



FLORISTIC DIVERSITY AND ETHNOMEDICAL PLANTS USED BY NATIVE FOLK AND TRIBAL OF RESERVE FOREST OF VADGAM TALUKA OF BANASKANTHA DISTRICT, NORTH GUJARAT (INDIA).

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ABSTRACT

Along with systematic identification and documentation of the flora of 'reserve forest of Vadgam taluka of Banaskantha district, North Gujarat', Area under present study has been untouched in respect of its floral and ecological studies except present study even though being one of the flora rich regions. Plants were collected from the various forests area including hill and hillocks. In The present study a total angiospermic plant species in the area gives the result that the about 536 species belongs to 367 genera of 106 families. Of these dicots represented by 446 species while monocots represented by 90 species. The concentration of dominance was recorded highest in the herb species. The dicotyledon was found to be the dominant class in the study area.

Key words: Angiosperms, Vadgam, Banaskantha.

INTRODUCTION

India is known for its rich heritage of biological diversity, having already documented over 46,000 species of plants in its ten biogeographic regions. Wild plants play an important role in the national economy and well being of the occupant population in a region. Floristic studies have acquired increasing importance in recent years in response to the need of developing and under developing countries to assess their plant wealth. The rich botanical wealth of this Vadgam range forest is being continuously over exploited for timber and non timber forest products such as fodder, grasses, gums, grazing etc. The earlier work on floristic part of North Gujarat has been carried out Sexton & Sejweek (1918). They were worked in selected different area of North Gujarat. During our field trip visit were taken various photographs rare plant species in Vadgam forest. At first observation area under present study 'Vadgam taluka reserve forest of Banaskantha district, North Gujarat' seemed to be rich in its flora. From this region we have reported 536 plant species. In view

of the regional importance of the particular zone of 'Vadgam taluka reserve forest flora so that present study was under taken. The study provided actual overview of the study area in respect of its threatened and rare flora that may be helpful in developing strategies or action plan for its conservation and development.

STUDY AREA

Vadgam taluka is located in the East Banaskantha district of North Gujarat region. The province occupies a total of 565.87 sq. km. geographical area, which is about 5.26 % of the total area of the district. Vadgam taluka range forest is one of them. The reserve forest of Vadgam taluka is situated between 72. 49' E longitude and 23. 59' N latitude and approximately 750 feet above the mean sea level. The climatic condition of the area is semi-arid. The reserve forest area of Vadgam taluka is spread into two forest ranges -Danta range forest and Palanpur range forest. The reserve forest of Vadgam taluka covers total area of 13.218 sq. km. Based on the phytosociological characteristic and vegetation type of the study area, it may be categorized as dry deciduous forests. Patches of thorny scrubs, small grasslands, river line vegetation, parasites, epiphytes and cultivated vegetation are observed here.

MATERIALS AND METHODS

The investigation was based on the survey of more than three years of extensive and intensive, regular excursions of the study area which is enriched with floral components and having ecological significance. The fieldwork consisted of collection of plant specimens for herbarium, observation on the habit, habitat, phenology and distribution. To collect the data for determination of phytosociological characters of angiosperms, belt transect method (Muller-Dombois and Ellenberg, 1974; Kershaw, 1973) was used. Total 165 sample plots, were laid down in the study area. All the plant species which were found inside and outside as well of the sample plots were identified and documented using 'Flora of Gujarat State' (Shah, 1978) and 'Flora of the Presidency of Bombay' (Cooke, 1901-1908). The plants were collected season wise and during the collection photographs were taken.

RESULTS AND DISCUSSION :--

A total of 536 angiosperms belonging to 367 genera and 106 families have been collected from the region. (Table- 1.)

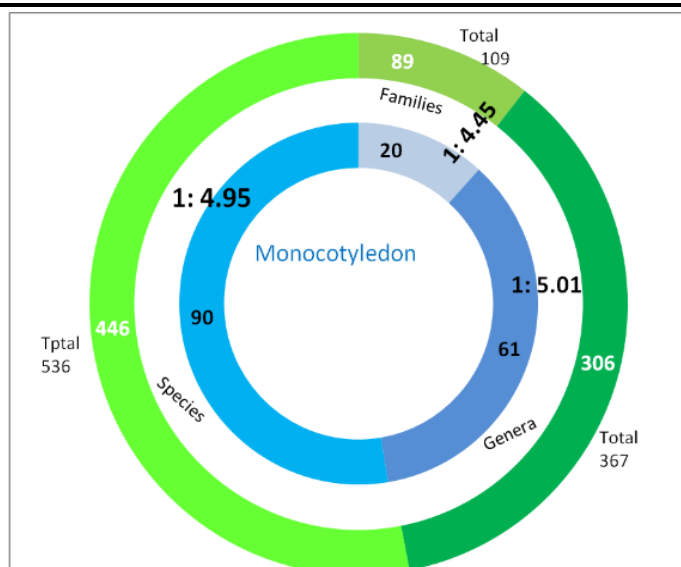
Table:- 1. Floristic Analysis of the study area.

FAMILIES	GENERA	SPECIES
109	367	536

The genera to species ratio was 1: 1.46 The ratio between monocots and dicots species was 1: 4.95; between monocots and dicots families was 1: 4.45 and between monocots and dicots genera was 1: 5.01. (Table- 2.).

Table:- 2. Ratio of Families, genera and of Dicotyledons and Monocotyledons

- Inner cycle indicates Monocotyledons.
- Outer cycle indicates Dicotyledons.



species

Out of which, Dicotyledons contributed 446 plant species which belong to 306 genera and 89 families, which is quite higher than that of Monocotyledons. The Monocotyledons contributed only 90 species belonging to 61 genera and 20 families except Poaceae and Cyperaceae. (Table- 3).

Table:- 3. Floristic analysis of class, sub class in the study area.

Class	Sub Class	Series	No. of Families	No. of Genera	No. of Species
Dicotyledons	Polypataleae	Thalamiflorae	15	35	54
		Disciflorae	14	23	27
		Calyciflorae	19	87	132
		Total	48	145	213
	Gamopetalae		27	124	176
	Monochlamydae		14	37	57
	Total		89	306	446
Monocotyledons			20	61	90
Total			109	367	536

Monocotyledons were represented by 90 species out of which Poaceae and Cyperaceae were dominant. A list of dominant families of the study area has been prepared. The table shows the position of different families in the study area and their respective positions in order of dominance. Among monocots Poaceae occupy highest position (40 species). The table-4 below gives the account of ten dominant families in the study area. The largest family being Leguminosae with 71 species (Fabaceae + Caesalpiniaceae and Mimosaceae).

Table:- 4. Family wise genera and species recorded in the area.

No.	FAMILY	Genera	Species
1	Poaceae	27	40
2	Fabaceae	29	39
3	Asteraceae	23	28
4	Cucurbitaceae	11	22
5	Euphorbiaceae	12	21
6	Convolvulaceae	7	19
7	Acanthaceae	13	19
8	Caesalpinaceae	7	17
9	Amaranthaceae	10	16
10	Mimosaceae	8	15

In the present paper ethnomedicinal information of 10 families of angiosperms growing as weed plants in the agricultural fields of the forest areas of Vadgam taluka forest of Banaskantha district are given. The present work is undertaken to collect information regarding the medicinal values of some species from the vaidyas, Bhagatas and people residing the the Vadgam taluka forest areas of Banaskantha district. Information given in the present paper will be directly useful to the mankind in curing several diseases. Looking to the applications of the plant species with reference to their families, it is observed that 10 families have more than 10 applications. A list of families with the total number of applications is given in the Table - 5. Some families like Papilionaceae, Cucurbitaceae, Caesalpinaceae, Mimosaceae, Poaceae and Lamiaceae are most dominant for ethnomedicine use in area for various diseases and regularly homemade treatments.

Table:- 5. ANALYSIS OF ETHNOMEDICINAL DATA

Sr. no.	Name of the Family
1	Meliaceae
2	Papilionaceae
3	Solanaceae
4	Asclepiadaceae
5	Cucurbitaceae
6	Mimosaceae
7	Lamiaceae
8	Liliaceae
9	Rutaceae
10	Zingiberaceae

Table:- 6. A list of dominant families according to ethnomedicinal plant species.

Sr. No.	Name of the Family	Total Number of Plant species
1	Papilionaceae	8
2	Cucurbitaceae	7
3	Caesalpinaceae	6
4	Mimosaceae	6
5	Lamiaceae	6
6	Poaceae	6
7	Rutaceae	5
8	Asclepiadaceae	5
9	Solanaceae	5

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