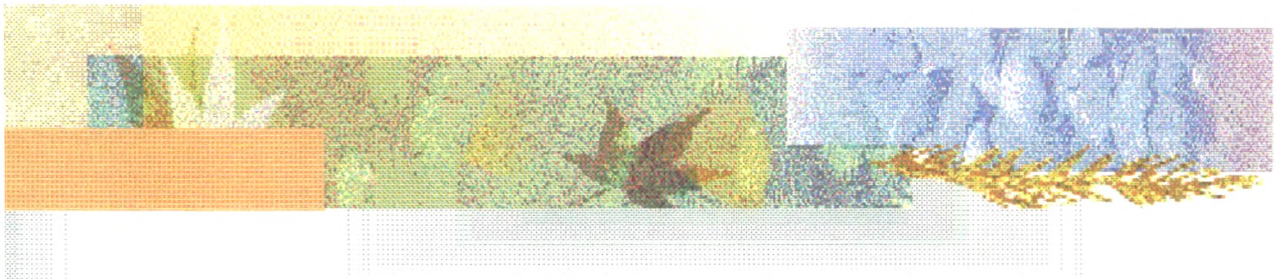

SUMMARY AND CONCLUSIONS

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It is an accepted fact that the flora of India requires a thorough revision. The project is already launched by the Botanical Survey of India and many series of Flora of India have already been published. As a pre-requisite, it is essential to compile different regional floras in the modern lines.

A good number of scientists have worked on the flora of various parts of the old Bombay state. Mention have to be made about Graham (1839); Dalzell and Gibson (1861); Nairne (1894); Cooke (1902-1958 (Repr. ed).); Talbot (1909-1911); Blatter and McCann (1926-1935), Santapau (1954) etc. All these workers have concentrated on different parts of the Western peninsula and Southern parts of the Bombay presidency.

There are few notable contributions to the flora of Gujarat state. Mention may be made of the contributions of Blatter (1958 (Repr. ed).); J. I. Thaker, (1910 and 1926); Saxton and Sedgwick (1918 and 1922); Santapau (1955 and 1962); Chavan and Oza (1966); Shah (1978) and Patel (1984). The other works on floristics carried out in Gujarat are that of Oza (1962); Sabnis (1966); Bedi (1968); Deshpande (1968); Singh (1971); Suryanarayan (1969); Yogi (1970); Bhatt (1971); Patel (1971); More (1972); Patel (1972); Karatela (1973); Padate (1973); Parabia (1974); Vyas (1974); Thaker (1974); Bhatt (1975); Desai (1976); Menon (1979); Yadav (1979); Joshi (1980); Vora (1980); Rao (1981); Mac (1982); Gopal (1983); Joshi (1983); Vashi (1985); Contractor (1986); Bhatt (1987); Reddy (1987); Bhatt (1993); PradeepKumar (1993); Kotiwar (1995) and Punjani (1997). In spite of these there still exists a lacuna in our knowledge of the flora of Gujarat, especially of the hilly forests regions that forms a discontinuous chain along the Northeastern border. These hilly regions form a part of the Aravalli and the Vindhya ranges and exhibits varying patterns of vegetation, due to variation in rainfall, soil characters, altitude and their distance from the arid regions of Sind and Rajasthan.

North Gujarat that receives very scanty rainfall is semi-arid or arid with scrub forests on plains and poor quality of tropical dry deciduous forests in the hilly regions. The central and south Gujarat receive more rainfall and thus are rich in vegetation compared to other parts. The well-known forests that exist in Central Gujarat are Ratanmahal Sloth Bear Sanctuary; Jambughoda Wildlife Sanctuary; Chhota-udepur reserve forests; Devgadh-baria reserve forests; Dahod reserve

forests and part of Lunawada and Santrampur reserve forests. The frequency of such forests rich in vegetation increases as one moves towards south.

The present work was therefore undertaken with a view to fill up the existing lacunae on the flora of Chhota-udepur forest division. The area has been explored floristically after a period of 27 years. A floristic account supplemented with ethnobotanical data of the vegetation of Chhota-udepur, Boriyad, Panvad, Dolariya and Pavi-jetpur ranges of the division is discussed in the present work.

These ranges were selected for the study because three ranges viz., Boriyad, Panvad and Dolariya were not covered by the previous workers and the remaining two ranges were selected due to the lacunae in our knowledge of local uses of the plants therein.

The thesis embodies the results of research work carried out for a period of 3 years (1998-2001). The study area forms one of the major forest of Central Gujarat. It spreads over an area of 745.87 sq. kms, and has its importance due to the rich mineral deposits of Quartz, Manganese, Dolomites, Flourspour and Calcite Limestone. As far as ethnobotanical research is concerned, the area of Chhota-udepur is one of the important tribal areas of Gujarat, inhabited by Rathawas, Dungrabhils, Tadvi, Nayakas and Naninat tribes. Hence this area, especially the Northeast border along with certain central localities are surveyed thoroughly to study the vegetation and floristic components as well as the ethnobotanical uses of plants there in. During the survey, a total of 483 angiosperm plant species belonging to 109 families were reported, with 42 new additions to the flora of the region. The other aspect of the study was to record the changes that have occurred during the last 27 years. In addition efforts were made to study the socio-economic status of the tribals inhabiting the area and their dependence on forests (NTFP). Effects of various biotic factors on vegetation and flora were also studied to some extent. The indigenous knowledge of tribals about plants and conservational aspects remained closely intertwined with their daily life and culture that has been expressed in mythical as well as magical beliefs. As already stated above during the last few years, an elaborate research thrust on cross-cultural studies among different tribal populations from distinct locations has been worked out by (Jain and Saklani, 1992; Saklani and Jain, 1994; 1996; Jain et al., 1995; Jain and Fernandes, 1996; Jain and Lata, 1996; Jain and Sikarwar, 1996, 1998; Goel and Rajendran, 1999). This comparative study will enable us to get some inroads into knowledge, skills and

different methods used by the tribals for conservation and utilization of the plants. It can provide clue on the relationship between plant species and cross-cultural practices prevailing in different tribes within a smaller region like state or upto country level. Keeping in view above facts, an attempt was made during the present study to compare common uses of different plants between Rathawa tribe of Chhota-udepur forests and other tribes inhabiting various forested areas of Gujarat state, mainly by the means of secondary data available.

The major findings of present studies are: **1).** 42 new species have been added to the previous flora of the region. **2).** The nomenclature of a number of plants published on the flora of Kawant and Chhota-udepur ranges has been corrected with the aid of the latest available literatures. **3).** The study has also thrown light on the local uses of 261 plants by the tribal people. **4).** Fifty seven (57) rare plants are reported from the area. **5).** In addition to this, information on tribal lifestyles, tribal museums and also their rituals, faiths and taboos are also collected and presented here. **6).** A comparative ethnobotanical note has been prepared using the data from the present survey and the data on the uses of plant species recorded by earlier workers in different forest areas of the state. The data below gives the gist of the findings during the present studies.

RESULTS OF PRESENT STUDY

PART A--FLORISTICS AND ETHNOBOTANY

Total Plants reported from the Area	483
Total Genera	349
Total Species	483
Total plant families represented	109
Families represented by single genera	45
Ethnobotanically important plants repored	261
Total Dicot Plants	417
Total Monocot Plants	66
Total Dicot Genera	299
Total Monocot Genera	50
Total Dicot Species	417
Total Monocot Species	66

Total Dicot Families	90
Total Monocot Families	19
Rare plants of the area	57
New additions to the flora of area	42
Exotic weeds of the area	26
Cultivated plants of the area	45
Ratio between Monocot and Dicot Genera	1: 5.98
Ratio between Monocot and Dicot Species	1: 6.31
Ratio between Monocot and Dicot Families	1: 4.73
Ethnobotanical plants common with Dangs region	115; 47.71 %
Ethnobotanical plants common with Rajpipla forests	17; 7.05 %
Ethnobotanical plants common with North Gujarat	50; 20.74 %
Ethnobotanical plants common with Ratanmahal	70; 29.04 %
Ethnobotanical plants common with Saurashtra region	103; 42.73 %
Ethnobotanical plants common with Dharampur	120; 49.79 %

PART B--FORESTS AND TRIBALS OF THE REGION

Total forests Area recorded (1973)	819.06 sq. kms.
Total forests Area recorded (1998)	746.68 sq. kms.
Change in forests areas	(-)72.37sq. kms.
Total ranges in forests	08
Most dense range (area wise)	Pavi-jetpur.
Most dense range (density wise)	Dolariya Range.
Most degraded range	Kawant Range.
Range having maximum cultivable area	Rangpur
Highly degraded forests area	Kawant Range.
Area with maximum open forests	Kawant Range.
Total tribes in areas	07
Population of tribes (1991 Census)	5,94,503
Major tribal areas within study areas	Chhota-udepur, Naswadi, Pavi-jetpur.
Major occupations	Agriculture,

	NTFP collection, Workers (Daily wages), Minor-Hunting.
Major crops cultivated	Maize, Tuvar, Banana.
Major festivals	Holi, Chul, Bhangoriyu, Gher.
Literacy rate	*ca* 10 %.
Socio economic conditions	Backward, illeterate people with more than 60 percent population engaged in agriculture.

CONCLUSIONS

It can be concluded that though there has been a decrease in forest areas with an increase in population, the forests in the study area are still well protected. The area is rich in floral as well as cultural diversity. The forests officials as well as the local tribal communities through Joint Forest Management have been working hand to hand to save and maintain the forest ecosystem of the area. The development of locals through tribal museums and other bodies like "Bhasha Kendra" and "Shroff foundation" have thrown light on the issues pertaining to tribal development and tribal welfare which are closely linked to the forest development and planning. The objectives and the goals set out at the beginning of this work have been fulfilled. It is hoped that the information presented in the thesis will be useful to botanists, medical men, plant collectors and cultivators, foresters as well as anthropologists and sociologists and all those who are interested in becoming a part of preserving, maintaing and utilizing the natural resources of this area for the betterment of the quality of life of tribal.