

Studies on Plant diversity of Laling Forest of Dhule District (Mh), India

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ABSTRACT

The present paper focuses on the Plant diversity of Laling Forest of Dhule District (Mh), India via Survey conducted during January to December, 2017. A Total 137 plants species belonging to 53 families and 122 genera were collected and identified from Laling forest in which 49 plants were found to be herbs, 16 were shrubs, 47 were trees and only 07 were found to be climbers. Total 18 different cacti were identified situated in Cactus house and more than fifty medicinal plants were planted in medicinal plant garden which is developed by forest department under the scheme of conservation.

Key words: Biodiversity, Plant species, Laling forest, cactus.

INTRODUCTION

India has one of the oldest, richest and most diverse cultural traditions associated with the use of medicinal plants as medicine like Ayurveda, Siddha, Unani and the Tibetan systems (Retnam and Martin, 2006). Indian economy depends greatly on the number of wild plant species. The forest of Maharashtra covers a huge area of 61.939 sq km. thus covering about 21% of the total land. In order to preserve the wildlife, 33% of the land is given to the state government so that it can utilize the area to create more national parks as well as sanctuaries Nagpur is said to have the longest forest area while Aurangabad has the least forest area. The forest of Dhule district covers an area of 209 thousand Hectors which is 28.5% of the total state area. In the present study of plant diversity of laling forest situated in Dhule district. Laling forest area has spread over 4200 hectors. The laling forest spread around the laling fort and situated 9.65 kilometers away from Dhule city. The forest area around the laling fort having rich plant diversity. Many medicinal plants, herbs, shrubs, climbers and evergreen trees spread laling forest around the laling fort and nobody investigated the plant diversity of this area. The study of plant diversity particularly in the laling forest feels to be a most urgent need of this study region. Considering these facts present research work is undertaken in view to Plant Diversity of laling forest of Dhule District (Mh.) India.

MATERIAL METHODS

The plant diversity Laling forest of Dhule District was studied as per the methods described by Rahman et al (2007). Accordingly, the plant survey of Studies on Plant diversity of Laling forest, Dhule District was made during January, 2017 to December, 2017. For this regular excursions were arranged to Laling forest, of each and every zone at least twice in a week and later on twice in a month. The excursions were arranged in such a way that it covered the entire study area. As a result of this most of the plants could be collected in different growth stages. The identified plants were categorized as herbs, shrubs, trees and climbers as per the methods described by Bisht et al, 2004.

Identification

The collected weeds were identified on the spot and in the laboratory on the basis of their natural characters with the help of identification keys. The flora of Jalgaon District (Kshirsagar et al, 2008) was extensively used. Flora of Marathwada (Naik, 1998) Flora of Kolhapur District (Yadav and Sardesai, 2002), Flowering plants of chittoor district Andhra Pradesh (Chetty, 2008), Further Flower of Sahyadri (Ingalhalikar, 2007), Flowers of Sahyadri (Ingalhalikar, 2012) were also used for the identification of collected plants.

RESULTS & DISCUSSION

It is clear from the results presented in table that, total 137 plants belonging to 53 families and 122 genera were collected and identified from Laling forest. Among all the identified plants, total 49 plants were found to be herbs, 16 were shrubs, 47 were trees and only 07 were found to be climbers. The table also showed that, Total 18 different cacti were identified situated in Cactus house and more than fifty medicinal plants were planted in medicinal plant garden which is developed by forest department under the scheme of conservation. Most of the plants were found to be common and dominant in laling forest. Most of cacti were common in this forest. Similarly Ingalhalikar S. (2007), reported 1200 plant species from North Western Ghats of India. Total 158 plant species were identified from the main campus site of central university of punjap in 2013 (singh et al,

2014). Total of 532 plant species belonging to 308 genera and 80 families were identified as crop land by Prayaga M. P and Venkaiah M., (2011) during 2006-09. During 2006-09, these 382 were dicots, 149 monocots and one pteridophyte. Out of 532 species 396 were herbs, 36 undershrubs, 51 shrubs and 49 falls under climbing category. One species belonging to Solanaceae is the new record to Andhra Pradesh. Poaceae, Fabaceae, Asteraceae, Acanthaceae, Euphorbiaceae, Cyperaceae, Rubiaceae, Lamiaceae, Convolvulaceae, Malvaceae, Amaranthaceae, Commelinaceae, Asclepiadaceae, Scrophulariaceae and Solanaceae were among the largest families represented by more than 10 species. Rad Eshaghi J. et. al (2009), 104 species were recorded from Four communities, including Quercus-Carpinetum betulii, Carpineto-Fagetum Oriental, Rusco-Fagetum Oriental and Fagetum Oriental in different layers including 12 trees, 9 shrubs and 83 herbs. Mligo, C. (2015), reported total 312 plant species belonging to 62 families from Namatimbili forest. Similarly, Patunkar (1976) made an excellent study of grasses of Marathwada. These forests also shelter scores of rare endemic elements of flora and fauna. Ramanujam and Cyril (2003) studied the woody species diversity of four sacred groves in the Pondicherry region of South India. Athaya et al (2006) studied the ecological biodiversity of some forests of Sagar District. Naik (1969) explored and described morphology and uses of eight hundred four plants belonging to four hundred seventy two genera and one hundred six families of Angiospermic plants. He published his work in the flora of Osmanabad district. Parthasarathy and Karthikeyan (1997) worked on plant biodiversity inventory and conservation of two tropical dry evergreen forests on the Coromandel Coast, south India. Similar work has been carried out by different workers such as Sayeeduddin (1940), Rahman et al (2007), Kandya and Prashanth (2008), Arjaria and Chaurasia (2008), Shrikant et al (2008), Chakraborty(2009), Choudhary and Upadhyaya (2009), Ahirwar and Tripathi (2009), Jagtap and Mukherjee (2013), recorded total 237 species belonging to 184 genera and 73 families which are listed in this paper. Out of 73 families listed, 63 belong to dicotyledonae and 10 belong to monocotyledonae. Dominant families were Fabaceae (21 genera), Acanthaceae (12 genera) followed by Asteraceae (9 genera).

Table-1: Studies on plant diversity of Laling Forest of Dhule District (Mh.), India.

Sr. No	Botanical Name	Common Name	Family	Habit
1.	<i>Andrographis lineata</i> Wall. Ex Nees	Kalmedh	Acanthaceae	Herb
2.	<i>Andrographis paniculata</i> (Burm.f.) Nees	Kali chiraet	Acanthaceae	Annual Herb
3.	<i>Adhatoda vassica</i> (Medic)	Adulsa	Acanthaceae	Shrub
4.	<i>Agave Americana</i> L.	Ketki	agavaceae	Sub shrub
5.	<i>Trianthema portulacastrum</i> L.	vasu	Aizaceae	Herb
6.	<i>Amaranthus spinosus</i> L.	Matla	Amaranthaceae	Herb
7.	<i>Celosia argentea</i> L.	Kurdu	Amaranthaceae	Herb
8.	<i>Alternanthera sessilis</i> (L.) R.Br,ex DC		Amaranthaceae	Herb
9.	<i>Magnifera indica</i> L.	Amba	anacardiaceae	Tree
10.	<i>Semecarpus anacardium</i> L. f.	bibba	anacardiaceae	Tree
11.	<i>Annona squamosa</i> L.	Sitaphal	Annonaceae	Tree
12.	<i>Annona reticulate</i> L.	Ramphal	Annonaceae	Tree
13.	<i>Catharanthus roseus</i> L.	Sadafully	Apocynaceae	Herb
14.	<i>Nerium indicum</i> L.	Kanher	Apocynaceae	Shrub
15.	<i>Carissa inermis</i> Vahl	Karvand	Apocynaceae	Shrub
16.	<i>Rauwolfia serpentine</i> (L.)Bth.ex Kurz	Sarpagandha	Apocynaceae	Shrub
17.	<i>Cascabella thevetia</i> / <i>Thevetia peruviana</i> (Pers.) K. Schum	Bitti	Apocynaceae	Tree
18.	<i>Calotropis procera</i> L.	Rui	Asclepiadaceae	Herb
19.	<i>Gymnema sylvestre</i> (Retz.)R.Br. Schultes	Pitani	Asclepiadaceae	Climber
20.	<i>Eclipta prostrata</i> L.	Maka	Asteraceae	Herb
21.	<i>Tridax procumbens</i> L.	Kolashi	Asteraceae	Herb
22.	<i>Parthenium hysterophorus</i> L.	Gajor-Ghass	Asteraceae	Herb
23.	<i>Grangea maderaspatana</i> (L.) Poir.		Asteraceae	Herb
24.	<i>Vicoa indica</i> (L.) DC.	Sonkari	Asteraceae	Herb
25.	<i>Tecoma stans</i> (Linn.) H.B.& K.	Tecoma	Bignoniaceae	Small Tree
26.	<i>Bombax ceiba</i> L.	Katesavar	Bombacaceae	Herb
27.	<i>Coldenia procumbens</i> (L)		Boraginaceae	Herb
28.	<i>Cordia dichotoma</i> Forst. F.	Bhokar	Boraginaceae	Tree
29.	<i>Cordia gharaf</i> (Forssk.) Ehrenb.& Asch.	Gondan	Boraginaceae	Tree
30.	<i>Parkinsonia aculeata</i> L.	Vedi-Babhul	Caesalpiniaceae	Tree
31.	<i>Saraca asoca</i> (Roxb.)	Sita-Ashok	Caesalpiniaceae	Tree
32.	<i>Bauhinia Purpurea</i> L.	Aapta	Caesalpiniaceae	Tree
33.	<i>Tamarindus indicus</i> L.	Chinch	Caesalpiniaceae	Tree
34.	<i>Caesalpinia pulcherima</i> L.	Shankasur	Caesalpiniaceae	Tree
35.	<i>Delonix regia</i> L.	Gulmohar	Caesalpiniaceae	Tree
36.	<i>Carica papaya</i> L.	Papai	Caricaceae	Tree
37.	<i>Garcinia indica</i> (Du Petit-Thou.) Choisy	Kokum	Clusiaceae	Tree
38.	<i>Cochlospermum religiosum</i> (L.)	Ganer	Cochlospermaceae	Tree
39.	<i>Quisqualis indica</i> (L.)	Madhumalti	Combretaceae	Climber
40.	<i>Terminalia chebula</i> Retz	Hirda	Combretaceae	Tree
41.	<i>Terminalia bellirica</i> (Gaertn.) Roxb	Behada	Combretaceae	Tree
42.	<i>Terminalia catappa</i> L.	Badam	Combretaceae	Tree
43.	<i>Terminalia arjuna</i> (Roxb. Ex DC)	Arjun	Combretaceae	Tree
44.	<i>Commelina Benghalensis</i> L.	Kena	Commelinaceae	Herb
45.	<i>Ipomea obscura</i> L.	Morning glory.	Convolvulaceae	Climber

46.	<i>Costus speciosus</i> (J. Konig)	Pev	Costaceae	Herb
47.	<i>Kalanchoe pinnata</i> (Lam.)	Pan-futi	Crassulaceae	Herb
48.	<i>Citrullus lanatus</i> L.	watermelon	Cucurbitaceae	Herb
49.	<i>Elaeocarpus sphaericus</i> (Gaertn.) K.Schum.	Rudraksha	Elaeocarpaceae	Tree
50.	<i>Euphorbia heterophylla</i> L.	Dudhi	Euphorbeaceae	Herb
51.	<i>Phyllanthus amarus</i> L.	Bhule- Amla	Euphorbeaceae	Herb
52.	<i>Euphorbia hirta</i> L.	Dudhadi	Euphorbiaceae	Herb
53.	<i>Ricinus communis</i> L.	Erandi	Euphorbiaceae	Shrub
54.	<i>Putranjiva roxburghii</i> L.	Putranjiva	Euphorbiaceae	Tree
55.	<i>Phyllanthus emblica</i> L.	Amla	Euphorbiaceae	Tree
56.	<i>Vigna unguiculata</i> L.	Cowpea	Fabaceae	Herb
57.	<i>Abrus precatorius</i> L.	Kali-Gunj	Fabaceae	Climber
58.	<i>Gliricidium sepium</i> L.		Fabaceae	Tree
59.	<i>Vitiveria zizaniodes</i> L.	wala	Graminae	Herb
60.	<i>Cymbopogon citratus</i> (DC.) Stapf	Gavati- chaha	Graminae	Herb
61.	<i>Cymbopogon martinii</i> (Var.safiya)	Tikhati	Graminae	Herb
62.	<i>Eragrostics tenella</i> L.	Hawai	Graminae	Herb
63.	<i>Cynodon dactylon</i> (L.)Pers.	Durvagrass	Graminae	Herb
64.	<i>Cymbopogon winterianus</i> (L.) Sperng	Cintronella	Graminae	Herb
65.	<i>Bambusa arundinaceae</i> (Retz.)	Bamboo	Graminae	Tree
66.	<i>Mentha Spicata</i> L.	Pudina	Labiatae	Herb
67.	<i>Coleus Amboinicus</i> L.	Pan-ooa	Labiatae	Herb
68.	<i>Ocimum basilicum</i> L.	Sabja	Lamiaceae	Herb
69.	<i>Urginea indica</i> (Roxb)	Pan-kanda	Liliaceae	Herb
70.	<i>Allium sativum</i> L.	lasun	Liliaceae	Herb
71.	<i>Asparagus racemosus</i> L.	Shatavari	Liliaceae	Herb
72.	<i>Aloe vera</i> (L.) Burm.	Korpad	Liliaceae	Herb
73.	<i>Iphiginia indica</i> (kunth)	Jangali- Lahasun	Liliaceae	Herb
74.	<i>Chlorophytum tuberosum</i> (Roxb.)	Safed- musali	Liliaceae	Herb
75.	<i>Ammania baccifera</i> L.	Bhar- Jambul	Lythraceae	Herb
76.	<i>Abelmoschus esculentum</i> L.		Malvaceae	Annual Shrub
77.	<i>Hibiscus rosasinesis</i> L.	Jaswand	Malvaceae	Shrub
78.	<i>Urena lobata</i> L.	Van- Bhendi	Malvaceae	Shrub
79.	<i>Grewia asiatica</i> L.	Phalsa	Malvaceae	small Tree
80.	<i>Azardirachta indica</i> L.	Neem	Meliaceae	Tree
81.	<i>Tinospora cordifolia</i> (Thunb.)	Gul-vel	Menispermaceae	Climber
82.	<i>Tinospora glabra</i> L.	Gugul	Menispermaceae	Shrub
83.	<i>Acacia concinna</i> L.	Shikekai	Mimosaceae	Tree
84.	<i>Acacia leucophloea</i> L.	Hivar	Mimosaceae	Tree
85.	<i>Mimosa pudica</i> L.	Lajalu	Mimosaceae	Herb
86.	<i>Dechrastachys cinerea</i> weight.	Hivar	Mimosaceae	Small Tree
87.	<i>Acacia polyacantha</i> wild.		Mimosaceae	Tree
88.	<i>Leucenea glanea</i> L.	Subabul	Mimosaceae	Tree
89.	<i>Ficus benghalensis</i> L.	Vad	Moraceae	Tree
90.	<i>Ficus racemosa</i> L.	Umber	Moraceae	Tree
91.	<i>Moringa latifera</i> L.	Shewga	Moringaceae	Tree
92.	<i>Syzygium cumuni</i> (L.)	Jambhul	Myrtaceae	Tree
93.	<i>Baugoinvallea spectabilis</i> Willd.	Bogon-vel	Nactaginaceae	Climber
94.	<i>Jasminium sambac</i> L.	Mogra	Oleaceae	Shrub

95.	<i>Oxalis coniculata</i> L.	Changeri	Oxalidaceae	Herb
96.	<i>Trigonella foenum</i> L.	Methi	Papilionaceae	Herb
97.	<i>Hemidesmus indicus</i> L.	Anantvel	Periplocaceae	Herb
98.	<i>Decalepis hamiltonii</i> Wt.& Arm.		Periplocaceae	Climber
99.	<i>Piper longum</i> L.	Gup-pipal	Piperaceae	Herb
100.	<i>Zizipus jujuba</i> L.	Bor	Rhamnaceae	Tree
101.	<i>Zizipus rugosa</i> L.	Torn	Rhamnaceae	Tree
102.	<i>Gardenia recinifera</i> L.	Dikamali	Rubiaceae	Tree
103.	<i>Neolamarckia cadamba</i> L.	Kadamb	Rubiaceae	Tree
104.	<i>Hamelia patens</i> L.	Fibre -bush	Rubiaceae	Tree
105.	<i>Ruta graveolens</i> L.	Satap	Rutaceae	Herb
106.	<i>Citrus limon</i> L.	Lemon	Rutaceae	Tree
107.	<i>Santalum album</i> L.	Chandan	Santalaceae	Tree
108.	<i>Sapindus emarginatus</i> L.	Ritha	Sapindaceae	Tree
109.	<i>Manilkara hexandra</i> Roxb.	Khirmi	Sapotaceae	Tree
110.	<i>Mimusops elengi</i> L.	Bakul	Sapotaceae	Tree
111.	<i>Manilkara zapota</i> L.	Chikkoo	Sapotaceae	Tree
112.	<i>Ailanthus excelsa</i> Roxb.	maharukh	Simaroubaceae	Tree
113.	<i>Datura metal</i> L.	Kala-dhotra	Solanaceae	Herb
114.	<i>Capsicum annum</i> L.	Red paper	Solanaceae	Shrub
115.	<i>Solanum melongena</i> L.	Vangi	Solanaceae	Shrub
116.	<i>Withania sominifera</i> L.	Dhor- gunj	Solanaceae	Shrub
117.	<i>Duranta rapens</i> L.	Duranta	verbenaceae	Shrub
118.	<i>Lantana camara</i> Linn.	Ghaneri	verbenaceae	Shrub
119.	<i>Vitex nigundo</i> Linn.	Nirguli	Verbinaceae	Shrub
120.	<i>Agave angustifolia</i>	Caribben Ageve	Cactaceae	
121.	<i>Aloe Juvenna</i>	Tiger Tooth Aloe	Cactaceae	
122.	<i>Cansoliea falcate</i>		Cactaceae	
123.	<i>Cylindropuatiakleiniae</i>	Cholla	Cactaceae	
124.	<i>Eachino cactus</i>		Cactaceae	
125.	<i>Florade corrana</i>		Cactaceae	
126.	<i>Garolea lapaixii</i>		Cactaceae	
127.	<i>Haworthia attenuatta</i>	Zebra Cactus	Cactaceae	
128.	<i>Huemia barbata</i>		Cactaceae	
129.	<i>Mammillaria</i>		Cactaceae	
130.	<i>Neobus baumia</i>		Cactaceae	
131.	<i>Opuntia microdasys (red colour)</i>		Cactaceae	
132.	<i>Opuntia microdasys (Yellow color)</i>		Cactaceae	
133.	<i>Porodia</i>		Cactaceae	
134.	<i>Sansevieria</i>		Cactaceae	
135.	<i>Seneciopendulus</i>		Cactaceae	
136.	<i>Stapelia Gingantea</i>		Cactaceae	
137.	<i>Cereus peruvianus</i>		Cactaceae	

CONCLUSION

This study is based on diversity of plants in Laling Forest of Dhule district, which provides a preliminary

data of the different categories of plants in Laling Forest of Dhule district. It will be helpful to students and researchers related to this field for identification of plants and their specificity. Further study is required for

distribution and quantification of plants for ecological management.

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REFERENCES

- Ahirwar JR and Tripathi JP (2009) Importance value index of some tree species of Bargaun forest. *Biozone*, 1(1): 59-64.
- Arjaria A and Chaurasia K (2008) Phytosociological study of some ethno-medicinal plants at Chhatarpur district (M. P.). *Journal of the Botanical Society, University of Saugar*, 43: 125-132.
- Athaya CD, Kaushlesh Pathak and Bajpai SP (2006) Ecological biodiversity of some forests of Sagar, Madhya Pradesh. *J. Bot. Soc. Uni. Saugar*, 41: 37-43.
- Bisht T, Shah S, Tiwari B and Tiwari A (2004) Study of important medicinal trees, shrubs, and herbs for some vegetational parameters between 300-2000 m elevations. *Ecol. Env. & Cons.*, 10(1): 43-46.
- Chakraborty K (2009) Vegetation change detection in Barak Basin. *Current Science*, 96(5): 1236-1242.
- Choudhary MC and Ravi Upadhyaya (2009) Ecological distribution of family Acanthaceae in Hoshingabad district. *Biozone*, 1(1): 51-54.
- Chetty KM, Shivaji K, Tulasi rao K (2008) Flowering plants of chittoor district Andhra Pradesh, students offset printers, Tirupati.
- Das MK and BP Chourdury (2008) Biodiversity: Concepts and Approaches. In: *Plant Nomenclature and Biodiversity Conservation*. Kalyani Publishres, Ludhiana, India. Pp. 79-121.
- Dhar U (2002) Conservation implications of plant endemism in high-altitude Himalaya. *Current Science*, 82(2): 141-148.
- Jagtap S and Mukherjee S (2013) Plant diversity of Gadchiroli district of Maharashtra, India; a brief survey. Check list the biodiversity data, vol.-9 (1).
- Ingalhalikar S (2007) Further Flower of Sahyadri. corolla publication, pune.
- Ingalhalikar S (2012) Flower of Sahyadri. corolla publication, pune.
- Kandya AK and Prashanth KP (2008) A study of plant habitats in Achanakmar-Amarkantak Biosphere Reserve, India. *Journal of the Botanical Society University of Saugar*, 43: 12-24.
- Kshirsagar SR and Patil DA (2008) Flora of Jalgaon District, Maharashtra.
- Manilal KS (1998) A Handbook of Taxonomic Training. Department of Science and Technology by Manilal K.S. and M. S. Muktesh.
- Mligo C (2015) Conservation of plant biodiversity of Namatimbili forest in the southern coastal forests of Tanzania. *International Journal of Biodiversity and Conservation*, Vol7 (3), pp. 148—172.
- Naik VN (1969) *The flora of Osmanabad, Taxonomy and Ecology of Flowering Plants*. Ph. D. Thesis, Marathwada University, Aurangabad.
- Naik VN (1998) *Flora of Marathwada*, Vol. I-II. Amrut Prakashan, Aurangabad, M.S. (India).
- Parthasarathy N and Karthikeyan R (1997) Plant biodiversity inventory and conservation of two tropical dry evergreen forests on the Coromandel Coast, South India. *Biodiversity and Conservation*, 6 (8): 1063-1083.
- Patunkar BW (1976) *Contribution to the Botany of Marathwada-V. taxonomic studies in the grasses of the region*. Ph. D. thesis, Marathwada Univ. Aurangabad.
- Prayaga MP and Venkaiah M (2011) Biodiversity of Weed Species in Crop Fields of North Coastal Andhra Pradesh, India. *Indian Journal of Fundamental and Applied Life Sciences* Vol. 1 (2): 59-67 pp.
- Rad Eshaghi J, Manthey M, Mataji A (2009) Comparison of plant species diversity with different plant communities in deciduous forests. *Int. J. Environ. Sci. Tech.*, 6 (3), 389-394.
- Rahman AH, Anisuzzaman MM, Ferdous A, Naderuzzaman ATM and Rafiul IAKM (2007) A floristic study in the graveyards of Rajshahi city. *Research Journal of Agriculture and Biological Sciences*, 3(6): 670-675.
- Ramanujam MP and Cyril PKK (2003) Woody species diversity of four sacred groves in the Pondicherry region of South India. *Biodiver Conser*, 12: 289-299.
- Ramirez CR (2007) Ethnobotany and the Loss of Traditional Knowledge in the 21st Century. *Ethnobotany Research & Applications*, 5: 245-247.
- Retnam, KR and Martin P (2006) *Ethnomedicinal Plants*. Agrobios (India), Jodhpur. pp:05.
- Rothe SP (1985) *Flora of Beed District: A floristic study of flowering plants*. Ph.D. Thesis, Marathwada University, Aurangabad.
- Sarin YK (2003) Medicinal plant raw materials for Indian drug and pharmaceutical industry: An appraisal for resources. *Indian forester*, 1: 3-24.
- Sayeeduddin M (1940) Preliminary observation on a recent botanical tour to Amrabad Forest Reserve.

H. E. H. the Nizam's dominion, Hyderabad Deccan, *J. Bombay Nat. His. Soc.* 41: 907.

Shrikant K, Ramu G, Radhakrishna M and Narasimha Ramulu K (2008) Impact of deforestation on biodiversity of Eturunagaram Wildlife Sanctuary, Warangal, A. P. India. *J. Natcon*, 20(2): 201-211.

Singh A and Saini RG (2014) Plant biodiversity of central university of punjab main campus. city campus , mansa road, bathinda.

Venu P (1998) A review of floristic diversity Inventory and Monitoring Methodology in India. *Pinsa*, 64(5 &6): 281-292.

Yadav SR and Sardesai MM (2002) *Flora of Kolhapur District*, Shivaji University, Kolhapur (India). Pp.1-680.

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