



## Ethno-Botanical Survey of Sacred Groves and Sacred Plants of Jhalod and Surrounding Areas in Dahod District, Gujarat, India

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### Abstract

The present paper aimed 37 plant species belonging to 26 families documenting of sacred groves and sacred plants. During my research work I observed and documented six sacred groves, like Kedarnath mahadev, Panchkrishna, Bhamrachi mata Jhalaimata, Ghugardev mahadev and Sankatmochan hanuman sacred grove in the year 2011-12. The investigations revealed that different type of these groves are covered with herbs, shrubs and trees species which belongs to different families. Major species like *Bombax ceiba* L., *Aegle marmelos* L., *Ailanthus excelsa* Roxb., *Azadirachta indica* a. Juss., *Melia azedarach* L., *Maytenus emarginata* (willd.) D.hou, *Mangifera indica* L., *Butea monosperma* (lam.) Taub., *Dalbergia sissoo* roxb, *Sterculia urens* Roxb. *Pithecellobium dulce* (Roxb Bth., *Prosopis cineraria* L. Druce., *Terminalia arjuna* (roxb). W. & a., *Terminalia bellirica* (gaerth.) Roxb, *Eucalyptus globulus* labill., *Holoptelea integrifolia* (Roxb.) Konth, *Diospyros melanoxylon* Roxb., *Holarrhena antidyenterica* L. Wall ex g. Don. , *Wrightia tinctoria* r. Br., *Calotropis procera* (Ait.) R. Br., *Datura metel* L., *Tectona grandis* L. F., *Holoptelea integrifolia* (roxb.) Planch., *Ficus amottiana* miq., *Ficus benghalensis* L., *Ficus religiosa* L., *Ficus racemosa* L., *Agave americana* L., *Phoenix sylvestris* L. ,Roxb. And *Dendrocalamus strictus* nees.etc, are reported from my study area. Jhalod and surrounding areas in Dahod district, Gujarat, india.

**Keywords:** Sacred groves, Sacred plants, Jhalod, Conservation, Indigenous knowledge.

### Introduction

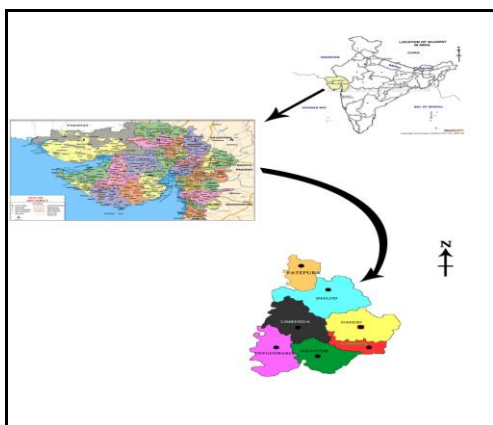
Sacred groves are one of the way to of the conservation of biodiversity. Today we are facing major problems. One of the critical issue on the national and global agenda is the need to preserve biodiversity for future generations. While trying to understand and document the indigenous knowledge of resource management practices. Religion being a powerful instrument for convincing people has always been used for meeting the desired objectives of the society. The various religious philosophies have contributed significantly in the conservation of forest, Sacred groves play an important role in recharge of aquifers and soil conservation of biodiversity. In sacred groves cutting, climbing of trees and removal of wood is strictly prohibited; it is protected by their natural condition. Collection and removal of any material from the sacred groves is prohibited<sup>1-2</sup> other forms of forest usage like honey collection and deadwood collection are sometimes allowed on a sustainable basis. Sacred groves did not enjoy protection via federal legislation in India. Traditionally, and in some cases even today, members of the community take turns to protect the grove<sup>3</sup>. Sacred groves can be used as indicators for potential natural vegetation<sup>4</sup> and are vital for well being of the society. Sacred groves or sacred trees serve as a home for birds and mammals, and hence, they indirectly help in the conservation of living organisms<sup>5</sup> sacred groves are the religious practice of conserving biodiversity with strong beliefs, customs and taboos and are treasure house of rare and endemic species. Everything

within these groves is under the protection of the reigning deity of the grove and the removal of any material, even dead wood or twig is a taboo<sup>6</sup> Sacred groves are the repositories of rare endemic, threatened species and are the remnants of the primary forest left untouched by the local inhabitants. They are protected even to date due to the cultural and religious beliefs and taboos along with the deities that reside in them. As a result of this, sacred groves are still conserved and contain a diverse gene pool of ethno botanically important species. The sacred groves found in different regions of India possess rich diversity of medicinal plants and provide suitable habitat for their sustainable, natural regeneration<sup>7-9</sup>. Protection of a large number of medicinal plants in sacred forests of different parts of India is some of the well documented by earlier studies<sup>10-12</sup>. It is also observed that more than 35,000 plant species are being used around the world for medicinal purposes<sup>13</sup>.

A few tours were planned so as to study the flora of sacred groves. Twenty nine SGs have been reported from Banaskantha district of Gujarat. The sacred groves found in India can basically be classified under three categories (based on analysis of studies on sacred groves): Traditional Sacred Groves – It is the place where the village deity resides, who is represented by an elementary symbol, Temple Groves – Here a grove is created around a temple and conserved and Groves around the burial or cremation grounds<sup>14</sup>. The sizes of the groves range between one acre to two square kms<sup>15</sup>. Numerous references are available in

literature where plants are treated as to the abode of the gods. In the scriptures, these plants are mention of the Kalpa vrisksha and Chaitya vrisksha, indicating that worshipping of the trees is an Indian tradition. These plants are often grown along and within the temples and can be considered as “sacred plants”. Various religious ceremonies are based on these trees or plants. In India, there are many festivals, which are based on flora. Holy Basil *Ocimum sanctum* L.(Lamiaceae), Ashok *Saraca asoca* L.(Cesalpiniaceae) Vad *Ficus benghalensis* L.(Moraceae), Peepal Piplo, *Ficus religiosa* L. (Moraceae), Limdo *Azadirachta indica* A. Juss. (Meliaceae), Aam (*Mangifera indica*) and Bili *Aegle marmelos* L.Corr. (Rutaceae) etc, are sacred plant species in India. Many of them like the sacred basil and neem are multi-purpose medicinal plants. Many ethnic, religious and cultural traditions are associated with plant species (folk music, dance, literature and poetry). In spite of this, these plant species play a significant role in our daily life. These species are used as a good fodder, fuel wood and timber, apart from the fact that they play a key role in nutrient cycling and conservation, as well as in ensuring water balance within the soil.

**Study Area:** Dahod district consists of seven talukas, having 696 villages / towns. The total population is 16, 35,374 as per 2001 censuses having total occupational area of 3,63,277.16 hectors. The Jhalod Taluka is situated between the banks of the Machhan river the district headquarters are located at Dahod. Total tribal population of the Jhalod Taluka is 91.80 %. Main tribes are Machhaar, Sangoda, Baria, Ninama, vasaiya, Vasava, Parmar, and Chauhan etc. the surrounding of the district can be mentioned as here: North side- Banaskantha district and vanswada district of Rajasthan. West side- Godhara district East side - part of Vadodara district and Zabua district of Madyapradesh. South side-part of Vadodara district and Zabua district of Madyapradesh.



**Figure-1**  
**Map of The Study Area**

## Methodology

During the present work I had visited various villages and forests area including hill and hillocks for collection of angiosperm

plants taxa. Good number of trips were arranged in context of the season. During monsoon the frequency was more because of good number of plant taxa were available in collection. The collected plants were brought to the laboratory, identified up to species level with the help of local flora<sup>16-18</sup> wherever it was possible and then dried and were mounted on herbarium sheet and labelled. The informants were mainly chosen according to their knowledge of common traditions and/or religious status. In each village we made a preliminary survey to locate people who are regarded as well immersed in local traditions and/or in religious customs. The informants were asked about the ritual and religious importance of the plant, found in the cemeteries. Information about its importance, utility and purpose was collected. Field study on sacred grove of in and surrounding jhalod, Dahod district were undertaken 2011-2012. The informants were mainly chosen according to their knowledge of common traditions status.

## Results and Discussion

During the present study, sacred groves were visited frequently near Dahod and surrounding areas of Jhalod. Total six sacred groves found in this area. total 37 plant species belonging to 26 families documented. These culturally valued species are often ecologically important keystone species, which by their key role in ecosystem functioning contribute to support much biodiversity associated with it. Enumeration provides the list of plant species with scientific and vernacular name and present of plants arranged in alphabetically (table 1). Groves Photo graphs (Figure 2 to 13).

**Kedarnath Mahadev sacred grove:** Kedarnath Mahadev sacred grove is situated on the kali dam near the area of sakarda, Chosala village, Dahod and near Kaligam village of Jhalod taluka. According to the local prayer, the tribal of the villagers coming daily, Sivaratri, “Aamli agiyarus” and every Monday of Gujarati month of “Shravan mas” for good worship and the deity is represented by milk. The folk believes that the area is protected and conserved due to presences of deity. The folk believes that after fulfillment of the wish the deity represented by flag which is made up of Narvans *Dendrocalamus strictus* Nees (Poaceae), and the cloth of cotton *Gossypium herbaceum* L., (Mavaceae).

**Panch krishna sacred grove:** Panchkrishna sacred grove is situated near river the Machhan, the old ashram of Suvart rishi was situated in the forest area of Therka village. According to local caretaker PanchKrishna area is known as hidambavan. According to historical evident in time period of twelve years exile pandavas stayed here, lord Krishna met them at this place .Five temples of eleven Gods is known as PanchKrishna . Fair held in “Ramnavami”, Janmastami”, “Devdiwali”. The grove was built by their ancestors before 13 century ago in the time of the origin of the village. Near the grove there is a stone inscription bearing year of AD 1355 as the year o construction In the course of time, the forest is destroyed for teak wood and the groves destroyed by another community. They believe that the Deity fulfils everyone’s wish.



**Figure-2**  
sankat mochan hanuman scared grove



**Figure-5**  
Jhalai mata scared grove



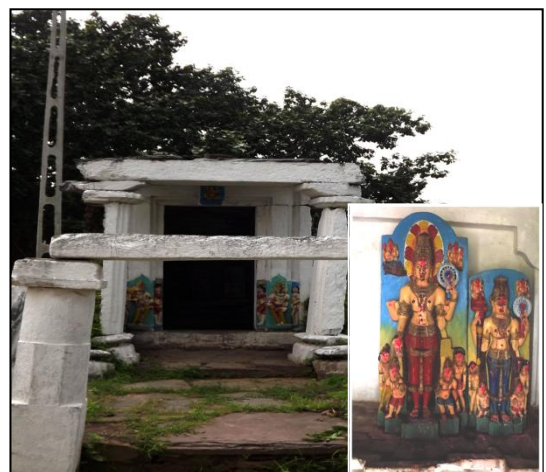
**Figure-3**  
sankat mochan hanuman scared grove



**Figure-6**  
Panch Krishna scared grove



**Figure-4**  
Jhalai mata scared grove



**Figure-7**  
Panch Krishna scared grove



**Figure-8**  
**Kedarnath mahadev scared grove**



**Figure-11**  
**Ghugardev mahadev scared grove**



**Figure-9**  
**Kedarnath mahadev scared grove**



**Figure-12**  
**Bhamarechimata scared grove**



**Figure-10**  
**Ghugardev mahadev scared grove**



**Figure-13**  
**Bhamarechimata scared grove**

**Table-1**  
**List of Plants Observed In Scared Groves**

Sr No	Botanical name of Plant	Local Name	Family	A	B	C	D	E	F
1	<i>Acacia nilotica</i> L. Del. subsp. indica (Bth.)	Baval	Mimosae	√	√	√	√	√	√
2	<i>Aegle marmelos</i> L.	Bili	Rutaceae	√	--	--	√	--	--
3	<i>Agave americana</i> L.,	Ramban	Agavaceae	√	--	--	--	√	--
4	<i>Ailanthus excelsa</i> Roxb.	Arduso	Simaroubaceae	√	--	--	--	--	--
5	<i>Annona squamosa</i> L.	Sitaphal	Annonaceae	√	√	√	√	√	√
6	<i>Azadirachta indica</i> A. Juss.	Limdo	Meliaceae	√	√	√	√	√	√
7	<i>Bombax ceiba</i> L.	Simlo	Bombacaceae	√	√	√	√	--	--
8	<i>Butea monosperma</i> (Lam.) Taub.	Kesudo	Fabeceae	√	√	√	√	√	√
9	<i>Calotropis procera</i> (Ait.) R. Br.	Nano akado	Asclepiadaceae	√	√	√	√	√	√
10	<i>Cynodon dactylon</i> L.Pers.	Darbh	Poaceae	√	--	√	--	√	--
11	<i>Dalbergia sissoo</i> Roxb.	Moto sisam	Fabeceae	√	--	--	√	--	--
12	<i>Datura metel</i> L.	Dholo dhaturu	Solanaceae	√	√	√	√	√	√
13	<i>Dendrocalamus strictus</i> Nees.	Narvans	Poaceae	√	√	√	√	√	√
14	<i>Diospyros melanoxylon</i> Roxb.	Timbru	Ebenaceae	√	√	√	√	--	--
15	<i>Eucalyptus globulus</i> Labill.	Nilgiri	Myrtaceae	√	√	--	√	√	--
16	<i>Ficus arnottiana</i> Miq.	Pipali	Moraceae	√	√	√	√	--	--
17	<i>Ficus benghalensis</i> L.	Vad	Moraceae	√	√	--	√	--	--
18	<i>Ficus racemosa</i> L.	Umaro	Moraceae	√	√	√	√	√	√
19	<i>Ficus religiosa</i> L.	Pipal	Moraceae	√	√	√	√	√	√
20	<i>Gmelina arborea</i> Roxb	Sevan	Verbenaceae	√	√	√	--	√	--
21	<i>Holarrhena antidysenterica</i> (L.) Wall ex G. Don. ,	Kudo	Apocynaceae	√	√	√	√	√	√
22	<i>Holoptelea integrifolia</i> (Roxb.) Konth	Kanji	Ulmaceae	√	--	--	√	√	√
23	<i>Mangifera indica</i> L.	Ambo	Anacardiaceae	√	√	--	√	--	√
24	<i>Maytenus emarginata</i> (Willd.) D.Hou,	Vikalo	Celastraceae	√	√	√	√	√	--
25	<i>Melia azedarach</i> L.	Bakan limdi	Meliaceae	√	--	--	√	√	--
26	<i>Mitragyna parvifolia</i> (Roxb.) Konth.	Kalam	Rubiaceae	√	√	√	√	√	--
27	<i>Ocimum Gratissimum</i> L.	Ram tulsi	Lamiaceae	√	√	√	√	√	√
28	<i>Phoenix Sylvestris</i> L.	Khajuri	Arecaceae	√	√	--	√	√	--
29	<i>Pithecellobium dulce</i> (Roxb.) Bth.	Gorasamli	Mimosae	√	--	--	√	--	√
30	<i>Prosopis cineraria</i> L. Druce.	Khijado	Mimosae	√	√	--	√	√	√
31	<i>Sterculia urens</i> Roxb.	Kadayo	Sterculiaceae	--	--	√	--	--	--
32	<i>Tectona grandis</i> L. F.	Sag	Verbenaceae	√	√	√	√	√	--
33	<i>Terminalia arjuna</i> (Roxb.) W. and A.	Arjun sadad	Combretaceae	--	√	--	√	-	--
34	<i>Terminalia bellirica</i> (Gaerth.) Roxb	Beda	Combretaceae	--	--	--	√	--	--
35	<i>Tinospora cordifolia</i> (Willd.) Miers ex Hk. f. and Th.	Galo	Menispermaceae	√	√	√	√	--	√
36	<i>Wrightia tinctoria</i> R. Br ,	Dudhi	Apocynaceae	√	--	√	√	--	--
37	<i>Zizyphus xylopyra</i> (Burm. f.) W. and A.	Gutbor	Rhamnaceae	√	√	--	√	√	√

A. Kedarnath Mahadev B. Panchkrishna C. Bhamrachi Mata D. Ghugardev Mahadev E. Sankatmochan Hanuman F. Jhalaimata.

**Note:** [√] Indicate plant is present in grove [-] Indicate plant is absent in grove

The present paper aimed 37 plant species belonging to 26 families documenting of sacred groves and sacred plants. During my research work i observed and documented six sacred groves, like Kedarnath mahadev, Panchkrishna, Bhamrachi mata Jhalaimata, Ghugardev mahadev and Sankatmochan hanuman sacred grove in the year 2011-12. The investigations revealed that different type of these groves are covered with herbs, shrubs and trees species which belongs to different families. Major species like *Bombax ceiba* L., *Aegle marmelos* L. *Ailanthus excelsa* Roxb., *Azadirachta indica* a. Juss., *Melia azedarach* L., *Maytenus emarginata* (willd.) D.hou, *Mangifera indica* L., *Butea monosperma* (lam.) Taub., *Dalbergia sissoo*

*roxb*, *Sterculia urens* Roxb. *Pithecellobium dulce* (Roxb Bth., *Prosopis cineraria* L. Druce., *Terminalia arjuna* (roxb.) W. & a., *Terminalia bellirica* (gaerth.) Roxb, *Eucalyptus globulus* labill., *Holoptelea integrifolia* (Roxb.) Konth, *Diospyros melanoxylon* Roxb., *Holarrhena antidysenterica* L. Wall ex g. Don. , *Wrightia tinctoria* r. Br., *Calotropis procera* (Ait.) R. Br., *Datura metel* L., *Tectona grandis* L. F., *Holoptelea integrifolia* (roxb.) Planch., *Ficus arnottiana* miq., *Ficus benghalensis* L., *Ficus religiosa* L., *Ficus racemosa* L., *Agave americana* L., *Phoenix sylvestris* L. ,Roxb. And *Dendrocalamus strictus* nees.etc, are reported from my study area. Jhalod and surrounding areas in Ddahod district, Gujarat, india.

**Sankatmochan Hanuman sacred grove:** *Sankatmochan Hanuman* sacred grove is situated near the vania ghati area of kota village, near sanjeli. The grove was built by their ancestors before more than 110 years ago during the time of Darbar of sanjeli. The tribal of the village coming daily for worship. Fair is held on *Ramnavami*, *Hanumanjayati*. This grove is surrounded by *Mitragyna parvifolia Roxb.* (Rubiaceae) Konth, *Aegle marmelos* L., (Rutaceae) *Azadirachta indica* A. Juss. (Meliaceae)

**Ghugardev Mahadev sacred grove:** *Ghugardev Mahadev* sacred grove is built near Chhakaliya village on the bank of the Anas River near the forest area of Madhya Pradesh and Gujarat near the border. This grove was built by ancestors before 200 years ago. The local tribal and Madhya Pradesh people of the villages coming daily for good worship. The deity is represented by sweet boil wheat and jiggery. A natural water fall is present near the grove. According to local people, after monsoon it flows 24 hrs, up to the February than stops, flow again in next monsoon. The grove is built under the tree *Ficus arnottiana* Miq., (Moraceae) *Ficus benghalensis* L., (Moraceae) *Ficus racemosa* L., (Moraceae) This grove is surrounded by *Terminalia arjuna* (Roxb). (Combretaceae) W. and A., *Aegle marmelos* L., (Rutaceae) *Azadirachta indica* A. Juss. (Meliaceae).

## Conclusion

The local traditional folklore medicinal knowledge was the basic source for preliminary selection of medicinal valued plants, so the conservation of plant diversity of these groves is therefore most important for the management and sustainable development in these fragile ecological and life support systems. From pre-historic times, plants and animals are the part of our life. Plants are oldest creation of God on earth and plant worshiping is one of the earliest religious trends since the time ancient. Numerous references are available in literature where plants are treated as to the abode of the gods. Some plant species are grown in sacred places because people thought that ancestors and deities reside in these plant species and protect their life.

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