ISSN: 0975-833X

Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 8, Issue, 05, pp.30185-30190, May, 2016

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

RESEARCH ARTICLE

FLORESTIC DIVERSITY WITH SPECIAL REFERENCE TO RARE, ENDANGERED AND THREATENED PLANTS SPECIES OF MANUDEVI FOREST REGION OF SATPUDA FOREST RANGES

***Bagul Ramakant, M.**

PGRC, Department of Botany, MGSM's Arts, Science & Com. College Chopda-425107, Maharashtra, India

ARTICLE INFO

Article History:
Received 28th February, 2016
Received in revised form
05th March, 2016
Accepted 22nd April, 2016
Published online 10th May, 2016

Key words:
Satpuda,
Rare,
Endangered,
IUCN.

ABSTRACT

Manudevi forest is one of the richest floristic regions among Satpuda forest ranges of Maharashtra. An attempt has been made to document the rare, endangered and threatened species of Manudevi forest area which become helpful for the protection, management & conservation of biodiversity in general.In this work attempt has been made to highlight some of threatened important medicinal plants species found growing still in the Manudevi forest area reported in the Red list of IUCN.

Citation: Ramakant Bagul, 2016. "Florestic diversity with special reference to rare, endangered and threatened plants species of Manudevi forest region of Satpuda forest ranges", *International Journal of Current Research*, 8, (05), 30185-30190.

INTRODUCTION

As per Biodiversity Acts 2002 & National environment policy 2005, Floral & Faunal diversities are the most important components of biodiversity they covers the variety & variations among species. So there is need to prepare the comprehensive lists of rare, endangered and threatened important medicinal plants & animal species region wise to know the exact status of biodiversity. Manudevi forest is one of the richest floristic regions among satpuda forest ranges of Maharashtra. An attempt has been made to document the rare, endangered and threatened species of Manudevi forest area which become helpful for the protection, management & conservation of biodiversity in general. According to IUCN an endangered species is a population of organisms which is at risk of becoming extinct as they very few in numbers. Threatened species is related to referring as a species to likely to become endangered within future. IUCN published online information of 41,500 endangered species worldwide in the form of Red List of Threatened species (IUCN, 1994-2007). In India work on threatened plants was first published by Botanical Survey of India in 1980 by Jain & Shastry (1980) in the form of small booklet entitled Threatened plants of India.

****Corresponding author: Ramakant Bagul,***
MGSM's Arts, Science and Com. College Chopda, India.

Latter on Nayar and Shastriy in 1987, 1988, 1990 published their comprehensive work about Threatened plants of India in RED DATA BOOK OF INDIAN PLANTS by BSI (Nayar and Sastry, 1990). Similarly Arid zone circle of Jodhpur BSI published a list of rare taxa of western region of Rajasthan in 2008. Pandey in 2012 also published a list of 65 taxa with their present status and conservation in Rajasthan (Pandey, 2012).

Floristic diversity of Satpuda forest with special reference to Toranmal Dhule district was documented by Garud, B.D. 1998, and Flora of Dhule district by Mathew in 1988 & Recently Floristic diversity of Nandurbar district by Valvi, in 2013. Contribution to the flora & vegetation studies of Yaval Wild life Sanctuary of Satpuda ranges worked out by Salunkhe I.B. in 1995(10), each of them showing documentation on dominant families & their species in their respective study area. Bagul, in 2002, first time worked out threat status of medicinal plants of Satpuda forest east in which he marked '55' medicinal plant species at risk. In this work attempt has been made to highlight some of threatened important medicinal plants species found growing still in the manudevi forest area reported in the Red list of IUCN. By this paper I urge to conserve & multiply this important National wealth of manudevi forest which is having rich floristic diversity among the forest remains. There is need to declare this region as protected area.

Gloriosa superba Linn.

Terminalia chebula Retz

Morinda pubescens Sm

Wrightia tinctoria.R.Br

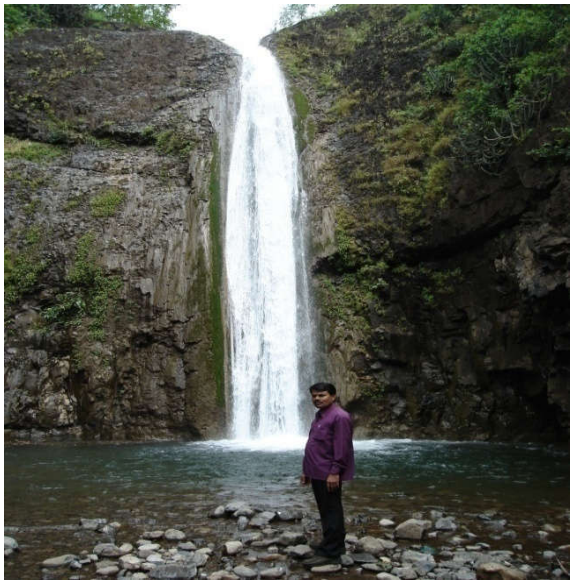
Rivea hypocrateriformis (Desr.)Choicy

Nyctanthus arbhor-tristis L

Ensete superbum (Roxb) Chessman

Celastrus paniculata Willd

Dioscoria bulbifera. LFAMILIES



Manu Devi water fall

During study

Table showing List of Rare, Endangered & Threatened Plants of Manudevi forest area

S.No.	Botanical name	Local name	Family	Habit	Red data Book category	Present status in study/sps.no.
1.	*Acacia catechu*(L.F.)Willd	Khair	Mimosaceae	Tree	Invulnerable	LC RMB-101
2.	*Ailanths excela* Roxb.	Varul	Simarubiaceae	Tree	Vulnerable	VU RMB -123
3.	*Terminalia chebula Retz.*	Hirda	Combrataceae	Tree	Vulnerable	CR RMB -105
4.	*Alangium salvifolium* (L.F.) Wang	Gajnimbu	Alangiaceae	Tree	Rare	EN RMB -150
5.	*Ampilocissus* latifolia Roxb.	Ran angur	Vitaceae	Climber	Invulnerable	CR RMB -98
6	*Argyreia nervosa* Dalz.	Murvel	Convolvulaceae	Climber	Invulnerable	EN RMB - 124
7.	*Boswellia serrata* Roxb.	Sal	Bursaceae	Tree	Rare	LC RMB -121
8.	*Celastrus paniculata* Willd.	Malkangni	Celastraceae	Climber	Rare	CR RSV-201
9.	*Chlorophytum borivilianum* Sant &fernand	Safed musli	Liliaceae	Herb	Rare	EN RMB -143
10.	*Cordia dichotoma* Frost.	Bhokar	Ehrateaceae	Tree	Vulnerable	EN RMB -139
11.	*Curcuma psuedomontanum* Grah.	Kali musli	Zingiberaceae	Herb	Invulnerable	NT RMB -60
12.	*Dalburgia volubilis Roxb.*	Shisam	Ceasalpiniaceae	Tree	Invulnerable	VN RMB -110
13	*Dioscoria bulbifera. L*	Godkand	Dioscoriaceae	Climber	Endangered	CR RMB -153
14	*Feronia limonia* l	Kaith	Rutaceae	Tree	Invulnerable	EN RMB -170
15.	*Gloriosa superb*a Linn.	Khadyanag	Liliaceae	Climber	Endangered	EW RMB - 182
16.	*Mimosa hamata* willd	Khora lajalu	Mimosaceae	Herb	Invulnerable	NT RMB -102
17	*Morinda pubescen*s Sm	Bartondi	Rubiaceae	Tree	Vulnerable	NT RMB -56
18.	*Nyctanthus arbhor-tristis* L	Parijat	Oliaceae	Tree	Vulnerable	LC RMB -78
19.	*Terminalia* belerica Gaertn	Behda	Combrataceae	Tree	Invulnerable	EN RMB -119
20	*Wrightia tinctoria.R.Br*	Kudi	Apocynaceae	Tree	Invulnerable	LC RMB -43
21	*Srychnos portatorum L.F.*	Nirmali	Longaniaceae	Tree	Vulnerable	CE RMB - 28
22	C*yclothin purpuria*(Buch-Ham.ex-Don)O.Ktze	Okrad	Asteraceae	Herb	Vulnerable	VU RMB -35
23	*Holoptelia integrifolia*	Papad	Ulmaceae	Tree	Vulnerable	VU RMB -87
24	*Rivea hypocrateriformis* (Desr.)Choicy	Phangvel	Convolvulaceae	Climber	Vulnerable	VU RMB -97
25	*Ensete superbum* (Roxb) Chessman	Rankela	Musaceae	Herb	Vulnerable	VU RMB -146

MATERIALS AND METHODS

Present study was is based on the field work and literature survey from June 2006 to Nov 2009 deals with many plant species observed for floristic data. Rare, threatened & endangered plants were recorded from the Manudevi forest region. During field survey various criteria of IUCN for categorizing threatened plants like Area of occupancy, Extent of occurrence, no. of individuals, probability of extinction etc, were measured. Rarity of species was determined by field study, visual estimations & literature. During the course of collection it was found that some rare & endangered species were present in the study zone of Manudevi forest which had found mentioned in the Red Data Book of Indian Medicinal plants, IUCN list of threatened plant species & in the list of BSI arid zone circle.

Extensive surveys of the area were conducted to prepare the list of plant species occurring in different seasons. During outgoing all the information collected were noted in field book. Pertinent attention was paid to habit, habitat, distribution pattern, diseases for which plants used dosages and mode of administration. As far as possible correct information were confirmed by repeated queries at different places. Specimens collected during the field work are processed for herbarium as per the customary methods suggested by Jain & Rao (1977). Specimens thoroughly studied for correct identification with the help of standard floras viz.

Flora of Presidency of Bombay (Cook, 1957 Repr.ed.), Flora of British India (Hooker, 1872-1897), B.S.I. Flora of Maharashtra State, Vol. I.II.&III (Edited by Sharma *et al*. 1996; Singh & Kartikeyan, 2000; Singh & Laksh 2001).

Manudevi Forest View

Trible Medicineman

The identification was confirmed by authentically identified species at B.S.I. Pune. Herbarium sheets were neatly labeled and deposited in the herbarium of department of botany, A.S.C. College Chopda dist. Jalgaon, Maharashtra.

RESULTS AND DISCUSSION

Taxonomic surveys were conducted in the tracks of Manudevi forest only where 270 taxa including angiosperms, Pteridophyte were documented. Total no of medicinal plants studied 270 No of medicinal plants reported with Present threat status & Reported in the list of IUCN are "25". 112 Herbs, 71 Trees, 57 Shrubs, 37 Climbers & Twinners,02 Parasites and 03 Pteridophytes are used for medicines. The common diseases based on uses of medicinal plants are skin diseases, Stomache, Rheumatism, Diarrhea, Sexual diseases, Cough, Jaundice, fever, Leucorrhoea, Indigestion, Urinary complaints and Piles. This result is very much similar to medicinal plants study worked out by RMB, in 2002. Plant species with Ten dominant families are Fabaceae, Compositae, Euphorbiaceae, Mimosaceae, Malvaceae, labiatae, Ceasalpiniaceae, Acanthaceae, Apocynaceae & Combrataceae. 25 plant species have been documented as threatened, rare & endangered belonging to 23 families enumerated with their local names, present status, and red data book category in the study area. Plants arranged as per the classification of threatened plants given by IUCN.

REFERENCES

Bagul, R.M. 2002. Studies on medicinal Plants of Satpuda Forest region of east Khandesh, PhD Thesis, North Mah Univ, Jalgaon.

Botanical Survey of India (BSI), 2008. List of Rare and Threatened plants of Rajasthan. Published by B.S.I.Arid Zone Circle, Jodhpur.

Garud, B.D. 1998. Forest flora of Toranmal Dhule District in Maharashtra State. Part I & II PhD Thesis, North Mah Univ Jalgaon,

Hooker, J.D. 1872-1897. The Flora of British India, Vol. I-VII, Reeve and Co.Ltd.London.

IUCN, SSC. The IUCN Red List of Threatened species. Version. 1994-2007

Jain S.K. and Sastry A.R.K. 1980. Threatened plants of India. A State art Report. BSI printed by Howrah Mehta Offset Works, New Delhi.

Jain. S.K. and Rao R.R, 1977. A Handbook of Field & Herbarium Methods Today & Tomorrow Printers & Publ, New Delhi.

Mathew, V. 1988. Forest Flora of Dhulia District Mah. State, PhD Thesis, Sardar Patel university, Gujrat.

Nayar, M.P. and Sastry, A.R.K. 1990. Red Data Book of Indian Plants, Vol. 1,2,3 , BSI, Kolkata1987, 1988.

Pandey, 2012. A list of Taxa with their present status and conservation in Rajasthan.

Salunkhe, I.B. 1995. Contribution to the Flora and Vegetation Studies of Southern Satpuda Ranges with reference to Yawal Wild-life Sanctuary. Ph.D. thesis, Univ. of Poona,

Singh, Kathikey and Laksh, B.S.I. 2001. Flora of Maharashtra State Vol . I,II,III.

Th. Cook (Repr.ed.), Flora of The Presidency of Bombay Vol. I, II & III. Bot. Survey of India, Calcutta, 1958

Valvi R.J. 2013. A Contribution to the Floristic studies of Satpuda Forest area of North Maharashtra, PhD Thesis, North Mah Univ. Jalgaon.

****