PRELIMINARY SURVEY OF FLORISTIC DIVERSITY OF 'CHANDAN-VANDAN HILL'. DIST. SATARA, MAHARASHTRA, (INDIA)

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Abstract:

The present study is based on preliminary field survey of floristic elements of the Chandan-Vandan Hill. During study 354 species of flowering plants are recorded, out of which 13 species are endemic and found on Chandan-Vandan Hill.

Key Words: Chandan-Vandan Hill, Floristic diversity, Endemic.

Introduction:

A laterite Chandan-Vandan Hill is 24 km. East to Satara City. It is in the range of Sahyadri. Chandan-Vandan Hill is in full bloom during monsoon season.. i.e. in June to Sept. It includes herbs, Shrubs, Climbers, ephemerals, bulbous, tuberous, Saprophytic, Parasitic, plants.

Study Area: Chandan-Vandan hill is located 24 km. east to Satara City of Maharashtra State It is east to Western Ghats. It is on border of Satara and Koregoan and Wai Talkula. It is situated between 17° 50' 49.53" N, 74° 02' 42.00" E; east to sahyadri ranges. The average height is 3692 feet ASL. Thin layer of Basalt, Murum soil occur on top of rock. Climate is tropical monsoon pleasant & healthy in summer, Rainy & Winter. The average rainfall is about 2000 to 2100 mm. Av. The minimum temp. in winter lowers to 15° C or below, where as maximum temperature ranges between 30° C to 38° C in summer.

Purpose of work : 1) The present work was undertaken to get an up-to-date picture of all endemic and threatened taxa of Chandan-Vandan Hill according to revised recommendations proposed by IUCN(1994). 2) So far as a threatened plant of Chandan-Vandan Hill is concerned, no detailed study was undertaken in the past. 3) It becomes necessary to assess the current position of endemic and threatened flowering plants of Chandan-Vandan Hill. 4) The study was also inevitable because, endemism is one of the most important factors for determining the status of threatened plants. 5) The study of all endemic and threatened taxa of Chandan-Vandan is important.

Past Work: Cooke (1901-1908) in his flora used the term apparently endemic to konkan and peninsular India. M.V.M Patrika 8: 3-15.

1973., Subramnyam & Nayar (1974) enumerated characteristic endemic species of western Ghats. Nayar (1977) estimated that about 2100 endemic flowering plants to occur in peninsular India which represent about 33% of its flora. Raghvan and Singh (1984) enumerated 594 endemic and threatened taxa of Western India. Bachulkar (1993) enumerated 26 endemic and threatened taxa of satara district with localities. According to Yadav S.R. (1997), of the 1790 species and 144 intraspecific taxa occur in Maharashtra of which over 125 species endemic to peninsular India are known only from Maharashtra. Deshpande and et.al (1993 to 1995) listed 25 taxa endemic to only satara district, 130 taxa endemic to western Ghats as well as satara district and 30 rare taxa are in district.

Material and Method:

Frequent Survey and exploration were undertaken covering the growth during monsoon, winter & summer in 2010 to 2014. The plant samples were collected based on morphological and reproductive features. List of all endemic taxa of Chandan-Vandan Hill. The hill was prepared by referring to all the available literature. Identification of most of the specimens was confirmed with help of National, state and local floras.

ENDEMIC PLANTS:- 1) *Delphinium. malbaricum var malbaricum*, 2) *Cleome simplicifolia* Hook, 3) *Flacourtia montana* Grah., 4) *Alysicarpus tertragonolobus* Edgew., 5) *Cajanus lineatus* Maesen, 6) *Crotolaria vestita* Balcer., 7) *Indigofera prostrate* Willd., 8) *Vigna vexillata* Walp., 9) *Cucumis setosus* L., 10) *Jasminum malbaricum* Light, 11) *Sehima. sulcatum* (Hack.) A. Camus, 12) *Argyreia cuneata* Kre Cwa. 13) *Tripogon. jacquemontii* Stapf.

Table No. 1 No. of Species per Group

Groups	Families	Genera	Species
Dicot.	64	201	283
Monocot.	6	38	71
Total	70	239	354

Table No. 2 No. of Species per Habit

Type	Dicot.	Monocot.
Herbs	165	67
Shrubs	41	-
Trees	50	2
Climbers	27	2

Table No. 3

Maximum No. of Species
With Five Families

Family	No. of Species
Poaceae	54
Fabaceae	37
Asteraceae	32
Acanthaceae	17
Lamiaceae	14

Table No. 4

Maximum No. of Species
with Six Genera

Genus	No. of Species
Crotolaria	8
Cassia	7
Eragrostis	7
Euphorbia	7
Sida	6

Table No. 5

Maximum No. of Genera
with Five Families

Family	No. of Genera
Asteraceae	29
Poaceae	25
Fabaceae	18
Acanthaceae	12
Asclepiadaceae	09
Lamiaceae	09

FLORISTIC SPECTRUM OF CHANDAN VANDAN HILL.

Figure. 1 **Figure. 2**

Photo plate Index

Photo plate No.	Botanical Name	Family
1	<i>Butea monosperma</i> Taub	Fabaceae
2	<i>Wattakaka volubilis</i> (L.f.) Stapf.	Asclepiadaceae
3	<i>Erythrina indica</i> Lumk.	Fabaceae
4	<i>Cynotis fasciculata</i> var. <i>fasciculata</i> Schult.	Commelinaceae
5	<i>Coleus brabatus</i> (Andrs.) Benth	Lamiaceae
6	<i>Rungia repens</i> Nees.	Acanthaceae
7	<i>Wagatea spicata</i> (Dalz.) Wt.	Caesalpinaceae
8	<i>Chlorophytum glycoides</i> L.	Liliaceae
9	<i>Cleome simplicifolia</i> Hook	Cleomaceae
10	<i>Celrodendron serratum</i> Sprery.	Verbenaceae
11	<i>Vigna vexillata</i> Walp.	Fabaceae
12	<i>Ceropegia hirsuta</i> Wight	Asclepiadaceae
13	<i>Plumbago zeylanica</i> L	Plumbaginaceae
14	<i>Senecio gramhami</i> Hook.	Asteraceae

Fig.3 **Conclusion:****Statistical Analysis**

Conservation Method: 1) In situ Conservation by Protected areas. 2) Gene Bank, Seed Bank 3) Ex situ Conservation 4) Plantation of local Plants. 5) Germ plasma Conservation, 6) Avoid vehicle Pollution 7) Cultivation,

domestication & propagation of rare plants 8) Cultivation as ornamentals, medicinal & commercial basis.

Floristic analysis: The floristic analysis of **Chandan-Vandan hill** reveals that it comprises **354 species** belonging to **239 genera** under **70 families**. Monocot represents 71 species, 38

genera 6 families Where as Dicot represents 283 species, 201 genera 64 families.

Threats: 1) Overgrazing 2) Fuel, timber
3) Anthropogenic Project 4) Demand of
Medicine 5) Tourism Project 6) Tourism
7) Exotic elements 8) Fire

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