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Vegetation Cover and Medidcinal Use of Chitraokoot Kamadgiri Hill Plants

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Abstract

Chitrakoot is a place of religious, cultural, historical and archaeological importance, situated in the Bundelkhand region. The place is believed to have been the abode of Lord Ram, Sita and Laxman during their exile. Chitrakoot as an eminently holy place inhabited by the great sages, abounding in monkeys, bears and various other kinds of fauna and flora. Totally 159 (Herb 107, tree 25, climber 17 and shrub 10) species were recorded in survey and studies on some medicinal plant of Kamadgiri hill.

Keywords

Chitrakoot, Herb, Shrub, Tree

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1. Introduction

Kamadgiri is the main holy place of Chitrakoot. The sanskrit word 'Kamadgiri' means the mountain which fulfills all the desires. Kamadgiri, the original Chitrakoot, is a place of prime religious significance. A forested hill, it is skirted all along its base by a chain of temples and is venerated today as the holy embodiment of Rama. There is a five KM Parikrama Path around the Kamadgiri Mountain. The place is believed to have been the abode of Lord Ram, Sita and Laxman during their exile. Lord Kamtanath, another of his names, is the principal deity not only of Kamadgiri but of the whole of Chitrakoot. Chitrakoot means the 'Hill of many wonders'. Chitrakoot falls in the northern Vindhya range of mountains spread over the states of Uttar Pradesh and Madhya Pradesh. The Chitrakoot region is included in the District Chitrakoot of Uttar Pradesh and the District Satna of Madhya Pradesh (District Unit Chitrakoot, National Informatics Centre).

Tulsidas, the saint-poet of hindi has spoken very reverently of this place in all his major works-Ramcharit Manas, Kavitawali, Dohawali and Vinaya Patrika. In India used approximately about 2500 species of medicinal plants which few more than 100 species serve as regular sources of medicine (Pei. 2001, Jain and Patole. 2001). Shinwaikar et. al (2004) reported that many plants have shown positive activities. A good number of plant species are being used the treatment of diarrhoea and dysentery (Sikarwar et al., 2008).

Totally 84 species of plants belonging to 39 families were known to be effectively used for treating pyretics, skin, ulcer, gastrointestinal, diabetes, diarrhoea and dysentery diseases by the tribal and rural peoples of Chitrakoot (Mishra, 2015). Mishra (2009, 2014) recorded that ethenomedicinal properties of *Lantana camara* and *Parthenium hysterophous*. Dewedi et al (2007), Ekka and Dexit (2007) and Jain (1962) several works on ethnomedicine. 64 species of plants belonging to 37 families plants are used by the rural people treatment and cure many disease in human and animals. The drugs (flower, fruit, leaf, bark and seed) are used to develop many medicinal preparations (Mishra, 2015).

The present study was focused at the identification and determination of families and medicinal properties of Chitrakoot hill plant vegetation.

2. Materials and Methods

Study area

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Chitrakoot is situated in the northern region of satna district of Madhya Pradesh and surrounded on North, Northwest and Northeast by Karwi (Chitrakoot) district of Uttar Pradesh and west by Panna district of M.P. It lies between 80 52' to 80 73'N latitude, covering an area of 1,584 km^2.

Fig. 1. Kamadgiri hill.

Vegetation surveys of Kamadgiri have been carried out during the years 2012-2014. Data were based on personal contact and observation and interview with local traditional healers and villagers of different localities of the study area. Collection of data of trees, shrubs and herbs species occurring in Kamadgiri hill. Classification of the different species of trees, shrubs and herbs Data synthesis and analysis. The plant identified by published literature.

3. Result and Discussion

3.1. Composition of Shrub Species

The observation recorded in table 1 that Verbenaceae is the dominant family having 2 shrub species. Malvaceae, Sterculiaceae, Rhamnaceae, Rubiaceae, Lamiaceae, Euphorbiaceae, Apocynaceae and Asclepiadaceae having 1 species each.

Table 1. Composition of shrub species in Kamadgiri hill.

S.No.	Name of the family	Name of species	% of Plants species
1	Malvaceae	*Abutilon indicum*	10
2	Sterculiaceae	*Helicteres isora*	10
3	Rhamnaceae	*Ziziphus nummularia*	10
4	Rubiaceae	*Ixora coccinia*	10
5	Verbenaceae	*Vitex negundo Lantana camara*	20
6	Lamiaceae	*Ocimum basilicum*	10
7	Euphorbiaceae	*Securinega virosa*	10
8	Apocynaceae	*Holarrhena pubescens*	10
9	Asclepiadaceae	*Calotropis procera*	10
		Total no. of species = 10	

Table 2. Composition of herb species in Kamadgiri hill.

S. No.	Name of the family	Name of species	% of Plants species
1	Papaveraceae	*Argemone mexicana*	0.93
2	Cleomaceae	*Cleome viscosa*	0.93
3	Violaceae	*Hybanthus enneaspermus*	0.93
4	Polygalaceae	*Polygala arvensis, P. chinensis*	1.86
5	Malvaceae	*Hisbiscus labatus, Sida acuta, S. cordata, S. cordifolia, S. rhomboidea, Urena lobata Malvastrum coromandelianum*	6.54
6	Tiliaceae	*Corchorus aestuans, Corchorus capsularis, C. olitorius, Triumfetta rhomboidea*	3.73
7	Oxalidaceae	*Biophytum sensitivum*	0.93
8	Fabaceae	*Alysicarpus bupleurifolius, A. hamosus, A. monilifer, A. vaginalis, Crotalaria medicaginea, Desmodium gangeticum, D. neomexicanum, D. triflorum, Indigofera cordifolia, I. linnae, I. linifolia, I. trita, Tephrosia pumila, T. purpurea, T. strigosa, Vigna trilobata, Zornia gibbosa*	15.88
9	Caesalpiniaceae	*Cassia absus, C. pumila, C. obtusifolia, C. tora*	3.73
10	Rubiaceae	*Borreria articularis, B. pusilla, Oldenlandia affinis, O. corymbosa*	3.73
11	Asteraceae	*Ageratum conyzoides, Bidens bipinnata, Lindernia ciliate, L. crustacea, Striga angustifolia*	4.67
12	Pedaliaceae	*Sesamum indicum*	0.93
13	Martyniaceae	*Martynia annua*	0.93
14	Acanthaceae	*Blepharis maderaspatensis, B.repens, Elytraria acaulis, Indoneesiella echioides, Justicia procumbens, J. simplex, Peristrophe paniculata, Rungia pectinata*	7.47
15	Lamiaceae	*Anisomeles indica, Hyptis suaveolens, Leucas aspera, Nepeta hindostana, Ocimum basilicum, O. canum,*	5.60
16	Nyctaginaceae	*Boerhavia diffusa*	0.93
17	Amaranthaceae	Achyranthes aspera, A. bidentata, Aerva sanguinolenta, Alternanthera pungens, Amaranthus spinosus, A. viridis, Digera muricata, Gompherena celosioides, Pupalia lappacea	8.41
18	Euphorbiaceae	*Acalypha indica, A. ciliate, Euphorbia chamaesyce, E. hirta, E.hypericifolia, Phyllanthus amarus, P. fraternus, P. urinaria, P. virgatus*	8.41
19	Hypoxidaceae	Curculigo orchioides	0.93
20	Commelinaceae	*Commelina bengalensis, C. hasskarlii, C. paludosa, C. longifolia, C. suffruticosa, Cyanotis cristata, Murdannia nudiflora, Blumea lacera, Cotula anthemoides, Emilia sonchifolia, Parthenium hysterophorus, Sonchus asper, Tridax procumbens, Vernonia cinerea, Xanthium strumarium*	14.01
21	Convolvulaceae	*Cuscuta campestris, Evolvulus alsinoides, E. nummularius*	2.80
22	Solanaceae	*Physalis minima, Solanum incanum, S. nigrum, S. virginianum*	3.73
23	Scrophulariaceae	*Lindenbergia indica*	0.93
24	Gentianaceae	*Enicostemma hyssopifolium*	0.93
		Total no. of species = 107	

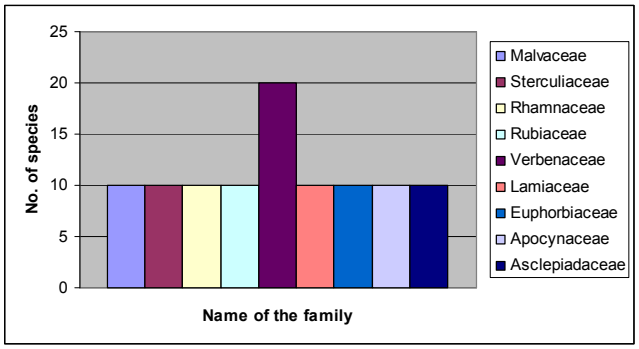

Fig. 2. Shrub species in Kamadgiri hill.

3.2. Composition of Herb Species

The table 2 data indicate that the family Fabaceae is the dominant herb family having 17 species. Commelinaceae having 15 species. Euphorbiaceae having 9 species. Acanthaceae 8 and Lamiaceae having 6 species. Amaranthaceae having 9 species. Malvaceae 7 and Asteraceae having 5 species. Tiliaceae, Caesalpiniaceae, Rubiaceae and Solanaceae having 4 each. Convolvulaceae having 3 species and Papaveraceae, Cleomaceae, Violaceae, Oxalidaceae, Pedaliaceae, Martyniaceae, Nyctaginaceae, Hypoxidaceae, Scrophulariaceae and Gentianaceae having 1 each.

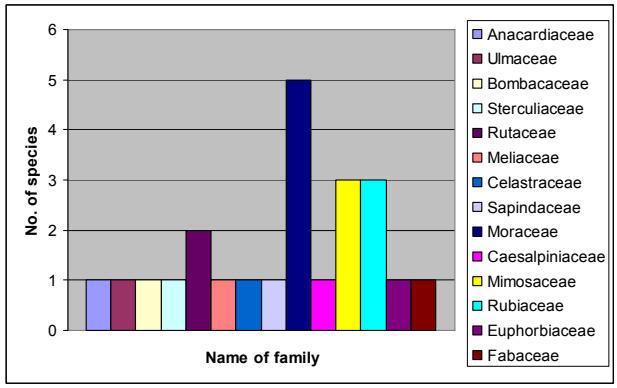

Fig. 3. Trees species in Kamadgiri hill.

3.3. Composition of Trees Species

The table 3 data indicate that Moraceae is the dominant family having 5 trees species. Mimosaceae and Rubiaceae having 3 species. Rutaceae and Caesalpiniaceae having 2 species. Anacardiaceae, Ulmaceae, Bombacaceae Sterculiaceae, Meliaceae, Celastraceae, Sapindaceae, Fabaceae and Euphorbiaceae having 1 species each.

Table 3. Composition of trees species in Kamadgiri hill.

S. No.	Name of the family	Name of species	% of Plants species
1	Anacardiaceae	*Lannea coromandelica*	4.0
2	Ulmaceae	*Holoptelea integrifolia*	4.0
3	Bombacaceae	*Bombax ceiba*	4.0
4	Sterculiaceae	Sterculia urens	4.0
5	Rutaceae	*Aegle marmelos,* *Limonia acidissima*	8.0
6	Meliaceae	*Azadirachta indica1*	4.0
7	Celastraceae	*Cassine glauca*	4.0
8	Sapindaceae	*Schleichera oleosa*	4.0
9	Moraceae	*Ficus benghalensis, F. mollis, F. racemosa, F. religiosa,F. virens*	20
10	Caesalpiniaceae	*Bauhinia racemosa, Cassia fistula*	8.0
11	Mimosaceae	*Acacia leucophloea, Albizia lebbeck, A. odoratissima*	12
12	Rubiaceae	*Gardenia latifolia, Haldina cordifolia, Mitragyna parviflora*	12
13	Euphorbiaceae	*Euphorbia neriifoliaj*	4.0
14	Fabaceae	*Pobnbngamia pinnata*	4.0
15	Flacourtiaceae	*Flacourtia indica*	4.0
		Total no. of species = 25	

3.4. Composition of Climber Species

The observation recorded that in table 4 Cucurbetaceae and Convolvulaceae family is the dominant family having 4 climber species. Menispermaceae having 3 species. Vitaceae, Fabaceae and Asclepiadaceae having 2 climber species each.

Table 4. Composition of climber species in Kamadgiri hill.

S.No.	Name of the family	Name of species	% of Plants species
1	Menispermaceae	*Cocculus hirsutus, Stephania glabra, Tinospora cordifolia*	17.64
2	Vitaceae	*Ampelocissus latifolia, Cayratia trifolia*	11.76
3	Fabaceae	*Butea superba, Teramnus labialis*	11.76
4	Cucurbetaceae	*Coccinia grandis, Cucumis melo, Momordica dioica, Trichosanthes bracteata*	23.5
5	Convolvulaceae	*Ipomoea obscura, I. pes-tigridis, I. sinensis, I. sindica*	23.5
6	Asclepiadaceae	*Gymnema sylvestre, Hemidesmus indicus*	11.76
		Total no. of species = 17	

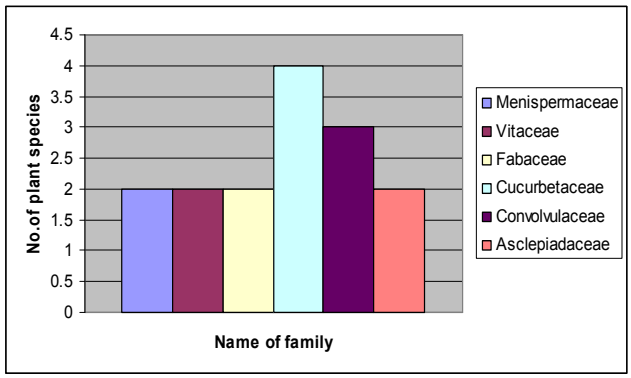

Fig. 4. Climber species in hill.

The fig. 5 showing that a total of 159 (107 herb, 25 Tree, 17 Climber and 10 Shurb) species are found in composition of Chitraokoot hill. Some plants are used by the rural people treatment and cure for many disease in human and animals (Table - 5).

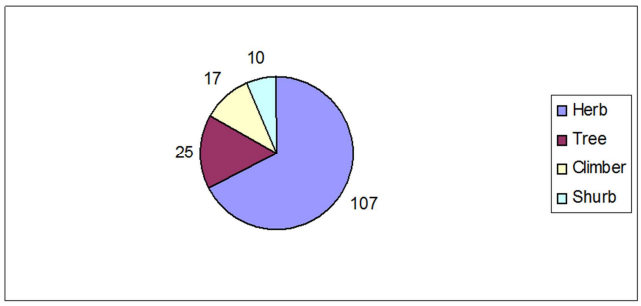

Fig. 5. No. of herb, shrub, tree and climber species in Kamadgiri hill.

Table 5. Some enthenomedicinal plants , part used for the treatment of different disease.

S.No	Botanical name	Local name	Name of family	Habit	plant part used / medicinal uses
1	*Tinospora cordifolia*	Guluchi	Menispermaceae	Climber	Whole plant / Diabetes, Jaundice, Liver
2.	*Argemone mexicana*	Ghumaiya	Papaveraceae	Herb	Flower / Fever and Dysentery
3.	*Abutilon indicum*	Country mallow	Malvaceae	Shrub	Leaves / Diarrhoea
4	*Sida acuta*	Sida	Malvaceae	Herb	Root and Leaves / Antipyretic, Nervous and Urinary tonic
5	*Sida cordata*	Sida	Malvaceae	Herb	Leaves / Hay fever, asthma, antibacterial
6	*Sida cordifolia*	Sida	Malvaceae	Herb	Leaves / Hay fever, asthma, antibacterial
7	*Urena lobata*	Mpuruza	Malvaceae	Herb	Root / Hydrophobia
8	*Tephrosia purpurea*,	Sarphonka, Ramsar	*Fabaceae*	small annual herb	Roots and leaves / Fever, asthma
9	*Cassia fistula*	Amaltas	*Fabaceae*	Tree	Seed, Fruit pulp / malarial fever, loose motion
10.	*Butea monosperma*	Dhak, Palas	*Fabaceae*	deciduous tree	Wood, flower / snake bite, itch and eczema, worm ring, regulate menstrual cycle
11.	*Anogeissus latifolia*	Dhao	*Combretaceae*	deciduous tree	stem bark / snake bite, diarrhoea
12.	*Anogeissus pendula*	Kardhai	*Combretaceae*	Deciduous trees or shrubs	Seed, bark / dysentery
13	*Ocimum basilicum*	Tulasi	Lamiaceae	Herb	Leaves/ Eczema, Fever, asthma
14.	*Justicia ocumbens*	Bakus	Acanthaceae	Herb	Leaves / Eczema
15.	*Anogeissus latifolia*	Dhawa	Combretaceae	Tree	Bark / Diarrhoea
16.	*Helicteres isora*	Marorphalin	Sterculiaceae	Shrub	Fruit / Gastrointestinal dieses
17.	*Evolvulus alsinoides*	Sankhapushpi	*Convolvulaceae.*	Herbs perennial	Whole plants/prevent bleeding.
18	*Wrightia tinctoria*	Safed Korea	Apocynaceae	Tree	Seed / Diabetes
19	*Holarrhena pubescens*	Kutaja	Apocynaceae	Shrub	Leaves / Diarrhoea
20	*Holoptelia integrifoli*a	Chilbil	*Ulmaceae*	deciduous tree	Leaves, wood, bark / ring-warm, gout, totem
21	*Vitex negundo*	Negad	*Verbenaceae*	Shrub	Leaves, Fruit pulp / joint pain, paralysis
22	*Lantana camara*	Ghaneri	Verbenaceae	Shrub	Twigs, leaves, root/ cuts, wounds and thatching
23	*Calotropis procera*	Aak	Asclepiadaceae	Herb	Root, flower, Leaf/ itch, eczema, Asthama and Swelling
24	*Gymnema sylvestre*	Gudmar	Asclepiadaceae	Climber	Leaves / Diabetes
25	*Hemidesmus indicus*	Indian Sarsaparilla	Asclepiadaceae	Climber	Leaves / Antidiarrhoeal, mucoprotective, Antiulcer
26	*Lannea coromandelica*	Dumpidi	*Anacardiaceae*	Tree	Bark / Cuts, wounds, diabetes and leprosy
27	*Achyranthes aspera*,	Apamarg, Latjira	Amaranthaceae	Herb	Whole plant / fever
28	*Holarrhena sp.*	Kutaj	*Apocynaceae*	Tree	root bark / Given to goat & Cow for yielding milk, dysentery
29	*Phyllanthus amarus*	Usiri	Euphorbiaceae	Herb	Leaf, Fruit / Tridosa, Jaundice, Peptic
30	*Azadirachta indica*,	Neem	*Meliaceae*	Tree	Leaves/ intestinal worms and skin disorder
31	*Ficus benghalensis*	Bargad	*Moraceae*	Very large tree	Arial roots, woo / Dysentery
32	*Ficus racemosa*	Umber, Umar	*Moraceae*	evergreen tree	Latex, wood, fruit / skin disease, dysentery and diabetes
33	*Ficus religiosa*,	Pipal	*Moraceae*	evergreen tree	Plant / stop bleeding, Totem,
34	*Acalypha indica*	Kuppi, Khokli	Euphorbiaceae		Leaves/Eczema
35	*Tinospora cordifolia*	Gurich	Minispermaceae	evergreen tree	Leaves/malarial fever, diabetes M
36	*Eugenia jambolana*	Jamun	*myrtaceae.*	evergreen tree	Leaves, fruit/ Pyorrhea, diabetes
37	*Ixora coccinia*	Kaya	Rubiaceae	Shrub	Flower / Eczema
38	*Helicteres isora*	Marod fali	*Sterculiaceae*	Herb	Fruits/ stomach ache
39	*Datura innoxia*	Dhatura	*Solanaceae*	annual shrub	Fruits/Itch
40	*Solanum nigrum*	Makoy	*Solanaceae*	Herb	Fruit / joint pain
41	*Solanum virginians*	Bhatkataiya	*Solanaceae*	herb	Seed / joint pain
42	*Cynodon dactylon*	Doob Ghas	*Poaceae.*	small perennial creeping grass	Hole plant/Wounds, diarrhea, vomiting , itch and eczema

4. Conclusion

Present study showing that a total of 159 (107 herb, 25 Tree, 17 Climber and 10 Shurb) species are found in composition of Chitraokoot hill. Some plants are used by the rural people treatment and cure for many disease in human and animals. Some of the plants reported in earlier study not found due to grazing by animals or environmental stress.

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