

Gupteshwar Mahadev: A Valuable Sacred Grove For Conservation Of Medicinal Flora In Parthapghah District, Rajasthan, India

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Abstract: *Gupteshwar Mahadev is an important sacred grove of Pratapgarh District of Rajasthan and it is also known as Deepeshwar Mahadev. During present investigation attempts were made to categorize the medicinal flora diversity of the Gupteshwar Sacred Grove and around 54 different flowering plants from 33 families recorded. Documented plants are arranged alphabetically with their local names, family, part used, modes of use and the ailments for which they are used.*

Keywords – *Gupteshwar Mahadev, Sacred grove, Pratapgarh, Medicinal plants.*

Introduction:

As mentioned in Bible “Abraham planted a grove in Beersheba and called there the name of God”. Sacred groves are any grove or orchard of trees having special religious importance to a particular culture. Alike these, they were vital fractions of mythological landscape and cult practice of India, Japan, and West Africa (Gadgil and Vartak 1976). Rajasthan has over 1100 major sacred groves varying in size, between 0.1 h to 500 h exist in Rajasthan. These Sacred groves are vividly known as *Deora, Malvan, Deorai, Rakhat bani, Oran, Sacred corridors, Deo ghats, Temple forests, Mandir van, and Sacred gardens or Dev baugh*. Most of the Sacred groves in state are associated with several endogamous groups of Hindu and Islam Lok Devta’s along with other communities and tribal groups. Most of these groups offer prayers to these trees and ensure health and wellness of family and community (Hughes and Chandra 1998). These are very rich source of several non timber forest product as well as multiple use livelihood goods. Plants found in these groves are good source of fodder, fruit, timber wood, seeds, and ethnomedicine. This Sacred grove belongs to Lord Shiva which is protected by Bhil and Mina tribe. As it’s in Southern part of Rajasthan and it is rich in biodiversity as well as with customs, traditions, conservation and sustainable utilization of plant wealth (Meena and Yadav 2010).

Study area - Pratapgarh district is located at 24.03°N 74.78°E. It has an average elevation 491 meters (1610 feet). The climate of this region is subtropical type characterized by winter, summer, and monsoon seasons. The average rainfall recorded is 750 mm. It is the second highest place in Rajasthan after Mount Abu. Pratapgarh is situated on the junction of the Aravali hills range and Malva plateau. Its geographical area is 1117.36 sq km. this southern region is known for rich flora and fauna. The area has highly preserved sacred groves among those Gupteshwar Mahadev is the one which is located in the centre of the city; it covers 1500 meters of circumference. This place is dedicated to Lord Shiva and was built in 19th century AD.

The area is mainly covered with teak forest with association of.

The main plant species found in the region are *Anogeissus latifolia, Anogeissus pendula, Boswellia serrata, Terminalia arjuna, Syzygium heyneanum, Tectona grandis, Lannea coromandelica, Diospyros melanoxylon, Mitragnya parviflora, Madhuca indica, Albizia leback, Acacia leucophloea, Capparis zeylanica* and *Zizipus mauritiana* (Sharma and Tiagi 1979, Shetty and Singh 1987). Sacred Groves are very rich in biodiversity; these are the source of several non timber forest products as well as multiple use livelihood goods. Plants found in these groves are good source of fodder, fruits, timber wood, seeds and ethnomedicine (Singh and Pandey 1998)

Although the Aravali region is very rich in biodiversity and several Sacred Groves are reported, inspite of this, the elaborative information of these groves are not available. Keeping the above fact in view, a field survey was carried out to explore the plant diversity in Gupteshwar Mahadev, (Pratapgarh District) to evaluate the medicinal use of local plants and provide the efficient information to peoples. The Southern part of Rajasthan is rich in plant diversity due to little moisture in compare to northern region. This cause the majority of the forest covers the state under Southern region. Afford the western prescription alternatives, to encourage the preservation of culture, tradition, conservation and sustainable utilization of plant wealth occurring in this sacred grove.

Location of Pratapgarh District and various Tehsils of Pratapgarh District





Material and methods:

During present investigation, attempts were made for categorization of different flowers and plants of study area via various field trips. During present investigations around 49 plant species were reported from Gupteshwar Mahadev, Pratapgarh, (Rajasthan). For proper documentation of flora in Gupateshwar Mahadev, collected specimens were confirmed with herbarium of Rajasthan University and BSI. The detailed literature survey was made for identified species for their medicinal importance and threats for their conservation. Ethno Medicinal information of wild plants was collected through interviewing local informants. (Singh and Singh 2015, Jain 1991, Singh and Pandey 1998). The collected herbs and trees twigs were identified up to species level at the herbarium of Rajasthan of Rajasthan university (RUBL,Jaipur) , all the collected photographs and specimen of information and further reference. Numbers of vouchers and specimen are also provided.

Result and discussion:

Sacred groves are valuable in society, just because of their ethno medicinal and conservation values in biodiversity point of view and cultural point of view also. Particular area is restricted by local communities due to their rituals and orthodox traditions, by this act they go near to the nature and protect the local environment from human perturbations. Plants have a vital role in religious and social ceremonies of local and tribal communities. Their religious and superstitious beliefs about these plants prevent their destruction. Plant and their parts hold an importance in various religious ceremonies. In observation Total 54 plant species from 33 families were found to be used by tribals and local peoples with medicinal value in different diseases. Out of them 15 plant species are sacred which are worshipped on special occasions and used in sacred pyre, There are several legends and myths associated with certain plants related to deities and ancestors. Sacred groves around temples of Gods and Goddess and local deities are rich in natural flora. They represent small centers or patches of biodiversity consisting of trees, shrubs, herbs etc. Thus they have been rescued from destruction because of their taboos and beliefs. Modernization has come as a big bane to these groves as day-by-day. These beliefs are beings forgotten by people, which give a big threat to their existence.

1. *Abrus precatorius* Linn. (Family- Fabaceae; Local Name- Chirmi): Leaves are chewed for 2- 5 days to cure blisters in the mouth, and seeds are used as an antifertility drug both by male and female. Five to ten seeds orally taken with water at the time of menstruation prevent conception in a lady forever, an effective contraceptive.
2. *Abutilon indicum* (Linn.) (Family- Malvaceae; Local Name- Talakunji/Kanghi): Leaves are ground with milk and given orally to cure dysentery. Decoction of leaves is given for urinary troubles.
3. *Acacia catechu* (Family-Mimosaceae; Local Name- Khair, Kattha): The gum is used by tribal male because it is prohibited to use *Anogeissus latifolia* gum during winters as a laddu. The pellets made with kattha are taken in stomachache.
- Sacred plant and sacred pyre also.
4. *Acacia leucopholea* (Family- Fabaceae; Local Name Ronjh/ Reonjha): Crushed stem bark is soaked in water overnight and given orally in the morning to increase sexual potency, as a contraceptive and for menstrual complaints.
5. *Adensonia digitata* (Family- Bombacaceae; Local Name- Kalpavrkash): Pulp of fruit is a rich source of tartaric acid, so it is preferable as a vegetable directly and acid- alkalic balance can be maintained in body. This plant completes the wishes according to a mythological myth
-Sacred plant and sacred pyre also.
6. *Adina cardifolia* (Family- Rubiaceae; Local Name- Haldu, kadmi): Fresh bark is grind with brown sugar and taken internally for stomachache. Fresh stem bark juice is taken in rheumatism; leaves are applied over swollen portion to remove pain and swelling.
7. *Annona squamosa* L. (Family-Annonaceae; Local Name- Sitafal, Sharifa): In Southern Rajasthan seeds of this plant in powdered form along with leaves of *Plumbago zeylanica* are used to cause abortion. The bark powder is applied externally for wound healing.
8. *Anogeissus latifolia* (Family- Combrataceae; Local Name-Dhwara): Bark extract is taken orally by the tribal's as antivenom in snake bite. The gum is used during winter season as well as after delivery in the form of Laddu, to cure the damaged tissue during child delivery.
-Sacred plant and sacred pyre also.
9. *Azadirachta indica* (Family- Meliaceae; Local Name- Neem): Decoction of leaves is used to wash affected eyes thrice a day for treating conjunctivitis till cured. And 2 tbsp of juvenile leaves sap consumption directly in month of March is very effective for blood purification.
- Sacred plant and sacred pyre also.
10. *Barleria prionitis* (Family- Acanthaceae; Local Name- Denteli, Kala Bans): Leaf decoction is given during cough. Roots and leaves are chewed to relieve toothache and blisters.
11. *Bombax cebia* Linn. (Family- Bombaceae; Local Name- Semal, Hamala): The gum is well known astringent and used for surgical dressing in the case of wounds. Fruits are expectorant and diuretic and the leaves are used for skin eruptions.
Sugar is mixed in the infusion of flowers and given orally in acidity and urinary problems. Root bark is mixed with honey and given as a tonic for children as well as adults.
12. *Boswellia serrata* Roxb. (Family- Burseraceae; Local Name- Halar Salar): Stem bark (extract of 200gm) is taken orally twice a day by cold water in the tribals, to cure stomachache. Powder of stem bark is mixed with ghee and this paste is useful on bleeding wounds.
13. *Buchanania latifolia* Roxb(Family-Anacardiaceae; Local Name- Chironji): The edible seed kernels of chironji contains a pleasant, slightly acidic flavor and are eaten raw or roasted, an ointment made from the kernels is used to relieve itch and prickly heat and

also to remove facial blemishes. The tribals of district blend the powder of the stem bark and *Syzigium cumini* together, and this powder is given to treat infantile diarrhoea.

14. *Butea monosperma* (Family- Papilionaceae; Local Name- Dhak.): Laddu prepared from the gum, known as kamarkas, are eaten after child delivery. Flower juice is given to children during fever and cold. Crushed seed on red stone is given to newly born child in case of diarrhoea. Twigs are used as tooth brush in toothache.
- Sacred plant and sacred pyre also.
15. *Calotropis gigantea* (Family; Asclepiadaceae Local Name-Aak, Ankara): Warmed leaves are applied 3 times a day in swelling. One or two flower buds are eaten for intoxication.
- Sacred plant and sacred pyre also.
16. *Cassia fistula* (Family Fabaceae; Local Name-Amaltas): crushed stem bark is soaked in water overnight and given orally in the morning for five days in diarrhoea.
17. *Cassia tora* (Family- Caesalpiniaceae; Local Name- Punwar): Crushed seeds are soaked in water overnight and are given orally in the morning for 15 days in galactagogue. Seed paste is used on ringworm. Tea is prepared from seeds and given to patients of asthma.
18. *Catharanthus roseus* (Family- Apocynaceae; Local Name- Sadabahar): Crushed leaves are used to stop bleeding from wounds. Application of this paste can also help in relieving symptoms of skin conditions like acne, eczema. It also helps in regulating menstrual periods in those who suffer from excessive or irregular bleeding.
-Sacred plant and sacred pyre also.
19. *Centella asiatica* (Family- Apiaceae; Local Name- Bramhi): The mixture of leaves (leaves paste and raw sugar) is helpful in improving memory, the sap of leaves and stem is very effective in diuretic disease and also helpful in curing leprosy.
-Sacred plant and sacred pyre also.
20. *Chlorophytum borivilianum* (Family- Liliaceae Local Name- Dholimusli): Tubers are used in anemic condition and in rheumatism. Dried fasciculate roots are used in the preparation of laddu with *Anogesissus latifolia* gum, and are taken during winter season.
21. *Chrozophora rotleri* (Euphorbiaceae) (Family-Euphorbiaceae; Local Name- Subali): Crushed leaves are applied on the face in sunburn and also used in sun stroke.
22. *Cocculus hirsutus* (Family- Menispermaceae; Local Name- Jaljamani, Bajarbel): Crushed whole plant is given orally for 7 days in galactagogue. Also used in impotence.
23. *Cordia dichotoma* (Family- Boraginaceae; Local Name- Lesoda): The immature fruits are pickled and are used as a vegetable fodder. The seed kernel has medicinal properties (anti bacterial) and laxative properties.
24. *Encostemma littorale*; (Family-Acanthaceae ; Local Name- Kadwa chiryata, Namae): *Encostemma* is used in tribals as a cure for stomachache, bitter tonic, carminative to reduce fever and as a tonic for appetite loss. It reduces blood sugar level in diabetic patients naturally.
25. *Ficus bengalensis* (Family- Moraceae; Local Name- Bad): Latex of this plant is given to children for their proper health. Leaf extract is taken orally in case of diarrhoea.
-Sacred plant and sacred pyre also.
26. *Ficus glomerata* Roxb. (Family- Moraceae; Local Name- Gular): The stem bark decoction is given in case of diarrhea and dried fruit powder (5gm) with latex is given thrice a day for three days to treat dysentery. Fruits are edible; dried fruits are stored for periodic uses. Fruits are available even during famine; unripe fruits are used as starter curds for instant fermentation of milk.
-Sacred plant and sacred pyre also.
27. *Grewia asiatica*(Family- Malvaceae ; Local Name- Phalsa or Falsa): The root bark is used by tribals in rheumatism. The leaves are used as an application to pustule eruptions.
28. *Heliotropium indicum* (Family- Boraginaceae; Local Name- Hathsura): This plant is chiefly used as an herbal medicine. The extracted juice from the pounded leaves of the plant is used to cure wounds, skin ulcers. The juice is also used as an eye drop for conjunctivitis.
29. *Hemidesmus indicus* (Linn) (Family- Asclepiadaceae; Local Name- Anantmool Jad): Roots are boiled in water and administered as regular tonic.
30. *Holarrhena antidysenterica* (Family- Apocynaceae; Local Name- Dudhi): The decoction of stem is taken twice a day for relief in heart diseases. In tribal regions the plants leaves and stems latex is used as a milk flavor
31. *Madhuca indica* (Family- Sapotaceae; Local Name- Mahua): The flower and fruits are eaten raw or cooked, the flower can be compressed in to laddos, and seeds are enriched with edible oil, which is used for cooking purposes. During famine the bark is boiled in the water to make "Rab" and is consumed locally. Latex of mahua mixed with turmeric powder is useful in cold, cough and bronchitis. Seed oil extract is laxative and oil is applied to itchy skin.
32. *Moringa oleifera* (Family-Moringaceae; Local Name-Sahjana): Crushed bark are soaked in water overnight and given orally in the morning in rheumatic pain. And flowers of this plant used to cook vegetable as good antioxidant and as good blood purifier.
33. *Musa paradisiaca* (Family-Musaceae; Local Name-Kela): Fresh leaves are given orally twice a day for 3 days in diarrhoea while ripe fruit helps to remove constipation.
-Sacred plant and sacred pyre also.
34. *Nyctanthes arbortristis* Linn (Family- Oleaceae; Local Name- Harshringar): Leaves are used as laxative and paste of leaves are applied as healer on affected part from rheumatism and fever; the leaf juice is used as diaphoretic and diuretic. The powdered seeds are used for scurvy and infections of the scalp.
35. *Origanum majorana* (Family-lamiaceae; Local Name-Marwa): It is useful in promoting and regulating menstruation. If taken in the form of an infusion, it helps in promoting the secretion and flow of milk in nourishing mothers. The oil of marwa is beneficial in skin disorders and it can be applied externally in case of bruises, sprain, stiff and paralytic limbs. The herb is beneficial in the treatment of typhoid.
36. *Osimum bascilicum* (Family- Labiateae; Local Name- Ban tulsi): The mixture of inflorescence, flower, leaves and soft stem of this plant are blended to make a paste, which is mixed with cooking oil and heated on a light flame, this can be applied on the painful areas of appendix. Seeds are also useful to curing vomit effect.

- Sacred plant and sacred pyre also.
37. *Pandanus tectorious* (Family-Pandanaceae; Local Name-Kevra): The tree leaves are often used for flavoring sweet dishes and are also said to have medicinal properties especially in liver disorders. And leaf of *Pandanus* is used to cure bad eye.
 38. *Phoenix sylvestris* (Family- Arecaceae; Local Name- Khajoor): Fruits are eaten fresh or in dried form. Sap is obtained by giving a cut near the apex of the tree and after 7 days, this sap converts in to sugar particles and this sugar is used as a sweetener by tribals.
 39. *Pithecellobium dulce* (Family- Fabaceae; Local Name- Jungle Jalebi): Seed pod is used as a food. Sour and sweet taste of pod makes it to flavors in taste. Bark extract is used against dysentery, and bark and branches used as a tooth medicine by chewing it, tribals protects their tooth from various problems.
 40. *Plumbago zeylanica* (Family- Plumbaginaceae; Local Name- Chitrak, Chitraval): Juice of 5-10 leaves is taken orally by the tribals as an antidote in snake bite. Paste is prepared from fresh root which is applied topically on infected part once a day for two days to cure ringworm.
 41. *Pongamia pinnata* (Family-Fabaceae; Local Name- Karanj): Whole plant used as a digestive and laxative and to treat inflammation and wounds. Seed extracts powder reduces fever and helps in treating bronchitis and whooping cough. Stem and branches used as a tooth brush for oral hygiene and for freshness.(personal experience)
 42. *Setaria italica* (Family-Poaceae; Local Name- Kakun): Grains of this plant are utilized after cooking like rice. In many areas the grains are ground to flour and used as chapaties. Kakun causes formation of stone in body so traditional healers instruct the patients having the problem of stones to avoid the consumption of kakun grains.
 43. *Syzigium cuminii* (Linn) (Family- Myrtaceae; Local Name- Jamun): The bark is useful in powdery form in diabetes, the tender leaves are used for vomiting and powdered seeds are used in diabetes.
 44. *Syzigium heyneanum* (Family- Myrtaceae; Local Name- Kath Jamun): Paste of bark is applied topically over affected part on the skin to cure wound. Bark is taken from eastern and western side of plant.
 45. *Tephrosia purpurea* (Family- Papilionaceae; Local Name- Kharhundis): Root is chewed slowly twice a day to cure toothache. The application is repeated if required.
 46. *Terminalia arjuna* (Family- Combretaceae; Local Name- Arjuna): Leaves are given in a compound decoction for flatulent distension of abdomen. It is applied as a paste on pimples and other minor skin eruptions. Seeds are used as an external application to parasitic skin diseases. Bark in powdery form is used as tea with milk for high blood pressure patients.
 47. *Terminalia bellarica* (Family- Combretaceae; Local Name- Bahera): This whole plant has medicinal value. Pulp of fruit is helpful in curing dropsy, leprosy and diarrhoea. Fruit of this plant has antibiotic properties.
-Sacred plant and sacred pyre also.
 48. *Tinospora cordifolia* (Family- Menispermaceae; Local Name- Giloy, Neem Giloy, Adharbel): Fresh stem/ crushed stem bark is soaked in water overnight and given orally in the morning for 7 days in blood purification. Stem decoction is used for chronic fever.
 49. *Tribulus terrestris* (Family- Zygophyllaceae; Local Name- Gokhuru): The seeds are powdered and mixed with the flour of grains of cultivated crops to make bread during famine. Fruits when young are sweet in taste and are eaten raw. The fruit powder is also used as a remedy for urinary disorders and impotency by tribals.
 50. *Tridax procumbens* (Family-Asteraceae; Local Name- Khoon Datani, Rookhari, bhangra): The leaf juice is used locally on wounds and cuts to stop bleeding. Roots and leaves used to cure sexual weakness, cough, dropsy and diuretic condition.
 51. *Verhonia cinerea* (Family-Asteraceae; Local Name Sahadevi): Sahadevi plant is used to treat intermitted fever, blisters boils and vaginal discharges. Its fresh juice is given to children to treat urinary incontinence. Plant leaves can be eaten like a vegetable. Young leaves of this plant are used for the treatment of tonsillitis.
 52. *Vitex negundo* Linn. (Family- Verbenaceae; Local Name- Negal, Nirgundi): Leaf extract is poured in the eyes to cure conjunctivitis. Leaves are boiled in earthen pot and used orally twice a day, it is beneficial in rheumatism. Mixture of 100 gm root powder of negal, 200 gm tuber powder of *Chlorophytum* species (market supplement) and 100gm powder of *Eulophia* species (market supplement) is prepared. One tbs of this powder is taken orally by the tribal men with milk to cure sexual debility.
-Sacred plant and sacred pyre also.
 53. *Withania somnifera* (Family- solanaceae; Local Name- ashwagandha): The dried powder of tubers is given to check constipation. One tea spoon full of root powder is given with 250 ml milk, twice a day in rheumatism.
 54. *Zizyphus nummularia* (Family-Ramnaceae; Local Name-Jhariber): Crushed root bark is soaked in water overnight and given orally in the morning to cure abortifacient. Tribal ladies chewed the root after delivery.
-Sacred plant and sacred pyre also.

Conclusion:

During the present investigation observation were made. Total 54 plants belonging to thirty three different families of angiosperm are being used by the tribals as well as local peoples of Pratapgarh Tehsil. Among them the dominant families are Fabaceae, Combrataceae, Apocynaceae, and Acanthaceae. These 54 plants are used in portions, partially or fully, by the tribes of investigated area. But some species like *Cassia tora*, *Lantana camara*, and some weeds which have allelopathic effect are hampering the growth of other beneficial plants. And the water source near Gupteshwar mahadev, is a pond which is getting polluted day by day due to human perturbation. These community forests are under tremendous pressure and threats such as encroachments for agriculture, grazing, developmental activities like roads, Dams, canals, urbanization and industrialization. If proper and immediate steps were not taken for their conservation and sustainable utilization, these important species would be threatened. A team of local people should be appointed to identify and derooting of the allelopathical plants and also some awareness programs should be run to provide knowledge for tribes and local peoples about the importance and protection of sacred groves. The present study indicates that the area harbors the high diversity of medicinal plants.

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Plate 1: Sacred groove of Gupteshwer/ Deepeshwer Mahadev



Pithecellobium dulce



Annona squamosa



Holarrhena antidysenterica



Abrus precatorius



Hemidesmus indicus



Syzigium heyneanum

Plate-2 some important medicinal plants of study area