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Diversity of ethnomedicinal plants from religious hills in Hatkangale tahsil, MS, India

Ingle ST

Department of Botany, DKASC College, Ichalkaranji, Dist. - Kolhapur-416115 MS

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ABSTRACT

Hatkangle tahsil is popular for holy places in Kolhapur district. The holy places like as Bahubali hills, Ramling hills, Babu -Jamal Darga hills, Dhuleshwar hills, Raspeeth hills, Narande hills are situated in outsources of Sahayadri ranges of Western Ghats. The tops and Plains in these holy places ranges comprising deep black soil while slope comprising gravel soil. An attempt has been made for survey and documentation of medicinal Plants in religious holy place Babu jamal Darga hills Ramling hills Dhuleshwar hills Bahubali hills Raspeeth hills, Tal. - Hatkangale which have great significance in utilization of wild resources of Ethan medicinal plants. During the Study survey, 85 plants assessed by Quadrate method. These are found to have medicinal values as remedy for different health problems to local people. It is revealed that, these wild resources (medicinal plants) are utilized by local people as per their needs.

Key words: Babu jamal Darga hills Ramling hills Dhuleshwar hills Bahubali hills Raspeeth hills, Ethno- medicinal plants and assessment.

INTRODUCTION

It is the fact that over 70-80% of the world population depends on the crude plant drugs to get rid of their health aliments. An Indian material medica includes about 2000 drugs of natural origin derived from different traditional systems and folklore medicines (Narayan et al 1998) while in modern medicines over 130 drugs originally extracted from higher plants (Dev 1997). In last few decades, new trends of 'Herbal Drugs' from medicinal plants has becoming more prominently apparent (Dev 1999, Bisset 1994). Now days it has been estimated that the present global market is going at the rate of 20% annually (Dev, 1997). Here the concept of Ayurveda begins and flourish between 2500-500 BC in India. The use of medicinal plants were documented in old literature half majority of them are found in Rig-Veda and Athervveda and also in Charaka Sanhita (-900 BC), Sushruta Sanhita (600 BC) and Ash tang Hridaya (700 AD). Thus ayurveda now has become scientifically organized. India is a store house of medicinal plants and there are some 1250 Indian medicinal plants (Chatterjee and Pakrashi, 1991).

Survey of Kolhapur district shows 600 plant species of some therapeutic value. Out of them some important medicinal plants are found in the Dhuleshwar hills. Dhuleshwar hills are one of the holy places of Hatkangale Tahsil. It's situated at 16'45N, 74'22' E and at altitude 773 m. from mean sea level. The vegetation is dry deciduous (Yadav and Sardesai, 2002). Duleshwar is the part and parcel of Sahayadri ranges. The plant diversity of Dhuleshwar hills shows different medicinal plants in the form of herbs, shrubs, trees and climbers. The common medicinal plants are assessed in this area are as *Gloriosa sauperba* L., *Discoriea bulbiflera* L., *Plumbago zeylanica* L., *Boerrhavia diffusa* L., *Vitex negundo, Launea procumbens, Lantana camara* L., *Terminalia arjuna, Clerodendrum serratum, Grewia tiliaefolia* etc.

MATERIAL METHODS

The assessment of medicinal plants studied with the help of a Quadrate method. The shape of Quadrate is usually square. The size of Quadrate varies with the type of vegetation to be studied. The Quadrate of 10 x 10 m size is laid randomly at three different places and species are recorded with their number in each. The abundance, density, frequency and frequency percentage of each species are determined by using the standard methods. (Kapur and Rani, 2000). The herbarium specimens are maintained in the department of Botany D. K. A. S. C. College, Ichalkaranji, Dist. - Kolhapur by following routine herbarium techniques.

RESULTS

Table 1: Assessment of Ethno medicinal plants by Quadrate analysis:

SN	Name of plants species	Quadrate			Total No. of species in all Qua.	Total no. of Qua. studied	No. of Qua. in which species occur	Abundance	Density	Frequency %	Frequency class
		1	2	3							
1.	*Carisa carrandus L.*	02	05	03	**10**	03	03	3.33	3.33	100	E
2.	*Discoriea bulbiflera* L	05	-	07	12	03	02	4	6	66	D
3.	*Plumbago zeylanica* L	03	02	06	11	03	03	3.66	3.66	100	E
4.	*Commelina benghalensis L.*	08	06	10	24	03	03	8.0	8	100	E
5.	*Lagacea mollis edu.*	03	15	05	23	03	03	7.66	7.66	100	E
6.	*Acalypha indica L.*	14	15	17	46	03	03	15.33	15.33	100	E
7.	*Lavandula burmanni Benth.*	11	24	13	48	03	03	16.0	16.0	100	E
8.	*Tribulus terrestris L.*	26	37	29	94	03	03	31.33	31.33	100	E
9.	*Stylosathes mucronataWild.*	02	14	17	33	03	03	11.0	11.0	100	E
10.	*Lavandula burmanni Benth.*	11	24	13	48	03	03	16.0	16.00	100	D
11.	*Cyanotis axillaris (L.) D. Don.*	13	07	09	29	03	03	9.66	9.66	100	E
12.	*Spermacoce hispida acut, non*	19	27	32	79	03	03	26.33	26.33	100	E
13.	*Rungia crenata Andres*	02	26	08	36	03	03	12	12	100	E
14.	*Euphrbia hirta L.*	21	17	33	73	03	03	24.33	24.33	100	E
15.	*Bursera penicillata (Sesse & Moc ex DC.)*	03	05	04	12	03	03	4	4	100	E
16.	*Clerodendrum serratum*	20	23	18	61	03	03	20.33	20.33	100	E
17.	*Panicum americanum L.*	03	---	07	10	03	02	3.33	5.66	100	E
18.	*Polygala arvensis Willd.*	02	---	07	09	03	02	3.0	3.0	100	E
	Acanthospermum hispidatum L.	08	11	16	35	03	03	11.66	11.66	100	E

Table 1: Continued…

SN	Name of plants species	Quadrate			Total No. of species in all Qua.	Total no. of Qua. studied	No. of Qua. in which species occur	Abundance	Density	Frequency %	Frequency class
		1	2	3							
2.	*Gloriosa superb L.*	06	11	10	27	03	03	9.0	9.0	100	E
3.	*Bidens pilosa auct.non.L.*	133	106	95	334	03	03	111.33	111.33	100	E
4.	*Evolvulus alsinoides L.*	06	05	07	18	03	03	6.0	6.0	100	E
5.	*Trichodesma amplexicaule Roth.*	07	05	03	15	03	03	5.0	5.0	100	E
6.	*Echinops echinatus Roxb.*	15	06	---	21	03	02	7.0	10.5	66.66	E
7.	*Opuntia dilleni Grah.*	07	09	08	24	03	03	8.0	8.0	100	E
8.	*Pergularia arborea Dennst.*	03	---	04	07	03	02	2.5	3.5	66.0	D
9.	*Dodonea viscose auct, non J acp.*	02	04	06	12	03	03	4.0	4.0	100	E
10.	*Iphigenia indica (L.) A Cray*	02	05	---	07	03	02	3.5	3.5	66.0	D
11.	*Terminalia arjunaL.*		---	02	07	03	02	2.5	3.5	66.0	D
12.	*Dichoma tomentosa Causs.*	03	01	06	10	03	03	9.5	9.5	100	E
13.	*Vitex negundo L*	04	-	05	03	-	-	07	02	66.0	D
14.	*Neanotis foetida (Hook. F.) W. H. Lewis.*	15	22	18	17	48	25	36	15	100	E
15.	*Gloriosa superba L.*	20	12	10	02	08	21	-	10	100	E
16.	*Tribulus terestris L.*	21	05	2	06	22	12	10	40	100	E
17.	*Ocimum sanctum.L.*	10	10	20	12	56	12	06	36	100	E.
18.	*Asparagus racemosus Wild Var. avanica*	05	08	12	03	21	01	-	04	66.0	D.
19.	*Withania somnifera L.*	02	06	03	04	10	08	01	02	66.0	D
20.	*Mimosa pudica L.*	14	22	20	14	05	36	16	25	100.0	E
21.	*Eclipta alba (L.) Hassk.*	02	-	14	06	08	07	02	03	66.0	D.
22.	*Curculigo orchioides Garten*	10	02	09	03	06	-	07	01	66.0	D
23.	*Securinega eucopyrns Mnell.*	16	12	45	26	-	08	06	25	100	E
24.	*Tinospora cordifolia Miers*	05	01	-	1	03	-	01	05	66.0	D
25.	*Adhatoda zeylanica Medic.*	02	04	01	02	03	02	-	02	66.0	D
26.	*Buchnania cochichinensis (Lour)Almeida..*	20	06	02	-	-	05	01	-	66.0	D.
27.	*Grewia tiliaefolia ahl.*	02	-	02	-	04	06	01	-	66.0	D
28.	*Cryptostega gadiflora R.Br.*	06	13	04	12	08	09	06	04	66.0	D
29.	*Bacopa moneieri (Micha)*	05	02	09	-	12	08	22	09	100	E
30.	*Sterculia urens Roxb.*	10	16	14	-	12	20	-	15	100	E
31.	*Solanum indicum l.*	15	22	40	41	25	12	40	10	100	E
32.	*Rauwolfia serpentine (Bth)*	02	06	03	-	05	04	03	-	66.0	D
33.	*Boerhavia diffusa (L.)*	06	20	36	14	41	-	22	06	100	E

Table 2: Medicinal uses and Plants listed at Ram ling Hills/ Babu-jaml Hills/ Bahu-bali Hills/Dhulehwar Hills/ Narande Hills/ Raspeeth Hills.

Sr. No.	Name of plants species	Parts used	Medicinal value
1.	*Carrisa conjesta* L.	Fruits, Leaves	Remedy in Hemoglobin loss and Ant acidic
2.	*Buchnania lanzan* Spreng.	Seeds, Fruit pulp	Stomach ache
3.	*Vitex negundo* L.	Leaves, Fruits	Poultice of leaves for inflammation
4.	*Ocimum sanctum* L.	Leaves, Seeds.	Cough and cold
5.	*Cryptostegia grandiflora* R. Br.	Bark, latex and leaves	External application of Poultice, leaves for inflammation, latex against boils, scabies
6.	*Neanotis foetida (*Hook.f.) W. H. Lewis	Leaves	Joint pains, Arthritis
7.	*Launaea procumbence* (Roxb.) Ramayya & Rajgopal	Leaves juice	Heart problems
8.	*Desmodium triflorum* (Benth) Drum & Thoth	-------	----------
9.	*Withania somanifera* L. Dunal	Root, leaves	Tonic, Churn, Nervous disorders medicine.
10.	*Lantana camara* auct.non.L.	Leaves	Injuries
11.	*Gymnosporia montanum* Benth	----------	----------
12.	*Terminalia arjuna* (Roxb) Wt. & Arn.	Bark, Fruits.	Decoction of bark powder, blood purification, decoction with milk for heart problems
13.	*Dioscoria bulbifera* L.	Tuber	Urinary, energy
14.	*Gymnema syluestre R.Br.ex*	Leaves, Roots	Diabetic medicine and liver tonic snake bite.
15.	*Lagascea mollis Cav. Anales*	Leaves ,pods	Common on waste places.
16.	*Lavandula burmani /L.bipinnata*	Leaves	Common on hill Slopes.
17.	*Rhus misurensis*	Leaves and Roots	Used in HIV medicines.
18.	*Bursera penicillata [Sesse] [Moc.ex.D.C.]*	Stem and Wood	Oil is used in medicine.
19.	*Polygala aruensis Wild*	Roots	Peculiar smell of Zandu balm.
20.	*Bouganvillea spectabillusl.*	Flower, Leaves.	Used in folk medicine.Anti-ulcerative, Anti-microbial coughs.
21.	*Polycarpea corymbosa L.*	All parts	Occasional on hill slopes on rocky soil
22.	*Plumbag zeylanica L.*	All parts	Medicine used in skin diseases
23.	*Malvarum triuspiatum(R.Br.)A.Gray*	Leaves and seeds	Leaves and seeds are used in Ayurvedic medicines.
24.	*Trichodesma indicum lehn*	Fruits	Common on hill slopes used medicine.
25.	*Leucas aspera [wild]Link enum*	Stem and Roots	Used in many Ayurvedic medicine
26.	*Iphgenia indica L. A.Gray*	Seeds	Common species used as source of Colchicines.
27.	*Tribulus terrestris L.*	Seeds and Leaves	Urinary medicine.
28.	*Enicostea axillare L.*	Leaves & Roots	Joint pain medicine.
29.	*Echinops echnatus (DC)*	All parts	Skin diseases, cough syrups.
30.	*Cleodendron serratum(Spreng)*	Leaves	Breathing medicine & Pregnancy period.
31.	*Dodona viscosa(Miller).*	Laves	Leaves tied along with poultice & muscle pans & swelling.
32.	*Morinda pubescens L.*	Leaves & seed	Used in medicine.
33.	*Grewia tiliaefolia vahl.*	fruits	Against intestinal gas problem.
34.	*Cynotics tuberosa [Roxb]*	tubers	Common in moist grassland.
35.	*Cassia auriculata L.*	Leaves and seeds , Roots , Flower	Leaves and seeds are used in Ayurvedic medicines, jaundice and skin diseases.
36.	*Solanum americanum Mill,Gard*	Fruits	Common on waste place.
37.	*Lagascea mollis Cav. Anales*	Leaves ,pods	Common on waste places.
38.	*Lavandula burmani /L.bipinnata*	Leaves	Common on gradually hill slopes.
39.	*Rhus misurensis*	Leaves and Roots	Used in HIV medicines.
40.	*Bursera penicillata [Sesse] [Moc.ex.D.C.]*	Stem and Wood	Oil is used in medicine.
41.	*Polygala aruensis Wild*	Roots	Peculiar smell of zandu balm.
42.	*Bouganvillea spectabillusl.*	Flower, Leaves.	Used in folk medicine.Anti-ulcerative, Anti-microbial coughs.
43.	*Bacopa monieri micha*	All parts	Children cough cold.Historia medicine etc.
44.	*Polycarpea corymbosa L.*	All parts	Occasional on hill slopes on rocky soil

Table 2 : Continued...

Sr. No.	Name of plants species	Parts used	Medicinal value
45.	*Plumbag zeylanica L.*	All parts	Medicine used in skin diseases
46.	*Malvarum triuspiatum(R.Br.)A.Gray*	Leaves and seeds	Leaves and seeds are used in Ayurvedic medicines.
47.	*Trichodesma indicum lehn*	Fruits	Common on hill slopes used medicine.
48.	*Withania somnifera L.Dunal*	Root, stem and leaves	Stimulating medicine
49.	*Leucas aspera [wild]Link enum*	Stem and Roots	Used in many Ayurvedic medicine
50.	*Iphgenia indica L. A.Gray*	Seeds	Common species used as source of Colchicines.
51.	*Boerhavia difusa L.*	All parts	Swelling and diseases.
52.	*Enicostea axillare L.*	Leaves & Roots	Joint pain medicine.
53.	*Echinops echnatus (DC)*	All parts	Skin diseases, cough syrups.
54.	*Cleodendron serratum (Spreng)*	Leaves	Breathing medicine & Pregnancy period.
55.	*Mucona pruniens De.*	Seed	Asthama small insect medicine.
56.	*Asperags recemosus Wild*	Leaves, roots.	Urine disease and acidty.
57.	*Tribulus treestris L.*	Fruits	Used in urinary medicine, Gokshuradi vati
58.	*Rhus mysurensis G. Don*	Leaves Fruits	Used in HIV medicines & Ayrvedic medicine
59.	*Abutilon indicum (L.) Sweet*	Leaves, Stem	Ayurvedic medicine
60.	*Cathranthu roseus (l.) G. Don*	Bark and Seeds	Bark and seed used in Aurvedic medicine specially stomach disorder.
61.	*Dodonia viscosa L.*	Leaves	Leaves tied along with muscle.
62.	*Ruta graveolens L.*	Stem	Oil used in medicine.
63.	*Solanum nigrum L...*	Fruits, seed	Used in medicine.
64.	*Dicoma tomentosa Cass.*	Fruits	Frequent on rocky hill slopes.
65.	*Piper longumL.Sp.*	Fruits	Dried, Unripe fruits and roots used in native medicine.
66.	*Launanea sarmentosa Roxb.*	Roots ad leaves	Used in Fever & Omitting.
67.	*Launaea pinatifida Roxb.*	Roots ad leaves	Health tonic
68.	*Caralluma asclendens (Wall)Grav.*	Leaves	Used in medicine
69.	*Ceropega bulbosa (Roxb.)Pl.*	Kharpudi/ leaves	Used in medicine
70.	*Sopubia delphifolia(l.) G.Don*	Leaves	Common in grassland & Wet field.
71.	*Andrographis panniculata (Burm)f wall.*	All parts	Used in Dysentery & Stomach medicine
72.	*Indoneesilla echioidesL.*	Stem	Used in medicine
73.	*Boerrhavia diffusa L.*	All parts	Eye disease and swelling medicine.
74.	*Celatrus paiculatusHook*	Leaves, Stem & Seed.	Used in massage Oil.
75.	*Gymosporia Montana Benth*	Bark, Leaves.	Purification of blood & Jaundice.
76.	*Euphobia ligularia Roxb.*	Latex, Stem.	Used in Ayurvedic medicine.
77.	*Phyllanthus scabrifolius Hook F.*	Fruits	Used in medicine.
78.	*Riccinus communis*	seeds	Used in dental medicine , snake bite
79.	*Iphigenia indica L.*	Seeds	As a source of colchicines
80.	*Scilla hyacithianaL.*	Roots	Diabetic patients
81.	*Spermadiction suavedens Roxb*	Seeds	Frequent on rocky hills plants has some repute in native medicine , in diabetic
82.	*Comelina suffruticosa L.Enum*	All parts	Used in asthma and lever medicine
83.	*Solanum xanthocarpumL.*	All parts	Used in medicine
84.	*Sterculia urens Roxb.*	Bark, Leaves.	Cough, Diarrheic, bone medicine.
85.	*Plumbago zeylanica L.*	Leaves , tubers	Skin disease medicine
86.	*Aloe vera L.*	Leave	Cough, juice antiinflamatry.

CONCLUSION

It is evident from the medicinal survey of assessed holy places In Hatkanagle Tahsil i.e. Ramling hills, Babu-Jamal hills, Bahu-bali hills, Dhuleshwar hills, Narande hills, and Raspeeth hills. In the above assessment that about 85 plants are found to be having local as well as traditional medicinal importance. All of them were locally used for remedies for different ailments and curing the diseases.

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