ACKNOWLEDGEMENT

The investigators record their sincere thanks to Principal, Management and Head and all staff members of K K Shah Janodwala Maninagar Science College, Ahmedabad for providing the infrastructural facilities and all the amenities for the conduct of the study. The investigators record their gratitude to Dr. A.S. Reddy (Hon’ble Ph.D. Guide) for extending all possible help for the smooth conduct of the study. The researchers express their sincere thanks to Dr. B.K. Jain, Principal, M.G. Science Institute, Ahmedabad for his constant help and support in this investigation. The investigators express their heartfelt thanks to the tribals of the study area for their valuable help rendered throughout the study. I specially thanks to my dearest wife Smt. Chetna Patel and my lovely parents and my children Jay and Kalp for their morally support and help during my investigation. The investigators are highly indebted and grateful to Smt. Kiriben Dave and all my research students Payal Dobariya, Avani Vyasa, Jinal Patel, Vandana Patel and Zarna Rathod for their co-operation rendered in the conduct of field work during the survey.

The investigators gratefully acknowledge the University Grants Commission, New Delhi, for sanctioning this minor research project and providing financial assistance. I would like to thanks my dear students Punnar Urvashi, Vidal, Dipika and Nimita for their kind cooperation in last moment in my project submission.
CONTENT

I. INTRODUCTION

II. METHODOLOGY

III. RESULTS AND DISCUSSION

IV. SUMMARY AND CONCLUSION

V. REFERENCES
   ◦ PUBLISHED RESEARCH PAPERS
   ◦ PRESENTATIONS IN NATIONAL AND INTERNATIONAL CONFERENCES

 (CERTIFICATES)
1. **INTRODUCTION**

The Indian sub-continent has a very rich diversity of plant species in a wide range of ecosystems. There are about 17,000 species of higher plants, of which approximately 8000 species are considered medicinal and used by village communities, particularly tribal communities, or in traditional medicinal systems, such as the Ayurveda (Paci, S.J., 2001). Many of the wild plants are endemic and are found only in the 20th century and the subsequent pressure on available land, which has lead to deforestation and land degradation, many species or populations of species are now threatened with extinction, because their natural habitats are being destroyed. Almost all medicinal plant raw materials India are collected from wild populations. This has led to the unsustainable exploitation of many of the plants. The growing interest in traditional herbal medicine will lead to further increase in the demand for medicinal plants.

Current estimates suggest that, in many developing countries, a large proportion of the population relies heavily on traditional practitioners and medicinal plants to meet primary health care needs (Abu-Rabia, 2005). Although modern medicine may be available in these countries, drugs obtained from plant are believed to be much safer (Kateva et al., 2004) and exhibit a remarkable efficacy in the treatment of various ailments (Siddiqui et al., 1995). The folk medicinal traditions play a reflecting and prominent role in human and environment interaction (Chopra et al., 1956). The important role that medicinal plants play in peoples' health and the increasing threat of extinction facing them call for immediate and proactive conservation measures. Promotion and revival of traditional management practices is one of such measures. These traditional practices, which are mostly based on cultural norms and religious beliefs, are the basis for sustainable use and conservation of biodiversity. Although they have long been neglected by official conservation policies, they have proved effective, as acknowledged in literature.

According to Scheppmann et al., more than 50,000 species are used for medicinal purposes worldwide, of which almost 13% are flowering plants. Over 8000 plant species are used in traditional and modern medicine in India and 90-95% collection of medicinal plants is from the wild, of which more than 70% collection involves destructive and unscientific extraction. Over exploitation of trade species, destructive way of collection, vulnerability due to anthropogenic pressures are some of the major threats to medicinal plants. In order to achieve sustainable harvest of medicinal plants and other to achieve sustainable harvest of multi-
disciplinary approach must be considered which include ecological, biological, socio-cultural and economical aspects of the species.

Sacred groves have close linkage with the ecology of the place. These are representatives of the relict climax vegetation of Indian sub-continent and part of the socio-cultural traditional (Sukumaran, 2000). Protection of environment and life supporting system is intricately interwoven with the conservation of biological diversity. The spreading of ecological awareness everywhere and the role played by various agencies to promote this have partially succeeded in creating a new culture which considers deforestation and destruction of ecosystem as almost a sin. These groves exist in several states of India in various names, in Tamil they are known as “iyarkkovilikal”. All forms of vegetation are conserved including trees, shrubs, herbs and climbers (Godgil and Vartak, 1975).

Sacred groves are tracts of virgin forests; the vestiges of an ancient practice in which people protected forest patches from the perceived wrath of its resident Gods. These sanctums of rare, endangered and endemic plants combined with other biotic and abiotic components represent a unique example of the all embracing concept and practice of Indian way of in situ conservation and protection of environment. The “Iyarkkovilikal” of Kanyakumari District are distinct and unique in biological diversity and ecosystem functioning. Some of these forests are still undisturbed, although their majority is in different stages of degradation. These groves are rich and dense with trees, shrubs, herbs, lianas, epiphytes, climbers and twiners and supports a wide range of local biodiversity (Godgil and Vartak, 1975, 1981; Haridasan and Rao, 1985, 1987; Raj, 1995; Rajendra Prasad et al., 1998, 2000; Sukumaran, 2002) and they preserve many of which hold potential use to man (Sukumaran and Raj; Sukumaran et al.; Ramamurthy and Cyril, 2003; Upadhyaya et al., 2003; Mishra et al., 2004). Sacred groves are segments of landscape containing vegetation and other forms of life and geographical features that are delimited and protected by human societies to keep them in a relatively undisturbed state. It is the expression of the relationship of man with the divine or with nature. The phenomenon of belief in sacred groves is ancient. The tract of virgin forest harboring in rich biodiversity, protected by the local people based on the ground of indigenous cultural and religious beliefs, and taboos is called sacred grove. They are the repositories of rare and endemic species and can be regarded as the remnant of the primary forest left untouched by the local inhabitants and protected by them due to the belief that the deities reside in these forests. Around 14000 Sacred groves have been reported from all over India.
Some of the groves have been studied for their floristic composition in other parts of Tamil Nadu (Visalakshi, 1995). In Kanyakumari District floristic structure of 40 sacred groves have been reported recently (Sukumaran et al.), Climax vegetation in sacred groves of this district is rich in their species composition. It is, therefore to survey sacred groves and properly assess their role in nature conservation (Gadgil and Varsik, 1975).

Ambaji is within the Aravali Range literally meaning 'line of peaks', is a range of mountains in western India running approximately 800 km in a northeastern direction across Indian states of Gujarat, Rajasthan, Haryana and Delhi. It is also called Mewat hills locally. Ambaji town also is between the borders of North Gujarat and Abu Road of Rajasthan. As of 2001 India census, Ambaji had a population of 13,702. Males constitute 53% of the population and females 47%. Ambaji has an average literacy rate of 66%, higher than the national average of 59.5%, with 60% of the males and 40% of females literate. 14% of the population is under 6 years of age.

Ambaji enjoys all types of weather. In Summer, it's hot and humid and temperature remains between 26-46°C Degrees with hot winds. In Winter, the temperature ranges between 10 and 36 degrees Celsius during this period, which is quite cold and best time and in Monsoon Season, the average rainfall is about 15 to 30 inches per season, sometimes even heavy rainfall. Ambaji is at Altitude: 480 m. Therefore, weather remains relatively pleasant through out the year.

Banaskantha, Sabarkantha, Mehsana and Patan are the four districts of North Gujarat, among them in Banaskantha district the Danta and Ambaji range forests are the part of Danta taluka having the part of Aravali hills. Ambaji range forest is a part of Danta taluka situated on eastern part of the Banaskantha district in North Gujarat. Ambaji range forest is a part of Danta taluka situated on eastern part of the Banaskantha district in North Gujarat. These forests are inhabited by a variety of ethnic groups including the tribes like Dubadiya, Parghi, Taral, Bhemij, Dhurung, Khair, Lirir, Makwana, Dubhi, Selaski, Chaanhan, Gamar, Parmar, Rohira, Rathod. Mann, Darwar, Khemal, Kudari etc. These tribes cover 46 per cent of the total population. Out of 300 sq. km. geographical area of the range, about 542 sq. km is notified as Ambaji-Haldarang wildlife sanctuary. The two main rivers Dansas and Sabarmati and their tributaries are contributing to the enrichment of floral components. The average annual rainfall is about 725mm. Ambaji range forest is representing 434 angiosperm species (20% of the Gujarat flora) belonging to 85 families. The forest type is dry deciduous and scrub (Champion and Seth, 1968) harbors about 400 tracheophyte plant species, including
pteridophytes, gymnosperms and angiosperms. These forest areas are inhabited by around 20 tribes. The present investigation was carried out in Ambaji range forest of Banaskantha district of North Gujarat. Tribal people of Ambaji forest range directly depend upon forest resources for their daily needs. Tribal people of Ambaji forest range directly depend upon forest resources for their daily needs. During the present investigation it was observed that tree species are being greatly used for various purposes. *Lannea, Amangium, Butes, Zizyphus, Acacia, Diapysis, Barvella, Gmelina, Alisanthus* etc. are the commonly found trees in this forest. Besides this some minor forest products like bark, gum, flowers, fruits, fuel wood are interwoven with tribal life for their survival. The species like *Dendrocalamus, Holopiea, Phoenix, Wrightia, Acacia* etc. are used for various purposes.

**STUDY AREA MAP**
Through questionnaire survey the information was collected on the name of sacred grove, its locality, size of grove, occurrence of plants in the sacred grove site, deities worshipped, history or folklore and gender issues associated with such groves. Besides, the local people were encouraged to give their views and perceptions on the sacred grove with respect to the cultural, ecological, economical and conservation perspectives. During the field work, the sacred grove sites were also visited with the local knowledgeable people for preparing the list of species and associated knowledge with such sacred groves. Participant observations were also employed and information was collected by participating in various cultural activities of the local tribal people.

The villagers also disclosed the fact that the soil in the sacred grove site remained more fertile than the adjacent sites of the village. This was possible due to high biomass and further decomposition and nutrients release in such ecosystems. The farmers, who had agriculture land in the proximity of such sacred grove, had reported relatively higher production of grains in such lands. Besides, such farmers had noticed the higher moisture contents in their land. The local people also reported that sacred grove used to provide the shelter and food for many wildlife species including varieties of birds and butterflies.

Traditionally, some gender issues were associated with the sacred groves, especially with respect to the collection and use of resources. There were some specific periods in which the people were not allowed to enter the sacred groves. Before entering the sacred grove women were advised to take bath. During menstrual period women were strictly prohibited going inside the sacred groves, as there was a strong belief that it might defile her or the deities living in the sacred grove. Similarly, the members from the deceased family were not allowed to enter the sacred grove sites until the completion of purifying rituals. The villagers generally performed the purifying ritual at 10th days of the death of the person. People strictly followed these customary norms in view of their own welfare as well as their deities and society. The villagers themselves maintained the sacred groves with a great passion and sanctity. The traditional institutional mechanisms have been helping the local people in maintaining the sacred groves. The established customary rules may vary from place to place and grove to grove but the goal is same, which follows the similar philosophy. These traditional rules often prohibit the felling of trees are the killing of animals, except when trees are required for the construction and repair of religious buildings or in special cases do allow collection of firewood, fodder, and medicinal plants by local people (D. Brandis, 1897, P. S. Ramakrishnan, 1998). As a result of these restrictions, the biodiversity in such sacred groves
are preserved over many generations, and still exist today. The sacred groves are the last home of some endangered species, as observed in Kodagu district of southern Indian state of Karnataka (S.A. Bhagwat, C. G. Kushalappa, P. H. Williams and N. D. Brown, 2005), and also are known to represent the only existing climax vegetation communities in northeastern India (P. S. Ramakrishnan, 1998). Numbers of studies have supported the role of sacred grove in conservation of biodiversity across the different parts of India including West Bengal (P.K. Pandit and R. K. Bhakat, 2007), Northeast India (A. D. Khumpongmanyum, M. L. Khan and R. S. Tripathi, 2004) and Eastern Ghats (M. Godgil and V. D. Vartak, 1976).
II. METHODOLOGY

During the survey of different forest areas of Ambaji, various local medicine men, healers and local people were contacted and got information questionnaire and interviews about forest plants. Instead of asking the plants names and their medicinal as well as local uses they are aware, we collected the plants through field exploration and showed them to name them. We tried to confirm their identity by putting couple of questions related to their habitat, habitat etc. By confirming the identity, we asked few more questions to get the information on the medicinal uses, preparation of medicine, method of usage, wherefrom they got this information, for how long they are practicing this medicine and useful things etc. The plant samples have been scientifically identified (Shah, 1978) comparison of the collected data with the published literature in the field of ethnomed (Jain, 1991) revealed that the ethnomedical information for some plant species is not reported earlier and becomes first report. The study area was surveyed regularly to record the floristic wealth of sacred grove of Danta and Ambaji forest areas. Various field trips were arranged and specimens were collected, identified with the help of Flora of the Presidency of Bombay (Cooke, 1958) and Gujarat Flora (Shah, 1978) and properly processed through standard methods. The collection of depository of dried plant specimens is known as herbarium. Herbaceous plants, growing in the forest area were collected with underground parts and in case of trees and shrubs, twigs, nearly 25 cm, long, along with the flowers were collected and was numbered and the detail note regarding the specimen was entered in the field note book. Special note on the ethnomedical use was noted. Data about floristic and regeneration status of such species were gathered. For this purpose, old men and “local vaidya” were contacted and verified with available literature. Plant species were arranged according to Bentham and Hooker’s classification given in the Gujarat Flora. Here documented 89 plant species were belonging to 79 genera and 46 families. Field notes with special reference to their distributional and regeneration status were noted. Followings are of some important contributors worked on North Gujarat flora: Plants of North Gujarat (Saxton & Sodgwick, 1918) and Saxton (1922), Flora of Visnagar Taluka - N. G. Addition to Gujarat Flora (Ahuja and Pataak, 1979), Floristic study of North Gujarat (Yogi 1970, Patels) 2002). But nobody has concentrated on sacred groves.

The study area was surveyed regularly to record the floristic wealth of sacred grove of Ambaji forest areas. Various field trips were arranged and specimens were collected, identified with the help of Flora of the Presidency of Bombay (Cooke, 1958) and Gujarat Flora.
Flora (Shah, 1978) and properly processed through standard methods. Special note on the ethno botany were noted. Plant species were arranged according to Bentham and Hooker’s classification given in the Gujarat Flora. Here documented 31 plant species were belonging to 29 genera and 25 families. Field notes with special reference to their distributional and regeneration status were noted. Followings are of some important contributors worked on North Gujarat flora: Plants of North Gujarat (Saxton & Sedgwick, 1918) and Saxton (1922), Floristic study of North Gujarat (Yogi 1970, Patel(s) 2003).

The study area was surveyed regularly to record the floristic wealth of sacred grove of Ambaji forest areas. Various field trips were arranged and specimens were collected, identified with the help of Flora of the Presidency of Bomhny (Cocke, 1958) and Gujarat Flora (Shah, 1978) and properly processed through standard methods. Special note on the ethno botany were noted. Plant species were arranged according to Bentham and Hooker’s classification given in the Gujarat Flora. Here documented 31 plant species were belonging to 29 genera and 25 families. Field notes with special reference to their distributional and regeneration status were noted. Followings are of some important contributors worked on North Gujarat flora: Plants of North Gujarat (Saxton & Sedgwick, 1918) and Saxton (1922), Floristic study of North Gujarat (Yogi 1970, Patel(s) 2003).
III. RESULTS AND DISCUSSIONS

Sacred Groves is a small area of land with a particular type of tree grown on it, that are considered to be holy by the local human community. Sacred Groves are groups of trees or patches of vegetation protected by the local people through religious and cultural practices evolved to minimize destruction (Sukumaran, and Jeeva, 2008). It's a place to settle in tranquility, listen to the birds, watch the trees sway in the wind, re-establish connection with God, Goddess, great spirit, great mystery or whatever you call that, ineffable power that underlies all life. India is one of the world's top 12 mega diversity countries with rich variety of biotypes including coral reefs and alpine meadows, rain forest and desert scrub. "Many traditional societies all over the world value a large number of plant species from the wild for a variety of reasons, for food, fiber, shelter or medicines (Anthwal et al., 2006). Sacred Groves is one of the first instances of traditional conservation. Conservation of bio-diversity has been possible in many ways. In-situ Sacred Groves can be placed in this category. The tradition is very ancient and widespread in most parts of the world. The estimated number of sacred groves in India is about two lakhs (Mahendra, Chaturjee and Gokhale, 2007). Surface air temperature is rising alarmingly at a rate of 0.4 degrees Celsius per century and The most worrying part of the prediction is the estimated increase in winter and summer temperatures by 3.2 degree and 2.2 degree Celsius, respectively, by 2050. If a one-meter sea level rise were to take place today, it would displace 7 million persons in India. People think that, how is it possible? Simple relation, if one-meter sea water rises then 35% land of Bangladesh would be submerged under sea water (Kumar & Parikh, 2001) and which ultimately generates refugees and many of them could spill over into interior India. So a thought about our security has become more important and we searched the different ways through which we can sustain us on healthy Earth. "Sacred Groves are one of the finest instances of traditional conservation practices. They have formed cultural and religious centers for people over much of the old world" (Gadgil & Chundran, 1992). The estimated number of Sacred Groves in India is about 2 lakhs (pal, 2011). Through the conservation of Sacred Groves we can promptly conserve the forest and faunal diversity that will help to maintain the biodiversity and environmental identity of the particular environment. In Situ, conservation of biodiversity has enabled it to withstand the test of time. Sacred Groves can be placed in this category. Nourishing several pockets of sacred trees the rates of co2 emission can be reduced to a considerable extent and ground water will be recharged which helps to balance
in the global hydrological balance. Moreover the rate of soil erosion will be reduced and the humic acid of sacred leaves will be fruitful for maintaining the soil fertility. The faunal diversity in sacred zones, those inhabits in the sacred landscape are the symbol of ecological balance in local environment. In broad level, the aggregation of micro results will be helpful to maintain the environment at macro level through the conservation of trees in different pockets of world. With the help of Sacred Groves perception large number of trees would conserve which would control the global warming as well as glacial melting and ultimately the deposition on river bed with flood generation with disastrous consequences. So the whole climatic hazard will be checked or controlled with the controlling and nourishing of the Sacred Groves. Sacred Groves improve the soil stability, prevent the top-soil erosion and provides irrigation for agriculture in drier climates. It helps in improving the soil fertility through efficient nutrient cycling, conserving soil moisture through humus buildup in the soil and partly through a deep root-system which has root biomass uniformly distributed through the soil profile. The huge importance of micro biome concept, in natural pond conservation, in river behavior regulator, to strengthen the floral and faunal diversity, preservation of vulnerable and rare plant species, and source of paleo-climatic behavior, baseament of future world forestry etc. In the context of biological conservation, pond ecosystem can also be preserved as these ponds serve as breeding sites for some animals and recreational facilities (pal, 2011). Sacred Groves enhances social integration improvement, educational significance, economic beneficial scenario, significance in respect of human behavior, preservation of open-air paleo-culture, energized to local and global level tourism, local infrastructure improvement, improvement of accessibility concept, medicinal (Arunadhe medicine) significance, encouraged the root of culture. The psychological environment forms the most important part of our life. Without this peace, our mind fails to bear a fruitful scenic physical and non-physical environment. Different islands of Sacred Groves reduce the rate of climatic harshness like floods, droughts, cyclones, soil erosion and through these the plucking of inhabitants from their habitats (number of refugees) is decreased. Due to Sacred trees the ground water recharged and the scarcity of water is reduced that will be helpful for local people in respect to their demand of fresh water. It will also refresh the courtier of mind psychology of folks. During Sacred Groves related festivals the economic regeneration is spurt out in that local area and that helps to improve the economic basement of folk-people. More over “in recent years, there has been an increasing awareness that the significance of the medical plant studies goes beyond mere anthropological curiosity” (Sokumaran & Raj,
2010). So with the conserving of Sacred Groves different medical plants can be conserved and with these medical trees people can reduce the hazards in medical environment because in recent times during the preparation of medicines the availability of the wild medical plants are too rare as raw materials. So Sacred Groves "act as natural gene pool preserve and serve as an example of habitat preservation through community participation" (Gadgil, and Vartak, 1975). I have reported total 32 sacred groves and 89 sacred plants from ambaji forest areas from March-2013 to March-2015 during the tenure of sanctioned minor research project. Present study Sacred groves are shown in plate no. 1 and sacred plants are shown in Plate no. 7 to 16. Table no. 1 is shown Enumeration of Plant Species in the Different Sacred groves and table no. 2 is shown Check list of Medicinal Plants frequently Reported from Certain Sacred Groves.

Data Collection of Sacred Groves and Sacred Plants from various Tribal People of Ambaji Forest, Gujarat during different extensive fieldtrips (2012-2015)

Mahadev Ramapur SGs:
Caretaker: Kesarbhai Sonabhai Kodari

History: Mahadev Ramapur sacred grove is 33 years old, situated in dense forest of Ambaji - Danta of the village Bamoda. The idols are in sequence such as Mahadev Ramapur, Gogabaaji, Mamaji & Ashaparamataji.

Tribal people of this area worship god in the Gujarati month of “Vaisakhi” at morning & evening time & also special adoration at every Saturday in evening time. No acceptance of any gift from tribal people. Caretaker Sonabhai had given this knowledge to his son Kesarbhai & further will be given to kesarbhai’s son Jayambhai. This temple is established inside the house.

Pledge:
- In case of infertility & typhoid the tribal lady pledge to the god rama dev pira.
- In case of disease & severe pain they worship to the god Bholenath.
- In case of mental disease they worship to the god Mamaji Dev.

The folk belief that after fulfillment of the wish the deity is respected by coconut & the sweet “Mohanthali”. Its called “Mithipuha”.

The grove is surrounded by the plant species like bunyan tree, Oleander, Neem, pipal, shetra, sanadsado, anti, bortal & bamboo.
Nageshwar Mahadeva SGS:

Nageshwar Mahadeva sacred grove is situated in dense forest & its local caretaker is Bhagaram. Sacrifice is done in week & wood of the plant sandal wood is used. The people passing by go to darshan of god. After fulfilling many of the wishes deity represents the sweet "SAKARIYA" to the god.

The grove is surrounded by the plant species like Nagod, Daryawal, Neem, Tulsi, Akado, boogun vel, vad, Dhav, Chomhi piplo.

Mahakali Mese SGS:

The grove is situated near the village Boda. Nayanaben Bachubhai Beqdiya is a local caretaker of the grove. The grove was built by their ancestors which is approximately 50 years old.

Prayer is done by the village people every Thursday by lamp of ghee. After fulfillment the deity represented burnt clay idols of house & coconut fruit.

The grove is occupied the following plant species like Shindo, Kadayo, Lindo, khakhro.

Veer Bapji Bhandhoro SGS:

Veer Bapji Bhandhoro sacred grove is also known as Mamali rosepal Bhandhoro. The grove is 15 years old and it is situated near the village Mota Pipodara. The grove was constructed by Ramjibhai who is a nephew of Amthubhai.

The grove is occupied by the plant species like arduo, Ambo, Kevdo, Kadvu, Bordi, Vad.

Hanuman SGS:

The grove is situated near the village Mota Pipodara. Jinji Shetaji Thakor is a local caretaker & the grove is more than 100 years old of the ancient time.

After fulfillment the deity represented the flower of calotropis procera & estable oil every Saturday. In the care of mental disease the people represented to 52 flowers of calotropis procera’s garland to the god.

The grove is surrounded by the plant species like Kasondro, Kofru, arduo.

Kahidevi SGS:

- Name of the village : Mota Pipodara
- Sacred Plants : The grove is surrounded by the plants like Kanji, Khakhro.
- History : Kahidevi sacred grove is situated near the village Mota Pipodara of the Ambaji Data range forest. The grove was established by their ancestors and is 600 to
700 years old. The local informants of the grove are Mohanji lakhji Thaker, Ishwarbhai Virabhai Shenna & Pratapji Panaji Thaker.

- Pledge: The deity is revered for well being of the cattle mainly for buffalo & after fulfillment they represented the sweet "Bhikhu", coconut fruit & Dhupstick and also "Garba".

Bhokharri Veer SGS:

The people of pipodara village pray to the god. After fulfillment the deity presented lamp of Buffalo ghee, goats Sacrifice, coconut, Fruit & Dhupstick.

Informer: Sunabhai Anabhai Dubhi, Bolubhai Bharabhai Dubhi

Veer Davij SGS:

The grove is situated near the village Kanbhiya vos. The grove is build by Makarchampe sarpanch & is 200-300 years old.

People of this village take vow after fulfillment the deity represented Coconut, Fruit & goat sacrificed it's called "Mithnapa".

The grove is occupied by the plants like Timung, Vad & Kanji.

Informer: Dhurbanbhai Gorana, Ghelabhai Gorana, Vastaabhai Kapurabhai

Kanjiba Badi SGS:

The grove is situated near the village Gualingam. The grove is 500 years old & partner Bachubhai Velabhai is a local caretaker of this village.

In case of the good Production of the crops like Maize, bhuiya etc. The deity represented coconut fruit & coconut coir. Sometimes they also represented goat sacrifice.

Dhana Bhanubhai SGS:

The grove is situated near the village Padaliya at Ambaji-Dada range forest. The grove is more than 300-400 years old. Ramchandrakabhai Dhabhai Dungara, Velchabhai Dungara & Maheshbhai Rajeshbhai Dungarse are the caretaker of this grove.

The deity take vow in case of obstinate disease & non-pregnancy. The grove is surrounded by Timru, Gholdo, Kadvo Indrajav.

Veer Hanuman SGS:

The grove is situated near the village Padaliya. The grove is 700 years old & Rahari Shankarbhai, Rabari Kelobhai, Rabari Lalabhai are the caretaker of it.
The people of Rabari community take vow in case of disease. After fulfillment the deity represented coconut fruit & sugar, Pray is done by the tribal every Saturday by oil & similir. The grove is surrounded by Anil.

**Mangri Mata SGS:**

Name of the village : Kegora
Informators : Arjunbhai Lalubhai Dungarisha, Somabhai Dharmabhai Dungarisha, Lalubhai Ghanubhai Dungarisha
Sacred Plants : The grove is occupied by the plant species like Khakdo, Kher, Ankol. History : The grove is situated near the village Kegora & is more than 100 years old. Tribal people of this area done specially pray to the god during Holly celebration. Pledge : Tribal people take vow in case of animal disease & represents goat sacrifice, coconut fruit & Mini puja.

**Bhakar Bavji SGS:**

The grove is situated near the village Kumpura. Bharabhai Gnanabhai Parmar is a caretaker of the grove. The god is specially worshipped on the fullmoon day of the Gujarati month "Bhadarva", After Fulfillment the deity represented maize seed, kheer, milk, sukhadi & Mini puja. The grove is surrounded by the plants like Kherani, Gando, Baval, Pipal, Ambo, Limbo.

**Kabaka Mataji SGS:**

The grove is situated near the village Khapura. Babubhai Angariya, Lalubhai Angariya, Manabhai Angariya & Heerbhoo Angariya are the caretaker of the grove. People of this area celebrate Moti puja on Divali & Holi celebration, Tribal people does hymn once in a month.

After fulfillment, the deity is represented by mini puja, coconut fruit, Papdi & Dhupstick. The grove is surrounded by the plant species Kheri, Bidi, khadho, Dholo.

**Trishuliva Ghat SGS:**

The grove is situated near the Data forest. Kesargiri Maharaj is a Local caretaker & the grove is more than 20-25 years old.

The king of Data Darbar daily pray to goddess Ambaji at Amur. After requesting Data Darbar to goddess Ambaji, Goddess stay on ghabar hill. Some disputes had taken place between Ambaji Mata & Data Darbar. So Ambaji mata left that place. Further Data Darbar requested to stay on ghabar hill & take vow to walk inverly. Then Ambaji Mata attacked by Trishul. So the Place called "Trishuliva Ghat".
The grove is surrounded by Mitho Indrajav, Kadvo Indrajav, Tumna, Khakhro, Kanji, Gholde.

**Rakhvad Bavji Mata SGS:**

This sacred grove is situated near the village Halad. Nitinbhai Malabhai Begadiya is a local caretaker. This grove is 50-70 years old. The grove had been established by Nitinbhai’s grandfather Rangabhai Pithabhai Begadiya.

People of this area believed that a vow is completed within a week after the completion of a vow people represented sweet penda, coconut fruit, and some time goat sacrifice.

The grove is surrounded by the plant species like Baboda, Ankoli, Limdo.

**Rakhvad Bavji SGS:**

Name of the village: Halad
Informator: Kesarambhai Begadiya & Naredbhai Begadiya (Worshipper)
Sacred Plants: The grove is surrounded by the plant species like Lindo, Babeda, Ankoli.
History: This sacred grove is situated near the village Halad. Kesarambhai Valchabhai Begadiya is a local Informator. Rakhevd Bavji & Chamunda mata both are situated here. People worship both. This grove 500-600 Years old. Firstly, father of Kesarambhai was taking care of this grove, now at present Kesarambhai is taking care of this grove. People of this area believed that a vow is completed within a week.

Pledge: After the completion of a vow people represented sweet penda, coconut fruit, and some time goat sacrifice. They also offer horse idols on completion of their vow as per their belief. They bring horse idols from the nearest village Poshana. Rakhevd Bavji God is under *Terminalia bellirica*, this tree is very old with the largest girth and height. Chamunda mata is situated under *Mangium salicifolium*.

**Sukhi Mata SGS:**

Name of the village: Machkoda
Informator: Indubhai Raghabhai Raisi
Sacred Plants: Lindo
History: The grove is situated near the village Machkoda. It is about 100 years old. Indubhai Raghabhai Raisi is a local Informatory. The grove is established under the Neem plant. The people of that area believed that once upon a time that area was totally dried but due to well wishes of God further this area became evergreen.

Pledge: After completion of the vow the deity represented coconut fruit, chhipstick and sweet sakshadi on Saturday, Sunday and Tuesday in the morning time in the Gujarati month ‘Vaisshakh’. Milk of cow, buffalo and goat is represented during the Rakhubandhan.
Dhanteras and other Hindu festivals. People of this area take vow of in case of Animal Protection etc.

**Manjali SGS:**
Name of the village : Chikbla
Informator : Gamabhai Lalubhai Dongania
Sacred Plants : The grove is surrounded by the plant like Timru, Piplo, Kanji, Metho, Indrajav, Arduo.
History : The grove is situated near the village Chikbla. Gamaabhai Lalubhai Dongania is a local infortor and the grove is 40-100 years old. Annual tribal fair takes place on the day of Gujarati month "Vaisakho".
Pledge : In case of non pregnancy people take vow and after completion of vow, the deity represented milk, burnt clay idol of horse on the festival like Rakshabandhan and Diwali.

**Matasur Surnata SGS:**
Village: Jevass
Rupjeta Kharadi
This sacred grove is 150 years old. It is situated near village Jetal. The goddess is worshipped specially on Pancham of HOLI festival, people celebrate this day. Also goddess is worshipped on Diwali. At the time of HOLI people represent Goat Sacrifice to the goddess & also they represent horse idol made from clay. Coconut is also represented. Here one horse is represented on Matasur Mountain & one is represented down. Here puja does not take place daily.

The plants such as Wrightia somnifera, Launaea cornutuliformis, Ficus benghalensis are seen surrounding the grove.

**Khodor mata SGS: (From the time of Britishehrs)**
Name of the village : Seballiya, Ranpur.
Informator : Bhagabhai Ambabhai Solanki, Rupobhai Nathabhai Solanki
Bhuma : Khongabhai Lalabhai Solanki (Godess comes in his body)
Sacred Plants : The sacred plants like Arduo, Khakho, Betli, Khajari, Vad, Kesodo, Piplo & Baheda are seen.

History : (From the time of Britishehrs) Here, Launaea cornutuliformis & Acochancha indica, both have grown jointly. They are not cut due to goddess. Also here exists both, Khadot mata and Bhakhar bavji. The goddess is represented mithipuja and mithipuja. But Bhakhar bavji is offered only mithipuja like "churva na bavri". The actual existence of Bhakhar dev is on the Ingva hill. They are not cut due to the flag. Piplo & Baheda are not cut because people
take rest under its shade during the fair. The tribal people believe that they suffer from less if they cut these trees. Horses are to be brought from the nearest village. The celebration takes place during Diwali.

**Pledge:** The goddess is represented Milk, Coconut, Horse idol of clay. If there is a big vow, goat sacrifice takes place. They take vow before goddess if any people is suffering from any disease and for less labour pain.

**Kalinama SGS:**  (From the time of Britishers)

This sacred grove is situated at the border of the Rampur village so that no disease can enter the village and people can live happily.

Mithi pujai takes place here. Also goat sacrifice takes place during large worship once in a year. All the village people are gathered. The tribal people call this as 'vahan'. All people gathers play drums, represent prasad & goat sacrifice. During this, the tribal people said that mataji comes in their body and they bless the people who are the victims of any disease and victims become alright after their blessings.

The sacred plants found around the grove are **Derris indica**, **Diospyros melanoxylon** & **Aleurites salviifolia**.

**Bhakhar Bayli SGS:**

This sacred grove is situated in the Meen village of Ambaji. It is about 100 years old.

**Informants:** Pratapbhai (21 years), Hemerabhai (50 years)

The plants such as **Lannea coromandelica**, **Ziziphus sericea**, **Diospyros melanoxylon**, **Holoptelea integrifolia**, **Holarrhena antidysenterica**, **Butea monosperma**.

The god is represented pudhi made of jaggery (sukhad). The people of village represent corn every year when it is ready. They worship god when someone is sick. If the person is very sick, they take a vow to sacrifice Goat when that person will be alright and they follow that.

**Baba Dev SGS:**

**Name of the village:** Meen (Mahada van)

**Informants:** Bheda Pampa Angari (Sarpadeh)(60 years), Bachhram (18 years)

**Sacred Plants:** The plants such as Gelado, Rutanjay. Kodo Mahado are found.

**History:** This grove is 5 years old. The grove is built under the **Butea monosperma** plant. The surrounding trees are not cut because of the existence of God.
Pledge: The God is represented by the White Flag, Coconut, Horse idol, locally known as "Papdi" (Sukhdi), when they take a vow during illness. The monkeys and goats eat the plant gollu (Lonsea coronandelfica).

Hirad Mata SGS:
This sacred grove is situated in the Meen village. (Mahada van)

Informant: Bhulada pola angari (Sarpanch)

The grove is built under the tree Ficus religiosa.

The goddess is represented by goat sacrifice, papdi (sukhdi), coconut and also sindeor. The tribelfair takes place at this grove on the seventh day after Diwali Festival called "Saatam" according to the Gujarati calendar. The tribal people sing songs in this fair. Also, goddess is represented "churmu" made of wheat flour. And it is represented only during the fair.

The plants such as Mahua indica, Zizyphus jocon are found.

Bahar Bavi SGS:
Name of the village: Meen

Informant: Reema Akhla Angari (60 years)

Sacred plants: The plants surrounding the grove are Mahada, Ratanjot, Kiolo, Khakhol, Kothi, Khajuri.

History: This grove is 5 years old. The whole village is gathered and the people complete their vow. The original place of this grove is somewhere else. But the Buffalo of the caretaker Reena Akhla was reproduced so due to his vow, he built this grove here.

Pledge: The God is represented Sukhdi. Goat sacrifice, coconut according to their vow during the Gujarati month of "Falgun".

Manjari Dev SGS:
This sacred grove is situated in the village Ambalimata. The grove is under Casia fistula. It is 100 years old.

Informant: Satrabhui Kedarbhab Bhagoria (55 years)

There is a white flag on Khir (Manikara henandra) & Casia fistula. The celebration takes place during Diwali & Dev is represented white flag, sukdi, coconut and goat sacrifice according to their vow. If once they are alright after taking vow, they come to the Dev for Darshan. The Dev is mainly worshipped for curing "Jaundice".

The dangerous animal Cheetah is also seen near this grove in the forest.

The plants such as Wrightia inctoria, Holarrhena antidysenterica were seen.

Bhakkar Dev SGS:
This grove is situated in village Borghoda near Ambaji Gaubhuz. The grove is under Bondi. It is 15-20 years old.

Informator: Nareshbhai Paraji Rabari (27 years)
The goddess represented Bodhi & Sukhdi during Diwali. Also coconut is represented.
The plants such as Acacia viridis, Acacia nilotica, Acacia houfffo, Lannea coromandelica, Holarrhena antidysenterica, Lannea camara, Herroonia elephantis.

Ambaji Mata SGS:
Main grove: Buaca monosperma
Plants: Khakiroo, Mitoo Indrajav, Ficus religiosa, Caparis sapiens.

Kheravainamta SGS:
Name of the village: Bagdaivas, Kesarpura
Informator: Nathabhai Solanki (75 Years)
Sacred plants: The sacred plants are Khakhiro, Kanjo, Baval and Amli.
History: This grove is about 2000 years old. Nathabhai Solanki is a local caretaker of this grove. The tribal people worship Goddess regularly. The fair is organized in the Gujarati month of "Vaishakh".
Pledge: When people are suffering from any difficulties such as family crises or any severe diseases, they pray goddess to help them out from that, for that they take vow to offer coconut, milk, Sukhdi & Makai on gaghri and also perform sacrifice to Goddess Kheravan and they offer it when the vow is completed.

Bhakhari Babu Bavvi SGS:
Name of the village: Ambalimala-sanscharpur
Informator: Deviben Parmar- 45 years, Kedi bhai Parmar- 75 years, Reshamabhai Bhagora- 19 years, Vakhabhai Bhagora- 85 years, Pani bhai Bhagora, Hamira bhai
Sacred Plants: Terminalia bellirica, Altheia, Holarrhena, Cassia fistula, Millettia somersetia (Umbiyao), Bombax ceiba (Shimlo), Sterculia urens (Katu), Wrightia tinctoria (Mitoo Indrajav), Areca sinensis (Dhavo), Lannea, Hiptisc (Labiatae family)
Medicinal Plants: Nitrogen nitidus (Kadlab)- Its stem bark is used for treating jaundice.
Grewia (Gangio)- Tiliaeaceae- its used for skin ulcers. Hemidesmus, Altheia odoratissima, Lannea- its gum is used, Barvelia (balad ni lakhda)
History: This grove is 100 years old. It is built on the Bahode Hill. The tribal people worship & take vow before God & on completion of that vow, they represent horse idol, sukhd!
coconut, full dish. If there is a big vow, they also represent goat sacrifice. Sukhdi is represented on the mornig of Diwali.

The grove is mainly under Terminalia, Albizia, Holarrhena & Cassia fistula. According to their belief, they do not cut these trees because it is God's place.

**Mamadev SG:**

**Name of village:** Rinchdi, Rinchodia Mahadev

**Caretaker:** Lakshmanbhai Odhabhai Dungnisha (32 years)

**Sacred Plants:** *Attungium salvifolium* (Ankol), *Terminalia craneulana*, *Ficus benghalensis*.

**History:**

This grove is beside Rinchodia Mahadev temple. Daily mithapuja is offered to god at morning & evening. Tribal people offer coconut, sukhdhi as per their belief and is offered mostly during festivals.

**Table 1: Enumeration of Plant Species in the Different Sacred groves**

<table>
<thead>
<tr>
<th>Sr. no.</th>
<th>Botanical name</th>
<th>Local name</th>
<th>Family</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td><em>Miliusa tenuifolia</em> (Reck.) Sinclair</td>
<td>UMPH, UMBIYO</td>
<td>Annonaceae</td>
</tr>
<tr>
<td>4.</td>
<td><em>Capparis decidua</em> (Forsk.) Edgew.</td>
<td>KERDO, KER</td>
<td>Capparaceae</td>
</tr>
<tr>
<td>6.</td>
<td><em>Crasave morada</em> Bach.-Ham.</td>
<td>VAYVARNO</td>
<td>Capparaceae</td>
</tr>
<tr>
<td>7.</td>
<td><em>Flacourtia indica</em> (Burn. f.) Merr.</td>
<td>KANTI</td>
<td>Flacourtiaeae</td>
</tr>
<tr>
<td>11.</td>
<td><em>Bombax ceiba</em> L.</td>
<td>SIMLO, SAVAR</td>
<td>Bombaceae</td>
</tr>
<tr>
<td>12.</td>
<td><em>Sterculia urens</em> Reck.</td>
<td>KADAYO</td>
<td>Sterculiaceae</td>
</tr>
<tr>
<td>15.</td>
<td><em>Grewia larsi</em> Vahl.</td>
<td>SISOTI</td>
<td>Tiliaceae</td>
</tr>
<tr>
<td>18.</td>
<td><em>Aegle marmelos</em> (L.) Corc.</td>
<td>BILI</td>
<td>Rutaceae</td>
</tr>
<tr>
<td>19.</td>
<td><em>Limonia acidissima</em> L.</td>
<td>KOTHU, KOTH</td>
<td>Rutaceae</td>
</tr>
<tr>
<td>Sl. No.</td>
<td>Scientific Name</td>
<td>English Name</td>
<td>Family</td>
</tr>
<tr>
<td>--------</td>
<td>----------------</td>
<td>--------------</td>
<td>--------------</td>
</tr>
<tr>
<td>20</td>
<td>Alangium excelsum Roxb.</td>
<td>ARDUSO</td>
<td>Simaroubaceae</td>
</tr>
<tr>
<td>21</td>
<td>Balanites aegyptiaca (L.) Del.</td>
<td>INGORIA, REGOREA</td>
<td>Balanitaeae</td>
</tr>
<tr>
<td>22</td>
<td>Boswellia serrata Roxb.</td>
<td>SALAD, DHIPELIO, GUGAL</td>
<td>Burseraeae</td>
</tr>
<tr>
<td>23</td>
<td>Azadirachta indica A. Juss.</td>
<td>NEEM, LIMDO</td>
<td>Meliaceae</td>
</tr>
<tr>
<td>25</td>
<td>Maytenus emarginata (Willd.) D. Hou.</td>
<td>VICKLO</td>
<td>Celastraceae</td>
</tr>
<tr>
<td>26</td>
<td>Ziziphus mauritiana Lam.</td>
<td>BOR, BOAD</td>
<td>Rhamnaceae</td>
</tr>
<tr>
<td>28</td>
<td>Mangifera indica L.</td>
<td>KERI, AMBO</td>
<td>Anacardiaceae</td>
</tr>
<tr>
<td>29</td>
<td>Lavocca coromandelica (Houtt.) Merrill.</td>
<td>GOLADO</td>
<td>Anacardiaceae</td>
</tr>
<tr>
<td>30</td>
<td>Moringa concolor Nimm.</td>
<td>JINGLI SARAGAVO</td>
<td>Moringaceae</td>
</tr>
<tr>
<td>33</td>
<td>Butia mono sperma (Lam.) Taub.</td>
<td>KHAKHRO, KESUDO</td>
<td>Pupilionaceae</td>
</tr>
<tr>
<td>34</td>
<td>Derris indica (Lam.) Benth.</td>
<td>KARANI, KANOJ</td>
<td>Pupilionaceae</td>
</tr>
<tr>
<td>35</td>
<td>Erythrina suberosa Roxb.</td>
<td>JAGRAIYO, KHAKHARO</td>
<td>Pupilionaceae</td>
</tr>
<tr>
<td>36</td>
<td>Indigofera cordifolia Heyne ex Roth.</td>
<td>DALIYO</td>
<td>Pupilionaceae</td>
</tr>
<tr>
<td>44</td>
<td>Delonix elata (L.) Gamble</td>
<td>HINDRO, SANDROJ</td>
<td>Caesalpiniace</td>
</tr>
<tr>
<td>45</td>
<td>Terminalia indica L.</td>
<td>AMIJI, AMBIJI</td>
<td>Caesalpiniace</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>No.</th>
<th>Scientific Name</th>
<th>Hindi, Urdu</th>
<th>Family</th>
</tr>
</thead>
<tbody>
<tr>
<td>46</td>
<td>Acacia chunna (Roxb. ex Rottl.)</td>
<td>KHAIR, KAIR</td>
<td>Mimosaceae</td>
</tr>
<tr>
<td>47</td>
<td>Acacia leucopephala (Roxb.) Willd.</td>
<td>RUNGIO</td>
<td>Mimosaceae</td>
</tr>
<tr>
<td>48</td>
<td>Aeaia adiantica (L.) Del. subsp. indica (Bh.) Brem.</td>
<td>BAVAL</td>
<td>Mimosaceae</td>
</tr>
<tr>
<td>49</td>
<td>Albizia odoratissima (L.) Benth.</td>
<td>KALIYO, DHOLOSARAS</td>
<td>Mimosaceae</td>
</tr>
<tr>
<td>50</td>
<td>Albizia procera (Roxb.) Benth.</td>
<td>GORD, GORJIO</td>
<td>Mimosaceae</td>
</tr>
<tr>
<td>51</td>
<td>Dichrostachys cinerea (L.) W. &amp; A.</td>
<td>MORDHUNDHIYU</td>
<td>Mimosaceae</td>
</tr>
<tr>
<td>52</td>
<td>Phoebea balsamifera (Roxb.) Benth.</td>
<td>GORAS AMLI</td>
<td>Mimosaceae</td>
</tr>
<tr>
<td>53</td>
<td>Paropsis cinerea (L.) Drace</td>
<td>KIJADO, SHAMI</td>
<td>Mimosaceae</td>
</tr>
<tr>
<td>54</td>
<td>Anogeissus latifolia (Roxb.) Wall. ex Bodd.</td>
<td>DHAVDO</td>
<td>Combretaceae</td>
</tr>
<tr>
<td>55</td>
<td>Terminalia arjuna (Roxb.) W. &amp; A.</td>
<td>ARJUNSADAD, SADAD</td>
<td>Combretaceae</td>
</tr>
<tr>
<td>56</td>
<td>Terminalia bellirica (Gaertn.) Roxb.</td>
<td>BEHDR, BEHDA</td>
<td>Combretaceae</td>
</tr>
<tr>
<td>57</td>
<td>Sarcococca cuneata (L.) Skeels</td>
<td>JAMBU</td>
<td>Myrtaceae</td>
</tr>
<tr>
<td>58</td>
<td>Alangium salviifolium (L.) Wang</td>
<td>ANKOI, ANKOL</td>
<td>Alangiaceae</td>
</tr>
<tr>
<td>59</td>
<td>Dysoxylum indicum (Grun. ex Wt.) D. Kuus</td>
<td>KATO CHITRO</td>
<td>Phomaginaceae</td>
</tr>
<tr>
<td>60</td>
<td>Phlomoides zeylanica L.</td>
<td>CHITRO, CHITRAK</td>
<td>Phomaginaceae</td>
</tr>
<tr>
<td>61</td>
<td>Madhuca indica J.F.Carl.</td>
<td>MBHOVA, MAHUDO</td>
<td>Sapotaceae</td>
</tr>
<tr>
<td>62</td>
<td>Diospyros melanoxylon Roxb.</td>
<td>TIBRU, TIMBRU</td>
<td>Ebenaceae</td>
</tr>
<tr>
<td>63</td>
<td>Hura creposa antideczentrica (L.) Wall ex G. Don</td>
<td>KUDA, DOLA KUDA</td>
<td>Apocynaceae</td>
</tr>
<tr>
<td>64</td>
<td>Wrightia tinctoria R. Br.</td>
<td>KUDA, DUDHLA</td>
<td>Apocynaceae</td>
</tr>
<tr>
<td>65</td>
<td>Tecoma grandiflora (Sm.) Seem</td>
<td>RAGAT ROHDO</td>
<td>Bignoniaceae</td>
</tr>
<tr>
<td>66</td>
<td>Lantana camara L.</td>
<td>DHANI DHRIOYA</td>
<td>Verbenaceae</td>
</tr>
<tr>
<td>67</td>
<td>Vietes segundo L.</td>
<td>NAGOD</td>
<td>Verbenaceae</td>
</tr>
<tr>
<td>68</td>
<td>Zapparia nyctlanda L.</td>
<td>THOR</td>
<td>Euphobiaceae</td>
</tr>
<tr>
<td>69</td>
<td>Holoptelea integrifolia (Roxb.) Planch.</td>
<td>KANJO</td>
<td>Ulmaceae</td>
</tr>
<tr>
<td>70</td>
<td>Ficus bergehausen L.</td>
<td>VAD, VALLO</td>
<td>Moraceae</td>
</tr>
</tbody>
</table>
Table 2 Checklist of Medicinal Plants frequently Reported from Certain Sacred Groves.

1. *Miliana tomentosa* (Roxb.) Sinclair [UMPH, UMBIYO]: Annonaceae
   - Fresh roots are tied at abdomen to cure tumors [Jivabhavi].
2. *Citrus aurantiifolia* Buch.-Ham. [VAYVARNO]: Rutaceae
   - Dried bark paste is applied twice a day on abscess [Seenabhavi].
3. *Ficus racemosa* L. [UMBRO]: Moraceae
   - Few root pieces are boiled in water and applied on the poisonous animal bites [Seemabhavi].
4. *Bombax ceiba* L. [SIMLO, SAVAR]: Bombacaceae
   - About 100g of fresh inner bark is crushed into paste and applied on broken horn of cattle. It sets well in few days [Nopabhavi].
   - Fresh stem bark paste (paste is made by rubbing stem bark on a moist stone) and applied on skin diseases and pimples [Seemabhavi].
5. *Grewia hirsuta* Vahl. [SISOT]: Tiliaceae
   - A glassfull of stem extract is taken in the morning with empty stomach to join bones of human beings and cattle [Khemabhavi].
6. *Angelica archeri* (L.) Cocc. [BILI]: Apiaceae
   - Beetroot fresh leaves are applied for blood clotting [Arjanbhavi].
   - Ripe fruits are edible and having medicinal properties [Shirmshen].
7. *Boswellia serrata* Roxb. [SALAD, DIHUPAL, GUGAL]: Burseraceae
   - Fresh leaves paste dissolved water and bathing with this cures vomiting [Seemabhavi].
8. *Azadirachta indica* A. Juss. [NEEM, LIMDO]: Meliaceae
   - Inner bark is mixed with black pepper, salt and water. The mixture is taken thrice a day to cure fever [Arjanbhavi].
9. *Sapindus laurifolius* Vahl. [ARITH]: Sapindaceae
• Boiled leaf juice is given to children for curing vomiting. Leaves are used as fodder [Devabhai].
• About 50ml of fresh leaf juice is taken regularly to cure fever after delivery [Somabhai].

10. *Mangifera indica* L. [KERI, AMBO]; Anacardiaceae
• Dried malformed inflorescence are powdered and given with water to animals, as a cure for swollen stomach [Somabhai].

11. *Buza monosperma* (Lam.) Taub. [KHAKIRO, KESUDO]; Papilionaceae
• About 250g fresh stem-bark is crushed with water and filtrate is taken once in a day to cure diarrhoea [Somabhai].

12. *Delonix elata* (L.) Gamble [HINDRO, SANDRO]; Caesalpiniaceae
• Four to five leaves are crushed with water and paste is made it is applied on eyelids for removal of eye diseases [Somabhai].

13. *Acacia nilotica* (L.) Del. subsp. *indica* (Bth.) Brenan [BAVAL]; Mimosaceae
• 100ml of stem bark decoction is taken once a day to cure stomach pain [Anabhai].
• Leaf juice is given to cure stroke [Jivabhai].

14. *Anogeissus latifolia* (Roeh.) Wall. ex Bedd. [DAVDO]; Combretaceae
• Fifty grams of fresh stem bark is chewed regularly for curing cough [Jivabhai].

15. *Terminalia bellirica* (Gaern.) Roxb. [BEHDR, BEHD]; Combretaceae
• About 5g of fruit powder is mixed with a glass of water and taken twice a day to cure sleeplessness [Jivabhai].

16. *Alangium salviifolium* (L. f.) Wang. [ANKOLJ, ANKOL]; Alangiaceae
• About 100g fresh roots are rubbed with water and applied on the poisonous animal sting [Jivabhai].

17. *Adina cordifolia* (Roxb.) Bth. & Hk. f. ex Brandis [HALDU]; Rubiaceae
• About 200g fresh stem bark is boiled in 400ml water, with sugar or honey. The mixture taken twice in a day to cure jaundice [Devabhai].
• Five inch piece of fresh stem bark is crushed with water and applied on mumps [Somabhai].

18. *Deoxypus melanoxylon* Roxb. [TIBRU, TIMBRU]; Ebenaceae
• Dried stem bark is smoked is inhaled to cure Asthma [Somabhai].
19. Holarrhena antidysenterica (L.) Wall ex G. Don [KUDA, DOLA KUDA]; Apocynaceae
- Fresh roots are crushed with water, a tea spoonful of this filtrate is taken once a day early in the morning to cure diarrhoea [Nopbabai].
- About 25 g fresh roots are pounded with 100 ml water and taken one spoonful as a cure stomach pain [Namabhai].
20. Cordia dichotoma Forsk. [VANDINGO, MOTOVUNGO]; Boraginaceae
- A glass of fresh leaf juice is taken thrice a day regularly to women as pain killer after delivery [Jivabhai].
21. Cordia gharatif (Forsk.) F. N. Will. [GUNDI, NANI GUNDI]; Boraginaceae
- A tea spoonful of stem bark juice is given orally to cure dysentery [Sonabhai].
- About 30 ml of leaf juice is given to cure dysentery [Jivalabhai].
22. Tecoma indica (Sm.) Seem. [RAGAT ROHIDO]; Bignoniaceae
- A teaspoonful of leaf juice is taken thrice a day to cure fever [Sonabhai].
- A tea spoonful of flowers powder is taken thrice a day regularly to cure cancer [Karimbhai].
23. Clerodendrum viscosum (Burn. f) O. Ktze. [ARNI]; Verbenaceae
- About 100 gms fresh leaves or soft stem branches are crushed and poultice is made used to relieve eye pain [Jivabhai].
24. Lantana camara L. [DHANI DHARIYA]; Verbenaceae
- Leaf paste is applied on animal ulcers [Devabhai].
25. Fibres negundo L. [NAGDO]; Verbenaceae.
- Leaf paste is applied on rheumatic swellings [Devabhai and Somabhai].
26. Euphorbia neriifolia L. [THOR]; Euphorbiaceae
- Fresh leaf paste is applied on abscess [Arjanabhai].
27. Jatropha curcas L. [RATANIOT]; Euphorbiaceae
- Linseed is applied to cure toothache [Jallabhai].
28. Ficus benghalensis L. [VAID, VALLO]; Moraceae
- Yellow old leaves are steamed and applied on abdomen to cure stomach pain [Devabhai].
29. Ficus racemosa L. [UMARO]; Moraceae
- Fresh latex is applied on tongue to cure cough [Somabhai].
30. Phoenix sylvestris (L.) Rosh. [KHAURIJ]; Arccaceae
31. *Dendrocolamus strictus* Nees. [LAKADI]; Poaceae

- A teaspoonful of root juice is taken twice a day to cure stomach pain [Nopabhau].
- Young shoot paste is applied externally to stop bleeding [Somabhai].
IV. SUMMARY AND CONCLUSION

The range forest is having a series of Aravalli hills with dry deciduous scrub forests. *Butea monosperma*, *Holarrhena antidysenterica*, *Wrightia tinctoria*, *Laurea coromandelica*, *Boswellia serrata*, *Ziziphus mauritiana* etc are found mostly in hilly regions. Species like *Sapindus febrifuga*, *Morinda tomentosa*, *Orobanche ogeimnensis*, *Hyrtzelea caudata*, *Schrebera suaventoloides*, *Oroxylum indicum*, *Teckomella undulata*, *Bridelia retusa* are found with restricted distribution. Out of these tree species, *Orobanche suaventoloides* one of the potential medicinal species used for women delivery was found very rare. 4 species of *pimplophores* are recorded in shady areas in the forest.

Local inhabitants of the present study area are greatly dependent on the forest resources. It was observed that the tribal villagers were collecting firewood from forest and selling in nearby towns. Habitat destruction due to grazing, logging, agriculture conversion of forest into land and road constructions is causing rapid disappearance of many floral components. Interviews conducted with local inhabitants during the study period showed ethno-botanical use of about 42 plant species by various tribal communities. Some of the informers bio-data along with their photograph are also provided.

Survey on ethno-botanical practice of the area showed a good number tree species have been used for the preparation of various agricultural implements, household implements, musical instruments etc. There is considerable decrease in use of plant resources through traditional way. Sometimes limited availability of phytowebel causing erosion of ethno-botanical practices. It is felt that further intensive ethno-botanical explorations are needed to bring out valuable information. Since the present study was mainly based on visual observation, further studies are necessary to document the potential medicinal plants both qualitatively and quantitatively. Sacred groves act as an ideal centre for biodiversity conservation. Several plants and animals that are threatened in the forest are still well conserved in some of the sacred groves. It has been observed that several medicinal plants that are not to be found in the forest are abundant in the sacred groves. Further, rare, endangered, threatened and endemic species are often concentrated in sacred groves. The sacredness, religious beliefs and taboos play a significant role in promoting sustainable utilization and conservation of flora and fauna of the region. However, with the passage of time, considerable changes have taken place in the extent of the sacred groves, in their vegetation structure, peoples’ perception towards them and the religious beliefs and taboos. Therefore, a holistic understanding of the current status, structure and function of sacred
grove is essential for assessing their ecological role and formulating strategies for their conservation.

The present study documents 89 Sacred Plant species. There are Leguminosae, Moraceae, Malvaceae, Apocynaceae, Verbenaceae are dominant. It is recommended that by appropriate management practices many of the sacred groves should be taken up or atleast they should be kept in their existing condition. Neglecting smaller groves will lead to the disappearance of both vegetation and cultural diversity. Nowadays the peoples are susceptible to the various diseases because they are living in polluted atmospheric condition of the modern world. So the herbal based medicine only tackles the problem. Hence every house should be maintaining some locally available medicinal plant in their garden to meet out their need for primary health care. For the sake of herbal based industry, there is a need to promote drug forms, instead of collecting materials from the wild. The only need is to conserve the important plant species in their natural habitat of sacred groves to maintain local loss of biodiversity. Although the medicinally important plants are not only conserved and preserved but indigenous knowledge also preserved for maintaining good health and sustainable utilization of resources for the present and future generations.

RECOMMENDATIONS

Sacred Groves is one of the leaves of environment through which numbers of trees are being preserved in different pockets of environment and parallel sporadic socio-economic and cultural resources are being conserved. Thus being environmentalists, all people should have to maintain their cultural specimen, biodiversity, social identity and even their psychological stability by nourishing Sacred Grove perception. So being a researcher, I expressed my concluding inference to manage the environmental problems.

"Save Sacred Groves! Preserve Sacred Groves! Maintain Sacred Tradition!

Manage Environmental Problems"
V. REFERENCES


Champion HG & Seth SK (1968). A Revised Survey of Forest Types of India. Government of India Press, Delhi, India.


Kumar K. and Parikh J., (2001), Indian Agriculture and Climate Change Sensitivity, Global


Pal, T., (2011). Geographical Assessment of Sacred Groves in Bolpur Subdivision, Ethiopian


<table>
<thead>
<tr>
<th>Species</th>
<th>Images</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Butea monosperma</em> (Lam.) Taub.</td>
<td><img src="image1" alt="Image of Butea monosperma" /></td>
</tr>
<tr>
<td><em>Cassia fistula</em> L.</td>
<td><img src="image2" alt="Image of Cassia fistula" /></td>
</tr>
<tr>
<td><em>Clerodendrum multiflorum</em> (Burm. F.) O. Ktze.</td>
<td><img src="image3" alt="Image of Clerodendrum multiflorum" /></td>
</tr>
<tr>
<td><em>Cordia dichotoma</em> Forst.</td>
<td><img src="image4" alt="Image of Cordia dichotoma" /></td>
</tr>
<tr>
<td><em>Cordia gharaf</em> (Forsk.)</td>
<td><img src="image5" alt="Image of Cordia gharaf" /></td>
</tr>
<tr>
<td><em>Crataeva nerval</em> Buch-Ham. var. nerval</td>
<td><img src="image6" alt="Image of Crataeva nerval" /></td>
</tr>
<tr>
<td><em>Dalbergia lanceolata</em> L.f.</td>
<td><img src="image7" alt="Image of Dalbergia lanceolata" /></td>
</tr>
<tr>
<td><em>Dalbergia paniculata</em> Roxb.</td>
<td><img src="image8" alt="Image of Dalbergia paniculata" /></td>
</tr>
</tbody>
</table>

**PLATE - 3**
Digma Bhakhro

Marghi Mata

PLATE - 10
Rinchhodia Mahadev

Rakheda Bavji

Khandor Mata

PLATE - 12
Informators