

Floristic Study of Vani Forest Area of Nashik District, Maharashtra, India

J. T. Jadhav.

Department of Botany, M.S.G. College, Malegaon (MS), India.
Email – drjtjadhav@gmail.com

Abstract: The present study for investigation was carried out in order to explore the existing floristic composition in Vani forest area of Nashik district (Maharashtra). The present area of Vani forest is selected for the floristic study. This is located between is situated in Nashik, Maharashtra, India, its geographical coordinates are 20° 20' 0" N, 73° 53' 0" E. The total geographical area is 2369.14 hector. Vani is connected by the state highway 17 which join the national highway NH3 that links Nashik with the temple site near the villages of Vani and Nanduri. The vegetation consequently is of dry deciduous type in spite of high rainfall, poor soil and low humidity after the rains. Based on the present study, the area is represented by 16 families, 27 genera and 29 species of the plant. Mimosaceae, Fabaceae, Combretaceae, Combretaceae, Caesalpiniaceae, Apocyanaceae, Anacardiaceae and Verbenaceae are the dominant families followed by Bignoniaceae, Boraginaceae, Lythraceae, Meliaceae, Moraceae, Poaceae, Rhamnaceae and Sapotaceae. The floristic information of the tree flora of Vani Forest is now available with this publication.

Key words: floristic, Vani Forest, Nashik, Maharashtra.

1. INTRODUCTION:

The present research paper on floristic study plays an important role in the economic and social development of India. The natural vegetation made us all kinds of essential primary requirements of the human needs in the form of food, fodder, fuel, medicine, timber, resins, and oil, etc. Plant communities play a important role in sustainable management by maintaining biodiversity to conserve the environment. Both are necessary to understand the present diversity status and conservation of biodiversity. Floristic study is a necessary for research in population and community ecology to understanding the the distribution pattern of plant species. Floristic studies acquire increasing importance in recent years in response to the need of developing and under developing countries to assess their plant wealth. Many floristic diversity studies have been conducted in different parts of world. Thus, it is clear that floristic studies are undertaken by many researchers worldwide in different levels. The present study area of Vani of Nashik district is selected for the floristic studies because it has not explored largely. Vani Forest is located in Nashik district.

2. MATERIAL AND METHODS:

Study Area

Vani lies at 20° 20' 0"N, 73° 53' 0" E. It is an important area from the view point of plants. It suffers from high rain fall, poor soil and low humidity after the rains. This is near to Nashik, 60Km distant. The vegetation consequently is of dry deciduous type in spite of high rainfall, poor soil and low humidity after the rains.

Quadrates of 10x10m were laid down in different directions in each of the places in forests, so that quadrates represented almost all species in the entire area studied. Thus the sampling was done for a total area of 10,200 sq m, in the forests. All species covered by the quadrates were recorded and collected. Further the quadrates were laid down to random but profitable in the localities showing diversity and denseness of the vegetation. The selection of quadrates for study was also motivated to include as many species as possible in a quadrate.

3. FLORISTIC ANALYSIS:

In the whole study area exploration were undertaken during all seasons in 2022 to 2023. The name and information were collected based on morphological characters. Identification and list of plant species were prepared by referring

literatures and floras of Hooker (1875), Cook, T (1908, 1958), Potdar (2012), Sharma (1996) and Lakshminarsimhan P and Sharma B.D (1990).

4. RESULTS AND DISCUSSION:

The investigation was carried out in order to explore the existing floristic composition in Vani Forest during 2022-2023. The vegetation was consequently of dry deciduous type. The Study revealed that the presence of some important shrubs and trees in the area. All together 29 plants belonging to 16 families were studied. Among 16 families, Mimosaceae, Fabaceae, Combretaceae, Combretaceae, Caesalpiniaceae, Apocyanaceae, Anacardiaceae and Verbenaceae are the dominant families. From 29 plants, genera like *Acacia* and *Terminalia* are dominant. It can be concluded that Mimosaceae was the dominant and leading family, species wise as well as genera wise, followed by Fabaceae, Combretaceae, Caesalpiniaceae, Apocyanaceae, Anacardiaceae and Verbenaceae. Rare species also reported during investigation are *Heterophragma quadrilocular*, *Cordia dichotoma*, *Woodfordia fruticosa*, *Azadirachta indica*, *Ficus racemosa*, *Eucalyptus citriodora*, *Bambusa arundinacea*, *Zizipus jujube* and *Madhuca indica*.

5. CONCLUSION:

The present floristic study provides a preliminary checklist of plant species. It is also revealed that, Over 29 plants belonging to more than 16 families were studied. Floristic vegetation is very much affected by local activities, visitors and heavy cuttings, grazing etc. The vegetation pattern altered due to influence of over population, loss of potential habitat, climatic changes etc. This entire forest area should be protected restricted to huge visitors and overgrazing cattle's. It will be useful in suggesting for the stability and correlation among the species in future.

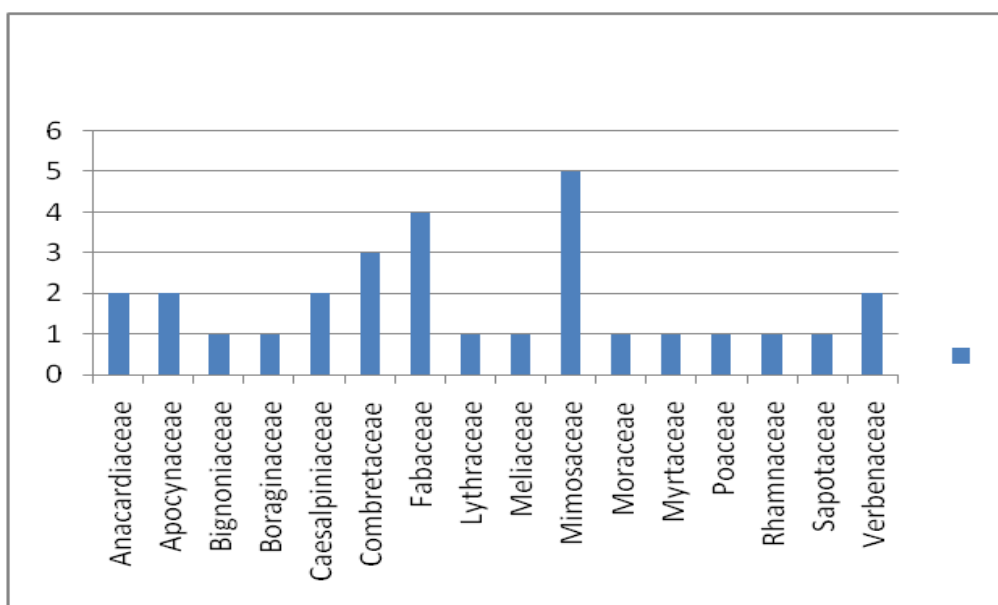


Figure1: Family wise distribution of species in Vani forest of Nashik district.

Table 1.Plant species reported from Vani Forest area.

Sr No	Botanical name	Family	Commen name	Habit
1	<i>Mangifera indica</i> L.	Anacardiaceae	Aamba	Tree
2	<i>Lannea coromandelica</i> (Houtt.)Merr.	Anacardiaceae	Ash Tree	Tree
3	<i>Carissa congesta</i> L.	Apocynaceae	Karawand	Shrub
4	<i>Wrightia tinctoria</i> Roxb	Apocynaceae	Kala Kuda	Shrub
5	<i>Heterophragma quadrilocular</i> Roxb	Bignoniaceae	Waras	Tree
6	<i>Cordia dichotoma</i> G.Forst.	Boraginaceae	Bhokar	Tree
7	<i>Bauhinia racemosa</i> Lamk.	Caesalpiniaceae	Apta	Shrub
8	<i>Cassia fistula</i> L.	Caesalpiniaceae	Bahawa	Tree

9	<i>Terminalia bellirica</i> L.	Combretaceae	Behada	Tree
10	<i>Terminalia crenulata</i> (Gaertn.) Retz.	Combretaceae	Sadada	Tree
11	<i>Anogeissus latifolia</i> Roxb	Combretaceae	Dhavada	Tree
12	<i>Gliricidia sepium</i> (Jacq.) Walp.	Fabaceae	Giripushpa	Tree
13	<i>Beutea monosperma</i> (Lam.)	Fabaceae	Palas	Shrub
14	<i>Pongamia pinnata</i> L	Fabaceae	Karanj	Tree
15	<i>Dalbergia sissoo</i> Roxb.	Fabaceae	Sisham	Tree
16	<i>Woodfordia fruticosa</i> (L) Kurz	Lythraceae	Dhavti	Shrub
17	<i>Azadirachta indica</i> Juss.	Meliaceae	Neem,	Tree
18	<i>Acacia auriculiformis</i> A.Cunn.	Mimosaceae	Australian babhull	Tree
19	<i>Leucaena glauca</i> (L.) Gills	Mimosaceae	Subabhul	Tree
20	<i>Albizia lebeck</i> (Roxb.)Bth.	Mimosaceae	Safed siris	Tree
21	<i>Acacia arabica</i> (Lam.) Willd.	Mimosaceae	Babul	Tree
22	<i>Acacia chundra</i> (Roxb.) Bedd.	Mimosaceae	Khair	Tree
23	<i>Ficus racemosa</i> L.	Moraceae	Umbar	Tree
24	<i>Eucalyptus citriodora</i> HK.f.	Myrtaceae	Neelgiri	Tree
25	<i>Bambusa arundinacea</i> (L.)Voss	Poaceae	Bamboo	Shrub
26	<i>Zizipus jujube</i> Mill.	Rhamnaceae	Bor	Tree
27	<i>Madhuca indica</i> J.F.Gmel.	Sapotaceae	Mahua,Moh	Tree
28	<i>Gmelina arborea</i> Roxb.	Verbenaceae	Shivan	Tree
29	<i>Tectona grandis</i> Linn.	Verbenaceae.	Sag, Sagwan	Tree

6. ACKNOWLEDGEMENT

Author J.T.Jadhav thanks Dr.Prashant dada Hiray,General Secretary M.G.Vidyamandir,Nashik for encouragement.

REFERENCES:

1. Farooque N.A. and Saxena K.G., Conservation and utilization of medicinal plants in high hills of the central Himalayas, *Environ.Conserv.*, **23**, 75-80 (1996)
2. Phillips O.L., Martinez R.V. and Vargas P.N., Efficientplot-based floristic assessment of tropical forests, *J. Tropi. Eco.*, **19**, 629-645 (2003)
3. VEDIYA S.D. and KHARADI H.S., Floristic diversity of Isari zone, Megharj range forest District Sabarkantha, Gujarat, India, *Int. J. of Pharm. & Life Sci. (IJPLS)*., **2(9)**, 1033- 1034 (2011)
4. Whittaker R. and Niering W.A., Vegetation of the Santa Catalina Mountains, Arizona: A gradient analysis of the south slope, *Eco.*, **46**, 429-452 (1965)
5. Risser P. and Rice E.L., Diversity in tree species in Oklahoma upland forest, *Eco.*, **52**, 876-880 (1971)
6. Nair N.C. and Daniel P., The floristic diversity of the Western Ghats and its conservation, a review, *Proc. Indian Acad. Sci. (Animal Sc./Pl. Sci.) Suppl.*,127-163, (1986)
7. Gentry AH., Tree species richness of upper Amazonianforests, Proceedings of the *National Academy of Science of U.S.A.*, **85**, 156-159 (1988)
8. Sukumar R., Dattaraja H.S. and Suresh H.S., Long-term monitoring of vegetation in a tropical deciduous forest in Mudumalai, southern India, *Current Science*, **62**, 608-613 (1992)
9. Linder P., Elfving B. and Zackrisson O., Stand structureand successional trends in virgin boreal forest reserves in Sweden, *Forest Eco.& Manage*, **98**, 17-33 (1997)
10. Sagar R., Raghubanshi A.S. and Singh J.S., Tree species composition, dispersion and diversity along a disturbance gradient in a dry tropical forest region ofIndia, *Forest Eco.& Manage*, **186**, 61-71 (2003)
11. Devi L.S. and Yadav P.S., Floristic diversity assessment and vegetation analysis of tropical semi evergreen forest of Manipur, north east India, *Int. Soci. Tropi. Eco.*, **47(1)**, 89- 98 (2006)
12. Jadhav J.T, Floristic study of Galana Fort Forest area of Malegaon Taluka, Dist-Nashik, Maharashtra India, *IJARESM*, 9(4), 2050-2055, 2021.
13. Jadhav J.T, Floristic Study of Trimbakeshwar Forest Area of Nashik District, Maharashtra India, *IJRCS*, 7(5),

128-132, 2023.

14. Patil D.A. and Tayade S.K., Floristic studies in Khandesh region (Maharashtra: India): an Overview, *Life sci. Leaf.*, **10**, 30-38 (2012)
15. Pawade P.N. and Rothe S.P., Diversity of ornamental trees from Amravati city of West Vidarbha region, *Recent Res. Sci.Tech.*, **4(10)**, 25-27 (2012)
16. Dabgar P.J., A contribution to the flora of Wadhvana wetland, Dabhoi taluka (Gujarat) India, *Biosci. Dis.*, **3(2)**, 218 -221 (2012)
17. Ghosh A, Mukherjee S and Naskar K.R, Floristic study and vegetational relationship of Bagmara Block in Sundarbans Tiger Reserve (STR), *Indian J. Applied & Pure Bio.*, **27(2)**, 207-218 (2012)
18. Hooker J. D., The Flora of British India. London. 7- Vols. 1904.(Rrpr. ed. 1954- 1961. Kent.) (1872-1897)
19. Cooke T., The Flora of the Presidency of Bombay London. 2 vol: Repr. Edition, 1958, B. S. I. Calcutta, (1901-1908) Yadav S.R. and Sardesai M.M., Flora of Kolhapur District. Shivaji Univresity, Kolh.