



Original Research Article

Documentation of some Threatened Ethnomedicinal Plants used by Tribes of Achanakmar-Amarkantak Biosphere Reserve, Central India

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ABSTRACT

Keywords

Threatened, Ethnomedicinal, Tribal communities, Achanakmar-Amarkantak Biosphere Reserve, Central India

Present paper highlights some threatened ethnomedicinal plants uses of 33 plant species belonging to 33 genera and 26 families used by the tribal communities of Achanakmar- Amarkantak Biosphere Reserve (AABR), Central India. Present Ethnomedicinalsurvey was conducted in the remote villages of Achanakmar-Amarkantak Biosphere Reserve (AABR) during the period 2012-2013. These plants are mostly used to different types of diseases like fever, diarrhoea, dysentery, Piles, joint pain, wounds, healings, asthma, bronchitis, cough, snake bite, abortifacient, memories, Cardiac disease, kidney trouble, urinary diseases, skin problem and Jaundice etc. Part of the plant used, dosage, mode of drug preparation and administration in different ailments and diseases are described. The plants species have been arranged alphabetically with their family, local name and ethnomedicinal uses.

Introduction

Achanakmar-Amarkantak Biosphere Reserve (AABR) is named after Achanakmar forest village and Amarkantak, a holy place from where the Narmada, Johilla and Sone rivers emerge. Achanakmar-Amarkantak Biosphere Reserve was declared as Biosphere Reserve (BR) by Government of India vide Notification no. 9/16/99 CS/BR dated 30th March 2005. It lies between 22^o 15' to 20^o 58' N Latitude and 81^o 25' N to 82^o 5' E Longitude. Geographically Achanakmar-Amarkantak Biosphere Reserve (AABR) covers the part of three districts, viz. Anuppur and Dindori district of Madhya

Pradesh and Bilaspur district of Chhattishgarh. The altitude varies from 400-1100 m above the mean sea level. The vegetation of the area is of subtropical type dominated mainly by sal trees. The mean annual temperature ranges between 21°C and 31°C. The average rainfall is about 1,900 mm which is received largely from South West monsoon. The soils of the area are usually lateritic, alluvial and black cotton type.

The core area of Achanakmar-Amarkantak consists of the protected forest land while the buffer zone and the transition area are

characterized by forests, agricultural and rehabilitated land and small suburban clusters. Twenty seven tribal and non-tribal communities inhabit 418 villages living on agriculture (including production of medicinal plants) and non-timber products produced in the buffer zone and transition areas. Its topography is varied from rice fields in Bilaspur and Anuppur district, and wheat fields in Dindori district to the hills of Maikal ranges of Satpura. The topography, in combination with perennial streams and valleys has created micro-climatic conditions in the area to provide diverse environmental conditions, encouraging luxuriant growth for several species of thallophytes, bryophytes, pteridophytes (ferns), gymnosperms, angiosperms and many species of wild fauna of economic importance. The Achanakmar-Amarkantak Biosphere Reserve (AABR) is inhabited by a number of tribes like Baiga, Gond, Bharia, Bhils, Oraon, Kol, Korcu, Muria, Bondya *et al.* (2006) who dwell in remote areas of the forest and uses plant resources in medicinal purpose. The tribals mainly occupy villages such as Achanakmar, Antaria, Bandha, BaratiNala, Chaparwa, Damgarh, Jagatpur, Januna Dadar, Kota, Thad Pathar, Sonkundi, etc. A number of valuable research papers on ethnomedicinal plants of the Achanakmar-Amarkantak Biosphere Reserve (AABR) have been published by various workers. However, the vast store of ethno-medicinal information of these study areas has not been fully documented. In the present paper, an attempt has been made to present indigenous knowledge and uses of the wild plants which are used by local tribal communities for treatment of various ailment and diseases (Figure 1).

Material and Method

The ethno botanical exploration was carried out during the 2012-2013 to document the

information of medicinal plants. Field trips were organized in different tribal villages and forest areas. The information on medicinal herbal recipes used by the tribal for curing different ailments is gathered through interviews with the tribal medicine men called vaidya and local experience medicine man and expert person and question asked to gather data for this purpose. Each of the plant material was collected and documented. The information has been collected from reliable and authentic sources. The plant specimens are dried and pressed to prepare herbarium. The herbarium prepared by standard method (Jain and Rao 1977). The collected plant specimens were identified by using flora and other pertinent literature (Hooker, 1872,1897; Mudgal *et al.*, 1997; Singh *et al.*, 2001; Kapale, 2012; Sahu, 2010 etc.) and specimens were deposited at Pt. S.N.S. Govt. P.G. College Shahdol, Madhya Pradesh, India. The information about the plant, part used, disease, Local name and family name is given.

Results and Discussion

Present study records a total of 33 plants species which are found to be used in the treatment of fever, dysentery and diarrhoea, piles, skin diseases, rheumatism, bone fracture, cuts, wounds healing, cough, pneumonia, bronchitis, asthma, gynecological and abortifacient, snake bite, insect bite, stomachache and intestinal disorder, memories, jaundice, cardiac diseases, kidney trouble, urinary diseases, boils, male weakness and antifertility diseases. These medicinal plants are used by rural people and tribal communities residing in remote area. This knowledge of medicinal plants is becoming vanished as there is no written material. These were only handed over orally from generation to generation. Some medicinal plants are vanishing in

alarming rate due to over exploitation, harvesting, trade value, grazing, industrialization and urbanization, Road construction, clearing of forest for agriculture, Megaprojects, anthropogenic influences. These plants are categorized as per IUCN. A total of 33 threatened plants species have been listed here. Achanakmar-

Amarkantak Biosphere Reserve(AABR) of Madhya Pradesh of which 04 plant species are recorded under Endangered (EN) category, 06 plant species are found under Vulnerable(VU) category, 04 plants species are observed under Near threatened (NT) category and 19 plant species Least Concern (LC) category (Table 1 and Figure 2-3).

Table.1 Some threatened medicinal plants of Achanakmar-Amarkantak Biosphere Reserve (AABR)

S.No.	Botanical name	Local Name	Family	Medicinal Used	Status
01	<i>Abelmoschus moschatus</i> Medic.	Janglibhindi	Malvaceae	Root powder is given for Abortifacient	LC
02	<i>Abrus precatorious</i> L.	Ratti	Papilionaceae	Root paste is applied in cuts	LC
03	<i>Abutilon indicum</i> (L.) Sweet.	Kanghi	Malvaceae	Root juice is given for Abortifacient	LC
04	<i>Acacia nilotica</i> (L.) Willd ex. Del.	Babul	Mimosaceae	Pod powder is given in piles	LC
05	<i>Achyranthes aspera</i> L.	Chirchita	Amaranthaceae	Root paste is applied in cuts	LC
06	<i>Aegle marmelosa</i> (L.) C. Orea	Bel	Rutaceae	Fruit is eaten in Diarrhea	LC
07	<i>Aloe vera</i> L.	Guwarphata	Liliaceae	Leaves paste is applied on cuts	LC
08	<i>Andrographis paniculata</i> (Brum. f.)Wal. Ex. Nes.	Kirayta	Acanthaceae	Leaf juice is given in fever	VU
09	<i>Argemonemexicana</i> L	Pili Kateri	Papaveraceae	Stem latex is applied on cuts	LC
10	<i>Asparagus racemosus</i> Willd.	Satawari	Liliaceae	Root is used as tonic	VU
11	<i>Bacopa monnieri</i> (L.) Wetst	Jalneem	Scrophulariaceae	Leaf powder	LC

				is given for memory increase	
12	<i>Boerhaviadiffusa</i> L.	Punarnava	Nyctaginaceae	Root powder is given in Kidney problem	NT
13	<i>Butea monosperma</i> (Lamk.)Taub.	Palash	Fabaceae	Seed is applied on Snake bite	LC
14	<i>Calotropisprocera</i> (Aiton) R.Br.	Aak	Asclepidaceae	Hollow stem having Jira used as smoke to cure Asthma	LC
15	<i>Capparis decidua</i> (Forsk.)Edgew	Karil	Capparidaceae	Seed powder is given in Snake bite	VU
16	<i>Cassia fistula</i> L.	Amaltas	Caesalpinaceae	Pod paste is eaten in piles	LC
17	<i>Chlorophytumborivilianum</i> L.	SafedMusali	Liliaceae	Root powder is used as a tonic	EN
18	<i>Costusspeciosus</i> (J.koen.) J.E.Sm.	Kevkand	Costaceae	Tuber powder is given cough	EN
19	<i>Croton tiglium</i> L.	Jamalghota	Euphorbiaceae	Seed powder is given in intestinal disorder	EN
20	<i>Curculigoorchioides</i> Gaertn.	Kalimusali	Hypoxidaceae	Rhizome paste is applied on healing	VU
21	<i>Curcuma angustifolia</i> Roxb.	Tikhur	Zingiberaceae	Tubers extract is given in Diarrhea	VU
22	<i>Cuscutareflexa</i> Roxb.	Amarbel	Cuscutaceae	Stem juice is given in Jaundice	LC
23	<i>Cyperusrotundus</i> L.	Nagarmotha	Cyperaceae	Tubers powder is	LC

				given in Dysentery	
24	<i>Evolvulusalsinoides</i> (L.)	. Sankpuspi	Convolvulaceae	Leaf powder is given in Bronchitis	LC
25	<i>Hemidesmusindicus</i> (L.) R.Br	Anantmul	Asclepidaceae	Root paste is applied in Joint pain	NT
26	<i>Mucunapuriens</i> (L.) DC	Kemach	Papilionaceae	Leaf paste is applied on skin for cooling	NT
27	<i>Pterocarpus marsupium</i> Roxb.	Bijasal	Papilionaceae	Bark extract is given in Diarrhoea and Dysentery	EN
28	<i>Puerariatuberosa</i> (Rox.ex.Wil.)DC	Vidarikand	Papilionaceae	Root powder is given in Urinary disease	LC
29	<i>Solanumnigrum</i> L.	Solanaceae	Solanaceae	Leaf paste is applied on skin for cooling	NT
30	<i>Terminalia cuneata</i> L.	Arjun	Combritaceae	Bark extract is given in Cardiac disease	LC
31	<i>Tinosporacordifolia</i> (W) Mier. Ex Hook.	<i>Gudbel</i>	Menispermaceae	Stem juice is given in fever	VU
32	<i>Tribulusterrestris</i> L.	Gokharu	Zygophyllaceae	Leaf juice is given in intestinal disorder	LC
33	<i>Vitexnegundo</i> L.	Nirgundi	Verbenaceae	Leaf paste is applied on Joint pain	LC

Abbreviation: VU= Vulnerable, EN= Endangered, NT= Near Threatened, LC =Least Concern

Figure.1 Location Map of Achanakmar-Amarkantak Biosphere Reserve, Central India

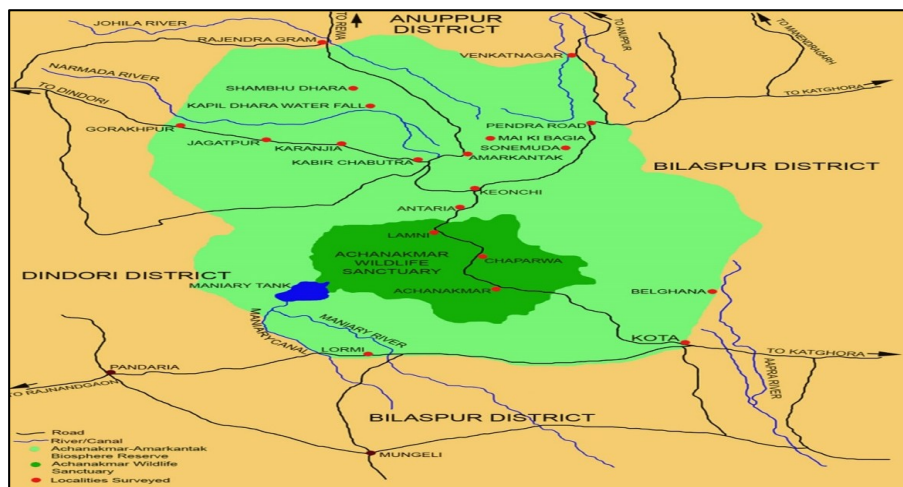
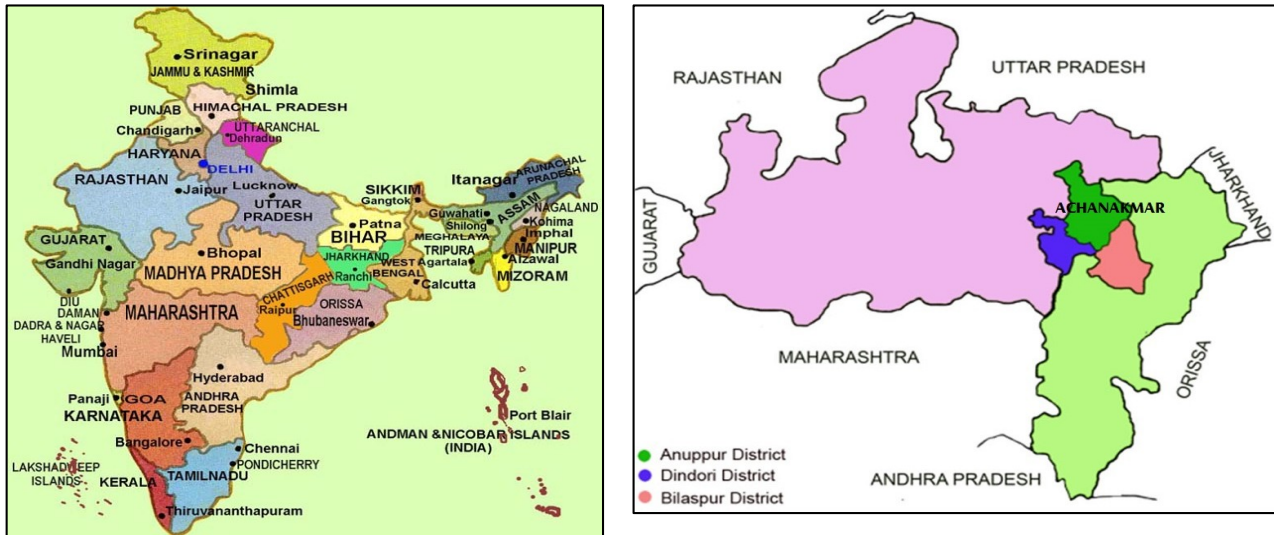


Figure.2 Percentage of Some Threatened Medicinal plants in (AABR)

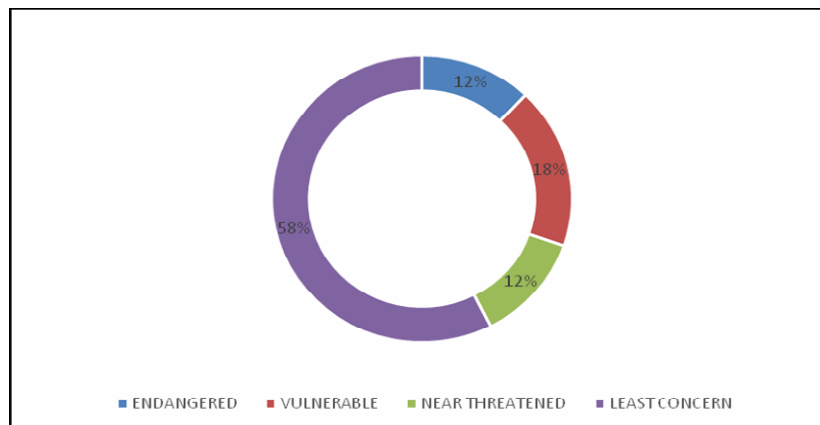
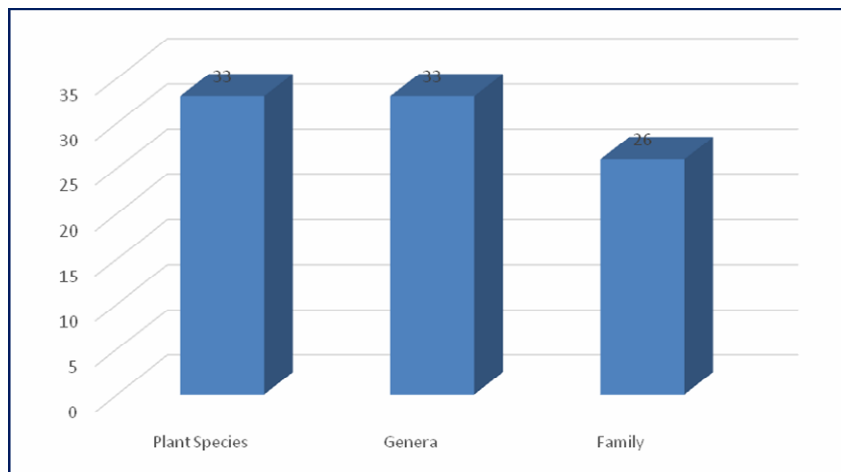


Figure.3 Representing of Some Threatened Medicinal plants in (AABR)



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