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Studies on Medicinal Plants of Satpuda Forest Region of East Khandesh, Maharashtra, India

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Abstract: ***Present study reveals about total no. of medicinal plant families '82 'composed of pteridophytes (3), Dicots (66), and monocots (13). The genera are 234, spread over pteridophytes (3), dicots (209) and monocots (22).Similarly Species are 270 out of which pteridophytes are (3), dicots (244) and monocots (23). The most striking feature of the study is evaluation and assessment of threat status of some important medicinal plants of the area to find out conservation priority. On the basis of number of medicinal plants, Habitwise breakup of plant species used as medicine, Dominant diseases with number of plants used, Mode of administration, Frequency of plant parts used***

Keywords: East Khandesh, Satpuda, Mountainous Ranges, Medicinal plants, Biodiversity.

1. Introduction

Study covers the area falls in Jalgaon district of Maharashtra state, India. East Khandesh Satpuda lies on northern part of Jalgaon district situated between 20^0-17' and 21^0-26' north latitude and 74^0-47' and 76^0-28' east longitude. It is rich in vegetation composed of humid and many semi evergreen species apart from dry deciduous ones. Topographically it can be distinguished as 1) The Tapi rich valley in the centre, 2) The high mountainous ranges on the north & 3) Barren ranges of Satmala and Ajanta ranges on the south. The study is confined to first two regions only and more specific to Satpuda mountainous ranges from 2006-2008. The climate is generally dry except in monsoon. Rain fall is 639.7 to 696.0 mm. The forest types of Satpuda ranges classified by Champion and Seth in 1966 are Dry Teak forest, Southern Dry mixed deciduous forest, Anjan forest & Scrub forest Studies on medicinal plants of the area are lacking except few sporadic references [1]-[5],[7],[10],[11]&[13],[14],[15]&[16].

2. Materials and Methods

Present study is based on the field work and literature survey from June 2006 to July 2008 through systematic planning and meticulously exploring the areas for gathering various information related to medicinal uses of plants, during outgoing all the information collected were noted in field book. Pertinent attention was paid to habit, habitat, distribution pattern, diseases for which plants used doseges and mode of administration. As far as possible correct information were confirmed by repeated queries at different places. Specimens collected during the field work are processed for herbarium as per the customary methods [9]. Specimens thoroughly studied for correct identification with the help of standard floras [6],[8]&[12]. The identification was confirmed by authentically identified species at B.S.I. Pune. Herbarium sheets were neatly labled and deposited in the herbarium of department of botany, A.S.C. College Chopda.

3. Results

Table 1: Showing medicinally important plant groups, genera, species & families.

No. of groups	Species	Genera	Families
Monocots	23	22	13
Dicots	244	209	66
Pteridophytes	03	03	03
Total	270	234	82

Table 2: Showing 10 most dominant families on the basis of number of medicinal plants

Sr. No.	*Families*	*No. of Genera*	*No. of Species*
1	Fabaceae	16	18
2	Compositae	13	13
3	Euphorbiaceae	08	11
4	Mimosaceae	06	09
5	Malvaceae	05	10
6	Labiatae	05	09
7	Caesalpiniaceae	06	09
8	Acanthaceae	08	09
9	Apocynaceae	06	07
10	Combrataceae	03	05

Table 3: Showing Habit wise breakup of plant species used as medicines

S. No	Habit wise	No. of Species
1	Trees	71
2	Shrubs	51
3	Herbs	112
4	Climbers & Twiners	31
5	Parasites	02
6	Pteridophytes	03
	Total	270

Table 4: Showing 10 dominant diseases with number of plants used for one diseases

Sr. No.	*Name of Diseases*	*No. of plants Used as Medicine*	*% of Plants used Disease wise*
1	Skin Disease	32	14.67
2	Stomachache	28	12.84
3	Rheumatic pain	28	10.84
4	Diarrhea	20	9.17
5	Sexual disease	23	10.85
6	Wound healing	22	10.09
7	Cough & cold	20	9.17
8	Jaundice	14	6.72
9	Headache	16	7.38
10	Fever	14	6.42
	Total	218	99.50

Table 5: Mode of administration of Medicines

Sr. No.	Mode of administration	No. of species used	% of Use.
1	Oral	252	56
2	External applications	109	24.22
3	Internal applications	49	10.08
4	Steam bath	02	0.44
5	Inhalation	04	0.88
6	Smoking	03	0.66
7	Poultice	31	6.88
	Total	450	99.16

Table 6: Showing Habit wise breakup of frequency of plant parts used in 320 uses of 270 medicinal plants

S. No	*Plant part used*	*Trees*	*Shrubs*	*Herbs*	*Climbers & Twiners*	*Total*
1	Root/Root bark	7	8	41	8	64
2	Stem/bark	27	11	3	2	43
3	Leaf	21	31	18	5	75
4	Tubers/Rhizome	--	--	1	1	2
5	Flowers	1	3	4	--	8
6	Fruit	18	5	8	4	35
7	Whole plant	1	14	42	6	63
8	Seed	10	--	12	2	24
9	Others	6	--	--	--	6
	Total	91	72	129	28	320

4. Discussion

- From the study, it can be observe that there are270 medicinal plant spread over 234 genera and 82 families.
- Study reveals that 10 most dominant families according to medicinal plants in descending order are Fabaceae with 16 genera and 18 species, while Combrataceae shows 3 genera and 5 species only.
- Habit wise breakup shows that bulk of medicinal plants comes from herbaceous plants followed by trees and shrubs.
- Frequency of plants used for Ten most dominant diseases it is found that more no. of plants used for Skin diseases 32 (14.67) & least for Fever like diseases i.e.14 (6.42%).
- Most of priscriptions are applied orally 252 (56.00%). 49 internally through nose, ear, and eye while the prescriptions through steam bath, inhalation and smoking is rarely used and specific to some diseases.
- Generally single plant part is used but sometimes many plant parts in combinations are for the treatment of diseases. Rhizome and tubers and flowers are surprisingly used rarely, may be attributed that people have tendency to conserve the plants.

5. Significance of the Study

- Studies on medicinal plants are very important to compile the future material medica of India in general world.
- Study helps in Forest and Range management.
- List of available plants from the area.
- Source of information for cruide drugs for the drug industries.
- Threatened, Rare and Endangered Plants.
- Helps in conservation of Biodiversity of plants.

6. Acknowledgement

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