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Impact of religious and cultural activities on the environment and conservation of biodiversity

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Abstract

The present paper deals with the impact of religious and cultural activities on environment and biodiversity conservation. During this survey it was revealed that 74 plant species belonging to 71 genera and 37 families are used by the devotees of various religions. Out of these, 4, 76, 2, 11 and 5 plant species are used by Christians, Hindus, Jains, Muslims and Sikhs respectively.

Keywords: Religious plants | Vegetables | Fruits

Introduction

India by virtue of its extensive geographical stretch and varied terrain and climate supports a rich biodiversity. Actually biodiversity is the abstract for biological diversity used to describe the variety and variability among the living organisms. It is the global asset of tremendous value to present and future generations. However, the decline of biodiversity at an alarming rate due to human intervention has lately been posing great threat to its ability. Our Nation is a rich vavilovian centre of diversity. It is a country which has more than 700 years continuous cultural history and a very long knowledge base. Cultural diversity coupled with biodiversity enriches resource utilization. With the changing socio-economic pattern of the people the resource utilization pattern also changes. Local people are dependent on the forest resources.

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ICUN and WWF have recognized priority key sites for conservation of which six sites occur in India i.e. two from Eastern Himalayas (Namdappa and Nanda Devi), two from Western Ghats (Agasthiyamalai and Nilgiris), one each from Eastern Ghats (Nallamalis) and Andaman and Nicobar Islands. People rendered divine honour and worshipped trees. Probably tree worship is one of the earliest forms of religion in Ancient India. In the words of Lord Budha “the forest is a peculiar organism of unlimited kindness and benevolence that makes no demands for its sustenance and extends generously the products of its life activity. It affords production of all beings, offering shade to the axe man who destroys it “. Sacred values of plants have been well documented by Gadgil and Vartak (1976 a and b) and Gayatri *et al* (2003). In India, where almost every day is a festival, people of various religions residing in the country observe their own festivals from time to time. A lot of plant material is used by the devotees of different religions throughout the year. Khargone is one of the tribal districts of Madhya Pradesh, India. It is not only famous for the Navgraha temple but also known for its ancient temples of Lord Shiva, which are situated on the Satpura hills of this district. Sirwel Mahadev, Bijagarh Mahadev, Mahakaleshwar temple and Mendleshwar Mahadev are some of the temples of Lord Shiva which are famous in this area and visited almost throughout the year by the Hindu community especially at the time of festivals and in the month of Shravana (July – August) or every Monday of the year. Apart from these,

various other temples are also found in this district such as Baki Mata, Pashupati Nath etc. which are visited by the religious people. On Shivratri day, a large number of Hindu people worship Lord Shiva with leaves ,flowers and fruits of various plants considered religious by them. Keeping in view the above facts, the present investigation has been under taken in which an attempt has been made to describe the impact of religious and cultural activities on biodiversity conservation

Materials and Method

The present investigation was done during the year 2006 – 2007 at Khargone, M.P. In this connection 10 persons of each religion were consulted and a list of such plants was prepared which are considered and used in their respective religion. Enumeration of plants with their scientific and local names, name of families and plant parts utilized by the devotees of every religion was prepared following the standard literature for proper identification (Bailey, 1966; Cooke, 1957; Maheshwari, 1963; Shastri, 1977 and Mahajan, 1987), (Table 1).

Results and Discussion

The present study revealed that 74 plant species belonging to 71 genera and 37 families are used by the devotees of various religions. Out of these 4, 76, 2, 11 and 5 species are used by Christians, Hindus, Jains, Muslims and Sikhs respectively. Some of the important plants used by the Hindus are *Aegle marmelos*, *Clitoria ternatea*, *Amaranthus viridis*, *Cocos nucifera*, *Barleria prionitis*, *Cynodon dactylon*, *Datura stramonium*, *Nerium odorum*,

S. No.	Name of plant	Family	Common name / Local name	Plant part used
Christians:				
1.	<i>Araucaria excelsa</i> R.Br.	Araucariaceae	Chritsmas tree	Twigs
2.	<i>Cycas revoluta</i> L.	Cycadaceae	Sago palm	leaves
3.	<i>Oryza sativa</i> L.	Poaceae	Rice	Seeds
4.	<i>Pinus longifolia</i> Roxb.	Pinaceae	Chir	Twigs, female cones
Jains:				
1.	<i>Pterospermum acerifolium</i> Willd.	Sterculiaceae	Kanakchampa	Worship
2.	<i>Nyctanthes arbor-tristis</i> L.	Oleaceae	Parijat	Flowers
Muslims:				
1.	<i>Aloe vera</i> Mill.	Liliaceae	Guar patha	Plant
2.	<i>Craeteva nurvala</i> Buch-Ham.	Capparidaceae	Barna	Plant
3.	<i>Crocus sativus</i> L.	Iridaceae	Kesar	Stigma
4.	<i>Curcuma longa</i> L.	Zingiberaceae	Haldi	Rhizome
5.	<i>Jasminum arborescens</i> Roxb.	Apocynaceae	Chameli	Flowers
6.	<i>Lawsonia inermis</i> L.	Lythraceae	Mehndi	Leaves
7.	<i>Oryza sativa</i> L.	Poaceae	Chawal	Seeds
8.	<i>Phoenix sulvestris</i> L.	Palmaceae	Khajur	Fruits
9.	<i>Rosa centifolia</i> L.	Rosaceae	Gulab	Flowers
10.	<i>Salvadora persica</i> L.	Salvadoraceae	Pilu	Plant
11.	<i>Ziziphus nummularia</i> (Burm. F.) Wight & Arn.	Rhamnaceae	Chhoti ber	Fruits
Sikhs:				
1.	<i>Curcuma longa</i> L.	Zingiberaceae	Haldi	Rhizome
2.	<i>Clerodendron viscosum</i> Vent.	Verbenaceae	Bhirangi	Twigs
3.	<i>Lawsonia inermis</i> L.	Lythraceae	Mehndi	Flowers
4.	<i>Sapindus laurifolia</i> Vahl.	Sapindaceae	Ritha	Plant
5.	<i>Ziziphus nummularia</i> (Burm. F.) Wight & Arn.	Rhamnaceae	Chhoti ber	Plant
Hindus:				
1.	<i>Aegle marmelos</i> L.	Rutaceae	Bil patra	Leaves, fruits
2.	<i>Azadirachta indica</i> A.Juss.	Meliaceae	Neem	Worship
3.	<i>Achyranthe saspera</i> L.	Amaranthaceae	Hathi jhara	Stem
4.	<i>Aloe vera</i> Mill.	Liliaceae	Guar patha	Plant
5.	<i>Anthocephalus cadamba</i> (Roxb.) Miq..	Rubiaceae	Kadamb	Flowers
6.	<i>Amaranthus viridis</i> L.	Amaranthaceae	Chaulai	Plant
7.	<i>Areca cateceu</i> L.	Arecaceae	Supari	Fruits, seeds
8.	<i>Barleria prionitis</i> L.	Acanthaceae	Katasla	Flowers
9.	<i>Bambusa arundinacea</i> (Retz.) Willd.	Bombacaceae	Bans	Stem

10.	<i>Bryophyllum crenatum</i> Baker.	Crassulaceae	Khatti- buti	Plant
11.	<i>Brassica campestris</i> L. var. <i>rapa</i> (L.) Hartm.	Brassicaceae	Rai	Seeds
12.	<i>Betula utilis</i> D.Don.	Betulaceae	Bhoj patra	Leaves
13.	<i>Calotropis procera</i> (L.) R.Br.	Asclepiadaceae	Akav	Flowers
14.	<i>Calotropis gigantean</i> R.Br	Asclepiadaceae	Akav	Flowers
15.	<i>Capsicum frutescens</i> L.	Solanaceae	Mirchi	Fruits
16.	<i>Cassia auriculata</i> L.	Caesalpiniaceae	Avlya	Flowers
17.	<i>Cassia obtusifolia</i> L.	Caesalpiniaceae	Charota	Flowers
18.	<i>Cicer arietinum</i> L.	Fabaceae	Arhar	Seeds
19.	<i>Cucumis pepo</i> L.	Cucurbitaceae	Kaddu	Fruits
20.	<i>Curcuma longa</i> L.	Zingiberaceae	Haladi	Rhizome
21.	<i>Cynodon dactylon</i> (L.) Pers.	Poaceae	Durba	Twigs
22.	<i>Carica papaya</i> L.	Caricaceae	Papita	Fruits
23.	<i>Citrus medica</i> L.	Rutaceae	Nimbu	Fruits
24.	<i>Canna indica</i> L.	Cannaceae	Keli	Flowers
25.	<i>Coriandrum sativum</i> L.	Apiaceae	Dhania	Fruits
26.	<i>Cocos nucifera</i> L.	Palmae	Narial	Fruits
27.	<i>Commiphora mukul</i> (Hook. Ex Stoks) Engl.	Burseraceae	Guggal	Resin
28.	<i>Desmostachya bipinnata</i> (L.) Stapf.	Poaceae	Kusha	Twigs
29.	<i>Datura innoxia</i> Mill.	Solanaceae	Dhatura	Fruits
30.	<i>Datura metel</i> L.	Solanaceae	Dhatura	Fruits
31.	<i>Echinops echinatus</i> Roxb.	Asteraceae	Untkatara	Plant
32.	<i>Elaeocarpus sphaericus</i> (Gaertn.) K. Schum.	Elaeocarpaceae	Rudraksha	Fruits
33.	<i>Elettaria cardamomum</i> Matom.	Zingiberaceae	Elaichi	Fruits
34.	<i>Emblica officinalis</i> Gaertn.	Euphorbiaceae	Anwala	Fruits
35.	<i>Ficus benghalensis</i> L.	Moraceae	Bar	Plant
36.	<i>Ficus racemosa</i> L.	Moraceae	Gular	Fruits
37.	<i>Ficus religiosa</i> L.	Moraceae	Pipal	Plant, leaves
38.	<i>Hordeum vulgare</i> L.	Poaceae	Jau	Fruits
39.	<i>Hibiscus rosa-sinensis</i> L.	Malvaceae	Gurhal	Flowers
40.	<i>Impatiens balsamina</i> L.	Balsaminaceae	Gultewari	Flowers
41.	<i>Jasminum arborescens</i> (L.) Roxb.	Apocynaceae	Chameli	Flowers
42.	<i>Lawsonia inermis</i> L.	Lythraceae	Mehndi	Leaves
43.	<i>Luffa cylindrica</i> (L.) M. Roem.	Cucurbitaceae	Gilki	Fruits
44.	<i>Mangifera indica</i> L.	Anacardiaceae	Aam	Fruits
45.	<i>Mesua ferrea</i> L.	Guttiferae	Nagkeshar	Aril
46.	<i>Musa paradisiaca</i> L.	Musaceae	Kela	Fruits
47.	<i>Nymphaea nouchali</i> Burm.f.	Nymphaeaceae	Kamal	Flower
48.	<i>Nyctanthes arbor-tristis</i> L.	Oleaceae	Parijat	Flowers
49.	<i>Nylumbium nucifera</i> Gaertn.	Nymphaeaceae	Kumudani	Flowers
50.	<i>Nerium indicum</i> Mill.	Apocynaceae	Kaner	Flowers

51.	<i>Ocimum sanctum</i> L.	Lamiaceae	Tulsi	Inflorescence
52.	<i>Oryza sativa</i> L.	Poaceae	Akshat,	Fruits, seeds
53.	<i>Pandanus fascicularis</i> Lamk.	Pandanaceae	Kewra	Inflorescence
54.	<i>Phaseolus mungo</i> L.	Fabaceae	Urd	Seeds
55.	<i>Phoenix sylvestris</i> Roxb.	Palmae	Khajur	Fruits
56.	<i>Piper beetle</i> L.	Piparaceae	Pan	Leaves
57.	<i>Prosopis juliflora</i> (Swartz.) DC.	Mimosaceae	Saungad	Leaves
58.	<i>Prosopis spicejera</i> L.	Mimosaceae	Shami	Leaves
59.	<i>Punica granatum</i> L.	Punicaceae	Anar	Fruits
60.	<i>Quisqualis indica</i> L.	Combretaceae	Rangoon-ki-bel	Flowers
61.	<i>Raphanus sativus</i> L.	Brassicaceae	Muli	Roots
62.	<i>Rosa centifolia</i> L.	Rosaceae	Gulab	Flowers
63.	<i>Sacharum officinarum</i> L.	Poaceae	Ganna	Plant, stem
64.	<i>Salvadora persica</i> L.	Salvadoraceae	Pilu	Leaves
65.	<i>Saraca asoka</i> (Roxb.) de Wilde	Caesalpiniaceae	Ashok	Plant, leaves
66.	<i>Sesamum indicum</i> L.	Pedaliaceae	Til	Seeds
67.	<i>Solanum melongena</i> L.	Solanaceae	Bhatta	Fruits
68.	<i>Sorghum vulgare</i> Pers.	Poaceae	Jowar	Inflorescence and fruits
69.	<i>Syzgium cumini</i> (L.) Skeel	Rutaceae	Jamun	Fruits
70.	<i>Sesbania grandiflora</i> (L.) Poir.	Fabaceae	Agasya	Flowers
71.	<i>Tabernaemontana divaricata</i> L.	Apocynaceae	Chandni	Flowers & leaves
72.	<i>Terminalia catappa</i> L.	Combretaceae	Deshi badam	Seeds
73.	<i>Trianthema portulacastrum</i> L	Aizoaceae	Punamava	Plant
74.	<i>Trapa natans</i> L. var. <i>bispinosa</i> (Roxb.) Makino	Trapaceae	Singhara	Fruits
75.	<i>Trigonella foenum-graecum</i> L	Fabaceae	Methi	Seeds
76.	<i>Ziziphus nummularia</i> (Burm. f.) Wight & Arn.	Rhamnaceae	Chhoti ber	Fruits

Table 1: Showing the list of plants used by the devotees of various religious communities.

Tabernaemontana divaricata, *Ocimum sanctum*, *Calotropis procera*, *Desmostachya*, *Embllica officinalis*, *Mangifera indica*, Banana, Canna and others while *Araucaria*, *Cycas* and *Pinus* species are used by the Christian community and *Pterospermum acerifolium* is considered as one of the most religious plants by the Jain community. Besides these, *Craeteva*, *Jasminum*, *Aloe vera*, *Phoenix*, *Oryza sativa*, *Salvadora*, *Rosa indica*, *Crocus*

and *Lawsonia inermis* etc. are considered religious by the Muslim community. Among Sikh community special importance is given to *Sapindus*, *Curcuma longa*, *Lawsonia inermis*, *Ziziphus* species from religious point of view.

Due to rapid increase in population and religious attitudes of the people of various communities, a large amount of plant material is used in various religious activities not only in this district but all over the world. This

causes a great loss to our *biodiversity* which adversely affect both our flora and fauna. If we want to conserve the biodiversity then there is urgent need for people's awareness so that the environmental balance may not be disturbed.

It is very essential that every one of us should share to make our planet healthier, safer and more productive. Of course, this is by no means an easy process but it is not difficult too because if once a favorable decision is taken in each religion to save our religious plants then positive results would definitely save the valuable plants. If we are moved by goodwill and the desire for peace and prosperity, then this can be achieved.

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