



## CONSERVING PLANT BIODIVERSITY THROUGH TRADITIONAL AND RELIGIOUS BELIEFS IN PEOPLE OF GAYA DISTRICT, BIHAR, INDIA.

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### ABSTRACT:

The present paper deals with Conserving Plant Biodiversity through traditional and religious beliefs in people of Gaya, Bihar "during-2020-22". To document the medicinal and other utility of plants with traditional uses such as *Aegle marmelos* ('bel'), *Calotropis procera* ('akwan'), *Coconut nucifera* ('nariyal'), *Curcuma longa* ('haldi'), *Cynodon dactylon* ('dub'), *Datura metel* ('dhatura'), *Desmostachya bipinnata* ('kusha'), *Ficus benghalensis* ('bargad'), *Ficus religiosa* ('pipal'), *Mangifera indica* ('aam'), *Musa paradisiaca* ('kela'), *Nelumbo nucifera* ('kamal'), *Ocimum sanctum* ('tulsi'), *Oryza sativa* ('dhan'), *Piper betel* ('pan') The documented religious plants are mostly used to cure hair loss, treats cough, respiratory health, urine retention, Improves digestion, blood pressure, cold, cough, flu and asthma, Relives menstrual pains and digestive distress.

### KEYWORDS:

RELIGIOUS BELIEFS, TRADITIONAL CULTURES, CONSERVED PLANTS.

### INTRODUCTION

Gaya is a holy city beside the Falgu River, in the northeast Indian state of Bihar. It's known for 18th-century Vishnupad Mandir, a riverside temple with an octagonal shrine. Close by, ancient Mangla Gauri Temple is set on a hilltop. To the north, Hindu devotees bath in a Brahma Kund pond before honoring their deceased ancestors atop Pretshila Hill. To the south lies the Hindu pilgrimage center of Bodh Gaya. Gaya is located in India country, in Asia continent (or region). DMS latitude longitude coordinates for Gaya are: 24°47'48.7"N, 85°0'13.86"E. Traditional beliefs has played, and still plays, a vital role in the daily lives of many people of Gaya. It has been found to contribute to sustainability in diverse fields such as biodiversity conservation, ecosystem mainrenance, biocultural restoration, sustainable water management, genetic resource conservation and management of the natural resources.

Gaya, Bihar occupies a unique place in the religious and cultural history of India. It recorded in its environ the imprints of Vartya, Aryan, Buddhists, Jains and Hindu civilizations. Today, it is fusion of faiths. The people of this place have rich tradition of indigenous cultural and socio-religious practices through various types of uses of trees and plants in different beliefs, faiths, worships, rituals, taboos, or customs which serve as a tool for regulated exploitation and promote conservation. It is this background that the present study has been undertaken, which is aimed at documentation of the plants related with religious and cultural practices by the local people and their conservational practices.

### MATERIAL AND METHODS

Vaidays were interviewed with the help of semistructured questionnaire and employing the guided field walk method were the information takes the observer on a guided tour and points out the various medicinal plants used by traditional knowledge and describe their uses. The field survey was planned in spring season and also in monsoon season when plants bloom and show extensive growth with the view of study their natural habitat and distribution. This in turn eased the process of identification of different plant species. The traditional knowledge about the plants was obtained through conservations and discussions with the learned people of the area regarding their local names plant parts used purpose of use and curative properties. Information was gathered through dialogues and discussions with some persons who regularly perform *puja* (worship), *yajnas* and other religious ceremonies.

The specimens were preserved following the standard and modern herbarium techniques (Jain and Rao, 1977) and deposited in the herbarium of University Department of Botany, Magadh University.

These were identified with the help of herbarium specimens of the Herbarium of Botany Department and relevant floras, like The Botany of Bihar & Orissa by H. H. Haines, The Flora of Delhi by J.K. Maheshwari and Records of the Botanical Survey of India, Calcutta.

STUDY AREA:- Gaya adjoining area viz, Gaya (S1), Bodh-Gaya (S2), Shobh (S3), Barachatti (S4) and Dobhi(5). The most important religious plants of this area Viz. Aam, Kela, Pipal, Bel, Tulsi, Akwan, Haldi, Dub. An religious plant survey for using different respects by peoples of above

Hindu and Buddhism area was carried out during 2019-20.

**TABLE: USE OF SOME TRADITIONAL AND RELIGIOUS PLANTS BY PEOPLE.**

1	<p><b><i>Aegle marmelos</i> (Linn.) Correa (F. Rutaceae). <i>Bel</i></b></p> <p><b>Description:</b> A common tree planted in compounds, vicinity of temples and on roadsides for its leaves, the “Bel Patra” which are in great demand during Shravan as religious offering to the Lord Shiva.</p> <p><b>Cultural and Religious Values:</b> Its green leaves and fruits are offered to Lord Shiva as religious offerings. It is also sacred to Parvati, and is the Vilva-rupra, nine forms of Kali. Its wood is used in several rituals.</p> <p>The drug called <i>Bel</i> comprises unripe or ripe fruits of the tree.</p>
2	<p><b><i>Butea monosperma</i> (Lamk.) Taub (F. Fabaceae) <i>Palas</i>.</b></p> <p><b>Description:</b></p> <p>A medium sized deciduous tree planted in gardens and along the roadsides for its beautiful orange- red flowers and goes by the name ‘Flame of the Forest’.</p> <p><b>Cultural and Religious Values:</b> Hindus attribute that among the 3 - leaflets of the leaf, the lateral leaflet (left) as representing ‘Brahma’ (God of creation), terminal leaflet as ‘Vishnu’ (God of protection) and the other leaflet (right) as ‘Mahesh’ (God of destruction). Dried twigs are used for feeding of sacred fires (called ‘Homa’ in Sanskrit) in religious ceremonies.</p> <p>The leaves are used for making platters, cups, wrappers for packing eatables and as ‘Beedi wrappers.</p>
3	<p><b><i>Calotropis procera</i> (Ait.) R.Br. (F.Asclepiadaceae) <i>AK, Akwan, Madar</i>.</b></p> <p><b>Description:</b> An erect or decumbent milky shrub frequent in open waste dry places often gregariously.</p> <p><b>Cultural and Religious Values:</b> The flowers are used in the worship of Lord Shiva. Besides, its twigs are also employed as <i>Samhitas</i> for performing the <i>Havan</i> ceremony.</p>
4	<p><b><i>Curcuma longa</i> Linn. (F. Zingiberaceae) <i>Haldi</i></b></p> <p><b>Description:</b></p> <p>A perennial herb, with a short stem and tufted, linear, ascending leaves, is cultivated extensively; rhizomes orange colored, cylindrical and constitute the turmeric of commerce.</p> <p><b>Cultural and Religious Values:</b> Turmeric (rhizomes or powder) is an auspicious article in all religious observances in Hindu households.</p> <p>The invitation card for a Hindu marriage or the new account books of shops is marked with fresh turmeric. The rubbing of turmeric and oil is an essential part of the Hindu marriage, as well as of some other religious ceremonies. The entire or the corners of every new article of dress, whether of man or woman, are stained before wearing it with a paste of turmeric. A liquid of turmeric with lime is used in the Aarti ceremony for warding off the evil eye.</p> <p>Turmeric is used as a condiment and is indispensable in the preparation of curry powder.</p>
5	<p><b><i>Cynodon dactylon</i> (L.) Persoon (F.Poaceae) <i>Dub</i>.</b></p> <p><b>Description:</b></p> <p>A perennial grass forms the commonest groundcover in lawns, roadsides and wastelands.</p> <p><b>Cultural and Religious Values:</b> Hindus consider it sacred and associate it with Ganesha. Few branches of grass held together or tied with a red thread, are used as a brush for applying vermilion, turmeric, curd, oil etc. on the body of the bridegroom.</p>

6	<p><b><i>D. alba</i> Nees (F.Solanaceae) <i>Dhatura</i>.</b></p> <p><b>Description:</b></p> <p>An erect, perennial, pubescent spreading herb, sometimes becoming shrubby; common as a weed on roadsides, waste open places and village sites.</p> <p><b>Cultural and Religious Values:</b> In old Indian literature, the plant is referred as "Shivashekharā", because the flower is associated with Lord Shiva. Leaves, flowers and fruits are offered to Lord Shiva.</p> <p><b><i>Desmostachya bipinnata</i> Stapf (F.Poaceae) <i>Kusa</i>.</b></p> <p><b>Description:</b></p> <p>A perennial, tall tufted, grass, with stout stolons covered with sheaths, finely pointed at the top; found especially in waterlogged soils.</p> <p><b>Cultural and Religious Values:</b> This plant is used in all Hindu ceremonies. It is used to clean a place where a ritual is to be performed by sprinkling water with it. It is used while reciting 'mantras' in rituals.</p> <p>Pavithram (<i>darbha</i> twisted into a ring-like loop with a tail) is an indispensable item in religious functions. It is to be worn in right hand ring-finger.</p> <p>In a fire ritual like Agni Santana, <i>darbhas</i> are placed on all the four sides of the Agni Kundan.</p>
7	<p><b><i>Ficus bengalensis</i> Linn. (F. Moraceae) <i>Bar, Bargad</i>.</b></p> <p><b>Description:</b></p> <p>An enormous tree, 70 to 100 ft. high, planted along the roads, near temples and shrines, and on open places in villages; sending down prop roots from to support the branches like pillars.</p> <p><b>Cultural and Religious Values:</b> Due to its immortal habit by the curious way it expands through aerial roots, it was very often referred to as 'Akshaya Vat' in old literatures. The <i>Akshaya Vat</i>, near the sacred <i>Mangla Gouri</i> temple in, Gaya, is the subject of many legends, and attracts thousands of pilgrims during Pitri Paksh.</p> <p>In the month of <i>Jyeshth</i> (May – June), women for belief of long life of their husbands worship the banyan and the worship is known as <i>Vat Savitri</i>.</p> <p>Its leaves are employed as one of the <i>Panch Pallav</i> (the other being the leaves of a peepal, a gular, a mango and a palas) in every religious ceremony. The dry twigs are used for producing sacred fires.</p>
8	<p><b><i>Ficus religiosa</i> Linn. (F.Moraceae) <i>Peepal, Asvattha</i>,</b></p> <p><b>Description:</b></p> <p>A large deciduous and glabrous tree with spreading branches; often found near temples or shrines, hence the name <i>religiosa</i>.</p> <p><b>Cultural and Religious Values:</b> It is especially sacred to the Hindus and it comes first on the list of five sacred trees viz. <i>Peepal, Bargad, Gular, Pakar</i> and <i>Aam</i>, It is the pagoda fig – tree, the tree of God.</p>
9	<p><b><i>Hordeum vulgare</i> Linn. (F.Poaceae) <i>Jau</i>.</b></p> <p><b>Description:</b></p> <p>An annual erect, stout and tufted grass cultivated as a food crop.</p> <p><b>Cultural and Religious Values:</b> It is one of the constituents of 'Sapta Dhanya'. It is considered as a symbol of wealth and fertility. During Navaratra the barley grains are ritualistically grown around the 'Kalash' on the 'Kalash Sthapan day'. and nurtured through the nine days. It is particularly associated with the God Indra.</p>
10	<p><b><i>Mangifera indica</i> Linn. (F.Anacardiaceae) <i>Am</i> (The Mango Tree)</b></p> <p><b>Description:</b></p> <p>A large spreading evergreen tree, grown more often in home yards, field borders and roadside avenues in rural as well as urban areas (typical mango groves lacking in this area.).</p> <p><b>Cultural and Religious Values:</b> On any auspicious occasion and vedic rituals, mango leaves can be seen in any house. Its leaves are employed in adorning <i>mandaps</i> of various ceremonies. Besides, its twigs are offered to sacred fire as <i>Samhidhas</i>. It provides one of the <i>Panch Pallava</i> and its flowers are used in Shiva worship on the Shivratri.</p>

11	<p><b><i>Musa paradisiaca</i> Linn. (F.Musaceae) Kela.</b></p> <p><b>Description:</b></p> <p>A perennial herb with stout pseudostems, widely grown as a backyard crop in households.</p> <p><b>Cultural and Religious Values:</b> It has been attached much religious significance during the Durga Puja. The plant is worshipped in dawn of the of Saptami and is installed on the right side of Sri Ganesh in Durga Puja Pandal. Its leaves are especially used in the worship of the Satya Narayana.</p>
12	<p><b><i>Ocimum sanctum</i> Linn. (F.Lamiaceae) Tulsi.</b></p> <p><b>Description:</b></p> <p>A much- branched erect herb; frequently grown in courtyards and temples; two types of <i>O. sanctum</i> are met with in cultivation: the green type (<i>Sri- tulsi</i>) and the second type (<i>Krishna- tulsi</i>) bears purple leaves.</p> <p><b>Cultural and Religious Values:</b> It has the greatest honour of getting worshipped as the consort of Lord Vishnu. Every year in Kartik Suklapaksha Dwadasi, Tulsi 'vivah' is celebrated with Lord Vishnu with great faith and devotion. Hence, she is glorified as <i>Vishnupriya, Kesavapriya</i>. It is believed that because of His deep attachment to Tulsi, Vishnu does not accept any offering if it is not accompanied by Tulsi leaves. In the course of worship consisting of <i>Achamana, Sankalpa, Abhishek, Alankara, Archana, Naivedya, Namaskara, Pushpanjali</i>, etc., in every stage Tulsi's presence is essential. Devotees of Vishnu wear Tulsimala (stringes made of Tulsi beads) because of the purifying effect of Tulsi.</p>
13	<p><b><i>Nelumbo nucifera</i> Gaertn. (F.Nymphaeaceae) Kamal.</b></p> <p><b>Description:</b></p> <p>A floating perennial herb, fairly common in ponds and tanks firmly anchored in the mud beneath the water surface.</p> <p><b>Cultural and Religious Values:</b></p> <p>The flowers of <i>N.nucifera</i> are used for ornament and as offering in temples.It is the National Flower of India belonging to each of us, whatever our faith.</p> <p>Padma, Dorje, Norbu, Kamal, Saroj, Neeraj, Pankaj, Rajiv and Rahul are some of its many beautiful word forms that live on forever in the culture of India as the names have been bestowed on the children.</p>
14	<p><b><i>Piper betle</i> Linn. (F. Piperaceae) Pan.</b></p> <p><b>Description:</b></p> <p>A perennial creeper cultivated for its leaves used as a masticator.</p> <p>The Magahi pan is grown in Magadh region of the State, mainly Gaya (near Wazirganj, Kauadol, and Tungi) and Aurangabad districts,</p> <p><b>Cultural and Religious Values:</b> Its leaves are used in all religious ceremonies of the Hindus. These are offered to deities along with betel nuts.</p> <p>Chewing of betel leaves by the Hindus on auspicious and festive occasions is an ancient practice.</p>

## RESULTS AND DISCUSSION

The present study has been aimed at documentation of the plants related with religious and cultural practices in the Vedic Hinduism by local people and their conservational practices.

In Hindu religion, trees and plants have been considered as revered, bestower of good, and protector from evils with a concept of God living in it. Hindus consider trees and plants as the abode of various Gods and Goddesses. They worship many trees, and it is still popularly believed that every tree has a Vriksha-devata "tree deity" who is worshipped with prayers and offering of water, flowers, sweets, and encircled by sacred threads. Tree worship has been quite popular and universal as early as in the times of Rig Veda.

They are considered symbolic of different celestial components of the universe ('Naksashtra', 'Rashi', and 'Grah') and are used in *Havans* to ward off evil effects (Tiwari, 1999). That is why in Indian mythology trees are regarded as pious objects, and are not to be cut or harmed at any cost

'Pipal' (*Ficus religiosa*) is probably the most important species in this respect. As gods live on it, so it is a sacrilege to harm it any way. Sometimes threads are tied around certain trees to seek a boon; or even symbolic marriages are performed on Amavasya between 'neem' (*Azadirchta indica*) and 'pipal' (*Ficus religiosa*), which are usually grown near each other. Yet another belief that helped in conserving wild vegetation is that during the

'Chaturmasya' (4 months of the rainy season), the god rests on trees and plants. Therefore, if trees are worshipped during this time, the gods will be pleased. Traditionally, trees are cut if only absolutely necessary. Traditional knowledge also has been useful in cultivating certain plants that needed extra care. For example, 'tulsi' (*Ocimum sanctum*), a highly valued medicinal plant, is grown in every house, and ritually watered, even today. , 'bel' (*Aegle marmelos*), mango (*Mangifera indica*), are some of the plants which have received preferential treatment in protection. This is clearly a case of religion and culture being used to protect, conserve, and /or produce resources for human sustenance. Also, for Hindus, the planting of a tree is a religious duty. Tree plantation ceremony, called Vana Mahotsava, has been narrated in Varaha Purana (172.39). Cutting of trees and destruction of flora are considered a sinful act. Hindu ancestors considered it their duty to save trees; and in order to do that they attached to every tree a religious sanctity. Gradually trees became objects of worship.

### CONCLUSION

Local people, vaidyas, ojas were confirmed the traditional property of conserved plants in gaya viz. *Aegle marmelos* ('bel'), *Calotropis procera* ('akwan'), *Coconut nucifera* ('nariyal'), *Curcuma longa* ('haldi'), *Cynodon dactylon* ('dub'), *Datura metel* ('dhatura'), *Desmostachya bipinnata* ('kusha'), *Ficus benghalensis* ('bargad'), *Ficus religiosa* ('pipal'), *Mangifera indica* ('aam'), *Musa paradisiaca* ('kela'), *Nelumbo nucifera* ('kamal'), *Ocimum sanctum* ('tulsi'), *Oryza sativa* ('dhan'), *Piper betel* ('pan') The documented religious plants are mostly used to cure hair loss, treats cough, respiratory health , urine retention, Improves digestion , blood pressure, cold, cough, flu and asthma , Relives menstrual pains and digestive distress.

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