Floristic Assessment of Nadhri Forest District Aravalli, Gujarat

Kharadi Hasmukh Dept of Botany Sir P.T. Science College, Modasa, Gujarat.

Abstract- The present work has been done to collect the Information about different plant species of Kanthariya range forest in particular zone of Nadhri. The data obtained from these studies have botanical importance of the particular zone Nadhri During my field work we have consisted of total 52 Angiosperm families are belonging 192 plant species were collected and recoeded. Trees are dominated with 112 and 38 shrubs, 8 climbers and 42 herbs. We have also noted 2 ptreidophytes and 3 bryophytes. The dominant species are Tactona grandis, Butea monosprma ,Holarrhena antidysenterica, Diospyros melanoxylon, Acacia nilotica, etc.

Keywords- Floristic Assessment, dominant species, diversity.

I. INTRODUCTION

Floristic Assessment have acquired increasing recent years in response to the need of importance in developing and under developing countries to assess their plant wealth. the rich botanical wealth of this Nadhri range forest in particular zone Kanthariya is being continuously over exploited for timber and non timber forest products such as fodder, grasses, gums, grazing etc. The earlier work on floristic part of North Gujarat has been carried out Sexton & Sejweek (1918). Later on there was on gap were from 1917 onward Patel (2000), Ant (2001), Jangid (2003). They were worked in selected different area of North Gujarat. During our field trip visit were taken various photographs rare plant species in Nadhri forest. From this region we have reported 192 plant species. Aravalli district has contributed to the expression of very rich culture diversity one of the major component in knowledge of natural resources as an integral part of it's culture and which reveals not only in the systematic knowledge the native tribal people of this region with regard to native flora and fauna, and but also the the development of large group of cultivated plants of texoethno-botanical value. The main aim of present study was to study the diversified composition of flora in Kanthariya forest range of Aravalli district, North Gujarat.

In view of the regional importance of the particular zone of Nadhri forest flora so that present study was under taken.

II. MATERIALS AND METHODS

The Aravalli district is situated in the North West part of Gujarat between latitudes 20 13' 15'' and 24 34' 30" North and Longitudes 72 47' 0" and 73 37' 30" east. Part of the western Aravallis Mountain in Aravalli. The Nadhri forest is situated on latitude 23 68' 31" North and Longitude 73 33' 40" North and Longitude 73 46' 52" east.

To carry out work on floral diversity in Bhiloda forest range Aravalli district, first of all, the study area was selected and divided into different regions for the sake of convenience and systematic study. To study the floristic diversity in different forest area Kanthariya range forest, the frequent visits were made to the study area in the different seasons, so that seasonal variation could be studied. A general survey of the vegetation was made and observed different plants such as herbs, shrubs and trees. the general associations of plants were observed in all the unprotected areas. Apart from the study of vegetation, plant species are collected and Herbarium sheets are prepared, and also to take photograph of particular species. Frequency percentage of each species was calculated by following the method given by Mishra (1968).

III. RESULT AND DISCUSSION

The total number of **52** Agiospermic families is belonging 145 genera and 172 species reported from this area. We have also noted the dominant species are *Tactona grandis*, *Butea monosprma*, *Diospyros melanoxylon*, *Holarrhena antidysenterica and Acacia nilotica etc.* in particular region Nadhri, Kanthariya renge Forest.

Table 1	: Floral	assessment of	the	Nadhri	forest
---------	----------	---------------	-----	--------	--------

Categories of plant.	of Genera	Species	Families
Dicots	140	163	48
Monocots	5	9	4
Total	145	172	52



Fig. A. Floral assessment of the Nadhri forest

Family	Plant name	Total number of plant (approxi.)
Verbinaceae	Tectona grandis	642
Fabaceae	Butea monosperma	494
Ebenaceae	Diospyros melanoxylon	354
Apocynaceae	Holarrhena antidysenterica	292
Mimosaceae	Acacia nilotica	189





Fig. B. Dominant plant in the Nadhri forest

We have recorded 140 genara of Dicots and 5 genara of Monocots, 163 species of Dicot & 9 species of Monocots, belonging to 48 dicot & 4 monocot families.(table-1 & fig. A). Table 2 and Fig. B shows dominant families and plant and also shows that approximately no. of plant in particular zone Nadhri Table 2 and fig. B shows that 4 genera are dominant in the Nadhri range forest.

REFERENCES

[1] A Irawan, P Peniwidiyanti, A Ainurrofiah. Floristic Composition And Structure Of Vegetation In Indonesia Power Gunung Salak Geothermal Plant, West Java, Indonesia .2023 - e-journal.biologi.lipi.go.id

- [2] Ajaz, S., Ahmad, K., Qaisar, K. N., Mugloo, J. A., Rafeeq, J., Gangoo, S. A., & Khan, I. (2022). Floristic Diversity under different habitats in overa wildlife sanctuary of J&K India. *Indian Forester*, 148(11), 969–985.
- [3] Cook, T. (1908). The flora of the presidency of the Bombay. Vol. I and II, Bishan Singh Mahedrapalsingh, Dahradun.
- [4] H. Punia1, H. Dhiman2, H. Saharan3 and S. Jakhar* Floristic Composition and Diversity in Response to Varying Degrees of Disturbance in Tropical Dry Deciduous Forests of Southern Haryana, India *Ecology Lab, Department of Botany, Kurukshetra University, Kurukshetra 136 119, Haryana, India Received 1 May, 2022; Accepted 4 July, 2022)
- [5] Jain, S.K and U.R Deshpande (1964). Observation on the vegetation of Khandes (Maharashtra). *Proc. Nat. Acad. Sci.* India, 34 (3): 322 – 333.
- [6] Karntik, C.R. (1955). A contribution to the biogeographical studies of Khandes with special reference to Satpuda range. *Bombay Geogr. Mar.*, **2:** 65 72.
- [7] Kotiwar, O.M. 1995. Ecological and Taxonomical study of dry deciduous Gir forest. Ph.D. Thesis, Bhavnagar University, Bhavnagar.
- [8] Mathew, Varghese (1988). Forest flora of Dhule district part I and II , Ph.D. thesis, Sardar patel University, Vallabh Vidyanagar
- [9] Maheshwari, J.K. 1963. *The flora of Delhi*. C.S.I.R., New Delhi.
- [10] Oosting, H. J. 1958. *The study of Plants communities* W. H. Freeman and co. San Francisco. U.S.A.
- [11] Pandit B. R., Mahesh Kumar R., Kotiwar, O. S. and Patel,
 B. P. 1995. "Biological Spectrum of Reserved forest near Bhavnagar, Gujarat." Ad. Plant. Sci." 8(2): 319-322.
- [12] Pandit B. R., Kotiwar, O. S. and Pahurkar, A. J. 1996."Life forms and biological spectrum of the flora of Gir Forest, Gujarat." Geobios new Reports 15(1): 17 - 20.
- [13] Patel, B.P. 1982. Ecological Survey of the Reserved forest (Victoria Park) near Bhavnagar. Ph.D. thesis, Bhavnagar University, Bhavnagar.
- [14] Patel, R.S. (2002). Floristics and Ethnobotanical studies of Ambaji Forest on North Gujarat; Ph.D thesis submitted to Sardar patel University, Vallabh Vidyanagar.
- [15] Pandeya, S.C., Pandya, S.M., Murthy, M.S and Kuruvilla, K. 1967. Forest ecosystem. Classification of forest vegetation with reference to forests in the River Narmada catchment Area. J. Ind. Bot. Soc.46: 412-427.

- [16] Rawat, B. (2021). Spatial prediction of plant species richness and density in high-altitude forests of Indian west Himalaya. *Trees, Forests and People*,
- [17] Santapau, H. (1951). The genus Dioscoera in Bombay state. J. Bombay Nat. Hist. Soc., **49**: 624-636, t 3.
- [18] Saxton, W.T. and L.J. Sedwick (1918). Plant of Northan Gujarat Ibid. 6(7) : 209 -326 and I- xIII
- [19] Santapau, H and Janardhanan, K.P., 1966. The flora of Saurashtra. Bull. Bot. Surv. India. 8: 1-58.
- [20] Smith A. P. 1973. Stratification in temperate and tropical forests. Am. Nat. 107: 671-683.
- [21] Shah, G.L. (1978). Flora of Gujarat state. Part I and II, Sardar patel University, Vallabh Vidyanagar
- [22] Thakkar, J.I. 1910. *Vanaspati Shashtra*. Reprint 1998. Pravin Pustak Bhandar, Rajkot.
- [23] Yadav, S.R. 1979. A contribution to the floristic and phytosociology of some parts of South Gujarat. Ph.D. Thesis, S. P. University, Vallabh Vidhyanagar.