

Baseline Profiling of
**Cultural-Heritage Biodiversity
Resources**
in select Eco Zones of Karnataka



Final Project Report

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Institute for Indigenous Cultures and Studies
Tarikere

Report prepared by:

Somashekhar BS & K Veeresh Gowda

Photograph credits:

Somashekhar BS & K Veeresh Gowda

Photos on the Front Cover:

- a) *Arjuna* tree (*Terminalia arjuna* (ROXB.) WIGHT & ARN) venerated as the seat of a healing deity. Matthithala, Mandya district.
- b) Idol of a village deity carved out of the wood of Foetid Sterculia tree. Belenahalli, Chikkamagaluru district.
- c) *Shami* tree (*Prosopis cineraria* (L.) DRUCE), venerated as the seat of a 'Maasthi' soul, elevated as a deity. Also a memorial tree. Mayakonda, Chitradurga district.

Photo on the Opening page:

Different fruits, flowers and foliage of certain wild plants arranged in a definite pattern as irreplaceable ingredients for making ritual offerings to the ancestral souls during 'Bhoomi Hunnime' ceremony, among the *Idiga* community in Malnad region.

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For Details Contact:

Somashekhar B S

Fulbright Fellow, Advisor

Institute for Indigenous Cultures and Studies

Bengaluru 560 106 INDIA

Email: bssomashekhar@hotmail.com,

cultureindicus@yahoo.in

ph: 91-9341835300



'Dhaarekamba': The 'Marriage Post' created by exclusively planting green leafy shoots of Country Fig, Peepal, & Pencil Cactus (Kolugalli) inside the marriage pandal erected in front of the bride's house, among the Tigala community. As an irreplaceable element in marriage ritual, 'Dhaarekamba' is endemic to the community, and becomes a salient element of its traditions. It is embellished with flowers and floral tassels, while water filled pots and Bamboo stump cylinder, into which certain plant produce as ritual ingredient is added, are arranged at its base. 'Dhaarekamba' is a classical example of Cultural Significance attributed to plants in local cultures. Hanumanthapura, Tumakuru.

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IINDICUS Team

PROJECT DETAILS

Project Team:

Principal Investigator: Somashekhar BS, Fulbright Fellow & Advisor, IINDICUS

Field Investigators: K Veeresh Gowda, BT Raghavendra Prasad, Siddanagowda Patil; Field Informants from 51 different study sites across 5 Agro- Climatic zones of Karnataka

Project Period: June 2011-May 2013

Technical Consultation:

- Prof. SN Balagangadhara, Director, Centre for Comparative Science of Cultures, University of Gent, Belgium
- Prof. Laxman Telagavi, Professor Emeritus, Dept. of History, Kannada University, Hampi
- Dr. Vasudeva R, Forestry College, Sirsi
- Dr. GV Anandamurthy, Tumakuru
- Dr. S Tukaram, Director, State Resource Centre, Mysore
- Sri MH Sridharamurthy, Executive Director, Graameena, Bangalore
- Dr. AS Prabhakar, Dept. of Tribal Studies, Kannada University, Hampi



Community feast exclusively served on Lotus leaves. Abalavadi, Mandya.

CONTENTS

1. INTRODUCTION	8-14
Natural environment is the basic living setting for Human groups	9
1.1 Cultural Significance associated with plants in Indian traditions	10
1.2 Common understanding of 'Cultural Significance of Plants' in India is India is incomplete!	13
1.3 Need for the present study	14
1.4 Project Objectives	14
Box: 'Natural Environment' in Ancient Indian Scriptures	
Box: Passage from <i>Mathsya Puraana</i>	
2. PROJECT AREA & STUDY SITES	15-19
2.1 Project area & Study sites	16
Box: Villages with 'Cultural Significance' of Plants-Selection Criterion	



Different plant produce including fruits, flowers and foliage, used for decorating the temple car for the annual jathra. Madhukeshwara temple, Banavasi, Uttara Kannada

3. FIELD SURVEY METHODOLOGY	20-26
Methodology adopted for documenting the Cultural Significance of Plants	21
3.1 What is a 'Cultural Heritage Biodiversity Resource'?	21
3.2 Categories of CSPs	22
3.3 Priority CSPs considered for the study	24
3.4 Field Explorations	25
3.5 Focal Questions for Analysis of the Field Data	26
4. FINDINGS FROM THE FIELD STUDY	27-55
4.A Diversity of Culturally Significant Plant Species in 5 Agro Climatic Zones of Karnataka	29
4.A.1 50 different sites and 100 Culturally Significant Plants!	29
4.A.2 Culturally Significant Plants are quite diverse!	33
4.A.3 Zone wise Diversity of Culturally Significant Plant species & Total Sightings	33
4.A.4 Prominent species of Culturally Significant Plant species in 5 Agro Climatic Zones	34
4.A.5 Culturally Significant Plants are quite singular in nature! Box: Mythological Association of Plants and Animals	38
4.B Multiple Manifestations of Cultural Significance of Plants	39
4.B.1 What makes a plant species Culturally Significant?	39
4.B.2 Is Cultural Significance synonymous to Puja & Venerated Status of a plant?	41
4.B.3 Predominant forms of Cultural Significance attributed to plants	42
4.C Plants being the Seat of Different Deities	43
4.D Plants associated with Non-Spiritual forms of Cultural Significance	47
4.E Species Choice for a Specific element of Cultural Significance	50
4.E.1 Attributes of a Plant species associated with a specific form of Cultural Significance	50
4.E.2 Multiple Significance V/s Singular Significance: Popularity Index of CSPs	52
4.E.3 Zone wise frequency of occurrence of CSPs under different forms of Cultural Significance	53
4.E.4 Species Choice for non-deity forms & attributes of Cultural Significance	55
5. PROBING FURTHER...	56-59
5.1 Six different species of the genus <i>Ficus</i>	57
5.2 Banyan v/s Peepal	58
5.3 <i>Bilva</i> & <i>Shami</i> : Regional counterpart species of CSPs?	59
6. WHY ARE CSPS (CULTURALLY SIGNIFICANT PLANTS) PROTECTED?	60-64

7. PROFILES OF PLANTS WITH CULTURAL SIGNIFICANCE	65-81
7.1 Seat of Village Deity/ Consort-Accomplice of main Deity	66
7.2 Seat of Clan Deity	71
7.3 Seat of Guardian Deity	72
7.4 Tree with Mystical and Magical powers	73
7.5 Multiple Species of Ficus as Venerated trees	75
7.6 Memorial Tree	76
7.7 Source of irreplaceable Ritual ingredient	77
7.8 Unique Village groves of CSPs	78
8. CONCLUSIONS	82-84
9. REFERENCES CITED	85-89
10. PUBLICATIONS & OUTREACH	90-93
Appendix I: Data entry Formats	94-97
Appendix II: List of Culturally Significant Plants sighted in the study sites	98-104



Culturally Significant Plants find a place in urban landscaping too!
Peepal trees planted along an avenue, Nagpur city, Maharashtra

1. INTRODUCTION



An extravagant display of cultural use of plant produce during a community ritual. Women carrying 'Kalasa', for performing puja to the village deity on the day of village fair. Hesaraghatta, Bengaluru North.

Natural environment is the basic living setting for Human groups

Natural environment provides a basic living setting for human groups around the world. Environment with its natural formations including hillocks and mountains, streams, rivers and water bodies, and living forms including plants and animals, constitutes the ‘basic space’ for human groups’ living. In the process of familiarizing this ‘basic space’, human groups have thoroughly explored, examined and evaluated their surroundings. Repeated attempts of such inquiry and examination have enabled them to get a grasp of it. This learning has in turn enabled them to realize that the various natural elements found in the surroundings, constitute the sole resource base for meeting their living needs of food, fuel, clothing, shelter, medicine, and other materials. Even though such inquiry based interactions might appear discrete and unsystematic, human groups generally perceive the natural environment as a whole and not into separate and distinct entities, assert cultural anthropologists (Pretty et al., 2009).

Usufructs derived from the natural elements including the biological resources that fulfill the living needs of human beings are termed as “Goods” in the ecological parlance. It is to be noted that, in the process of securing such usufructs, human groups tend to recognize and ‘pick out’ certain resources which provide them a wide range of benefits, as their priority resources, which eventually become ‘important’ in the context of their living. This ‘importance value’ assigned to select resources, serves as a recurrent trigger for the human groups to continue to access such ‘important’ resources for their living. What ensues subsequently is a complex dependency pattern on the natural elements, while this dependency pattern in a human group evolves into a ‘way of living’. several such ‘ways of living’ help the group forge a bonding with the natural elements, which are noticed as human affinities, affiliations and associations. The intensity of bonding assigns specific value to these resources, which, ensures them a unique place in the human group’s traditions. Garibaldi & Turner (2004) recognize the plants with such affiliations as the *Plants of Cultural Significance*. Scholars in the field of Comparative Science of Human Cultures thus assert that, when a person is born, he is bound to be under the influence of two settings: Natural & Cultural (Balagangadhara, 1994, 2005).

‘NATURAL ENVIRONMENT’ IN ANCIENT INDIAN SCRIPTURES

The natural environment has received the close attention of the ancient Hindu scriptures. Forests and groves were considered sacred, and flowering trees received special reverence. Just as various animals were associated with gods and goddesses, different trees and plants were also associated in the Hindu pantheon. The Mahabharata says that, ‘even if there is only one tree full of flowers and fruits in a village, that place becomes worthy of worship and respect’.

(In: Posey, DA. 1999. *Cultural and Spiritual Values of Biodiversity*. UNEP, Kenya)

1.1 Cultural Significance associated with plants in Indian traditions

It is interesting to note that the “Cultural Significance” of plants as attributed by different human groups and the related cultural affiliations and connotations in India, have been manifested in multitudes. They are quite wide, complex and seen in multiple settings. Some are quite familiar and widely seen, while some are not-so-familiar but confined to specific regional contexts. Look at some striking examples drawn from different socio-cultural contexts of Karnataka, as below:

From the common most *Tulsi* (*Ocimum sanctum* Linn.) retained as a venerated plant in the courtyards of almost every household in south India, to the gigantic trees venerated as the seats of local deities in many villages; from the common most practice of tying a festoon of mango leaves (*Mangifera indica* Linn.) across the main doorway on a festival day in almost every household in India, to the rare practice of tying a special string of tassel-tufts made of fresh paddy straw scrolls, across the main doorway among the *Kunbi* tribes in Uttara Kannada on the day of their ancestors puja; from the familiar Coconut (*Cocos nucifera* L.) and inflorescence of Arecanut (*Areca catechu* L.) used as common ingredients for puja, to the not-so-common fresh twigs of *Mahalingana balli* (*Diplocyclos palmatus* [Linn.] Jeffrey), used as an exclusive ingredient for performing ‘Balindra puja’ during Diwali festival; from the most common ritualistic practice of circumambulation around a Peepal tree (*Ficus religiosa* Linn.), to the region specific mass ritual of drinking a bitter decoction of Nux vomica tree bark (*Strychnos nux vomica* Linn.) by the local people in Dakshina Kannada district; from the customary practice of exchanging young shoot tips of Shami tree (*Acacia ferrugenia* DC and *Prosopis cineraria* (L.) DRUCE) with friends and relatives on the day of Dusserah in south India, to the not-so-common practice among the womenfolk in many villages of north Karnataka, who insert a shoot tip of Nirgundi bush (*Vitex negundo* Linn.) into their braids whenever they leave their homes to visit friends or relatives.



Tying a festoon of fresh Mango leaves across the main doorway of the house on a festival day is a familiar customary practice in south India.

That is not all! Look at some more: From the invariable practice of erecting a make shift isolation hut using the branches of Cluster Fig (*Ficus racemosa* L.) for the girl who attained puberty to remain in it, as a part of puberty rituals among many communities in south Karnataka, to a specific ritual puja performed to a *Jamun* tree (*Syzigium cuminii* [Linn.] Skeels) by the bride of *Gangadikaara Vokkaliga* community in Karnataka on her marriage day; from a special festival dish prepared exclusively with the leafy shoots and greens of a wild herb called *Aati soppu* (*Justicia wayanadensis*) in Kodagu district on the new moon day of *Ashadha* month, to a community feast served exclusively on Lotus leaves (*Nelumbo nucifera* Gaertn.) in a village in Mandya district; from a farming ritual called “Bhoomi Hunnime” observed by the *Idiga* and *Khare Vokkaliga* communities in Shivamogga and Uttara Kannada districts, on the full moon day of *Bhadrapada* month, where in the well grown paddy field is offered puja, to another farming ritual called, “Gadde Gandana Habba” in Dakshina Kannada district, in which branches of Screw Pine (*Pandanus unipapillatus*) are planted in select places in the Paddy fields; from recognizing a sub group or a clan of a human community with a specific plant which in turn becomes it’s social identity, to a gigantic Banyan tree as the cultural landmark of a village in south India; from the village groves retained as the hub of many socio-cultural processes and



Fresh twigs of a wild climber *Mahalingana balli* (*Diplocyclos palmatus*), as a ritual ingredient on sale in a local market.



Community feast called, ‘Hariseve’: food is served exclusively on Lotus leaves. Abalavaadi, Mandya.

activities in several villages in south India, to the sacred groves and serpent groves in many places along the Western Ghats. The list of different manifestations of cultural significance associated with plants can go on endlessly, since the range of cultural affiliations with plants, as assigned in the local traditions and cultures, is quite large, wide and fascinating!(see Somashekhar 2016, for an overview).

Plants with which some striking element of ‘cultural significance’ similar to the above and beyond, is traditionally associated, and which is acknowledged by the members of a human group in a given landscape, are generally regarded as **Cultural Heritage Biodiversity Resources**. Jain & Kapoor (2007) consider the study of such unique plants under a new term, ‘Divine Botany’.

In India, cultural affiliations with plants are quite ancient and rooted in her legacy. In addition to the diverse examples as mentioned above, concepts such as *Kalpataru* (wish fulfilling tree of Heaven), *Nandana vana* (grove of lord Indra), *Panchavati* (grove of five Ficus trees, in the epic Ramayana), *Ashoka vana* (grove of Ashoka trees in Lanka of the epic Ramayana), *Vrinda vana* & *Kadamba vana* (groves of Tulsi and Kadamba tree respectively where lord Krishna spent his childhood in Mathura, as per the epic Bhagavata), and *Khandava vana* (forest patch which was set fire by the Pandavas, as per the epic Mahabharata) are amalgamated in Indian traditions, which are familiar to us. It is interesting to note that the common man’s understanding related to the cultural significance of plants, however is restricted to popular sacred plants such as Ashoka, *Soma*, *Shami*, *Bakula*, *Parijatha*, and *Bodhi* which are frequently mentioned in the epics and Jataka tales.



‘Bhoomi Hunnime’, a farming ritual observed in Malnad. Fully grown Paddy field is venerated and offered Puja.

1.2 Common understanding of 'Cultural Significance of Plants' in India is incomplete!

However, one must realize here that, although cultural significance associated with the plant world is as old as human civilization, the prevailing understanding of the same in India is quite cursory and incomplete. Much of this understanding is based on stereotypically 'fascinating' and 'mystic' elements which are available in select oriental texts of the colonial period, which are reproduced again and again in the studies of the later period. The following excerpts from select recent publications substantiate this point.

"...tree worship is universal in India. Various trees, plants and groves are worshipped here... of the different trees and plants Soma was considered as tree of life by the Vedic Aryans. *Vata, Asvatha, Bel, Tulsi* etc., are the dwelling places of Brahma, Vishnu, Maheshwara, Krishna etc, and the Hindu Gods. Lord Buddha attained Nirvana under a Pipul tree. A number of other trees and plants are also considered sacred in India..." (Gupta 1980).

"...In India, tree worshipping became quite common in the third or fourth millennium BC, when there was highly evolved Harappan Culture...Tree worshipping occupied a very important place during the Vedic period also..." (Bhatla et.al. 1984).

"... banyan has other metaphysical properties that promote its conservation wherever Hindus live. This is the tree of immortality or tree of life (also of love, fertility, protection and healing) and is protected throughout India, Sri Lanka and Nepal..."(Hamilton 2002).

While such generic accounts speak about the spiritual and mystic elements, they alone do not offer a fair account of 'cultural significance' of plants. In fact, human affiliations of plants in India are quite diverse, complex and multi-faceted and have the potential to unveil the true 'cultural significance' of plants, which can be accessed through the disciplines of Folklore, Cultural Anthropology, Social Ecology and Traditional Ecological Knowledge.

PASSAGE FROM MATHSYA PURAANA

A passage from the *Matsya Puraana*, would illustrate the high level of importance assigned to plants and nature in the Indian culture. It goes as:

"...(once) Goddess Parvati planted a sapling of Asoka tree and took good care of it. She watered it, and it grew well. The divine beings and sages came and told her: "O [Goddess]... almost everyone wants children. When people see their children and grandchildren, they feel they have been successful. What do you achieve by creating and rearing trees like sons...? Parvati replied: "One who digs a well where there is little water lives in heaven for as many years as there are drops of water in it. One large reservoir of water is worth ten wells. *One son is like ten reservoirs and one tree is equal to ten sons (dasaputrasamodruma)*. This is my standard and I will protect the universe to safeguard it..."

(In: Narayanan, 2001. *Water, Wood, and Wisdom: Ecological Perspectives from the Hindu Traditions*)

Yet, the understanding of ‘cultural significance of plants’ is skewed towards ‘sacred plants’ or ‘plant worshipping’ even among the academia. While the available information elsewhere is quite sketchy, it presents some snapshots of different forms of cultural significance (see for instance, Russel 1979, Turner 1988, Cocks & Dold 2006, Dafni 2006, 2007a, 2007b, Dafni *et.al.* 2006, Casey & Wynia 2010, and Staub *et.al.* 2011). The focus of such studies in India, is however on sacred groves (Gadgil & Vartak 1976, Gadgil & Chandran 1992, Kalam 1996, Chandran & Gadgil 1998, Malhotra *et.al.* 2001, Waghchaure *et.al.* 2006, Murugan *et.al.* 2008, and Sukumaran & Raj 2008 among others), although some of them focus on select plants (Biswas & Debnath 1972, Bhatla *et.al.* 1984, Amrithalingam 1998, Deb & Malhotra 2001, Jain & Kapoor 2007, Jain *et.al.* 2009, and Srivastava *et.al.* 2010). Likewise, a few recent works have attempted to examine this subject through the framework of Cultural Anthropology (Shetty 2000, Somashekhar 2007, 2008a, and Ramesh 2010).

1.3 Need for the present study

Much of the available information in Karnataka in this regard typically revolves around ‘sacred’ elements and corresponds to the Western Ghats, leaving behind the Eastern plains not covered. Thus, ‘cultural significance of plants’ remains less understood from eco-socio-cultural perspective, an understanding that would help unravel the intricacies of human affiliations with plants, which in turn play critical role in their conservation. Given that biological conservation and ecological restoration are influenced by anthropogenic activities, such an understanding among the conservation fraternity will equip them better and is likely to contribute to the overall success of biodiversity conservation or restoration efforts. This is particularly needed in India where plants are traditionally integrated in human cultures.

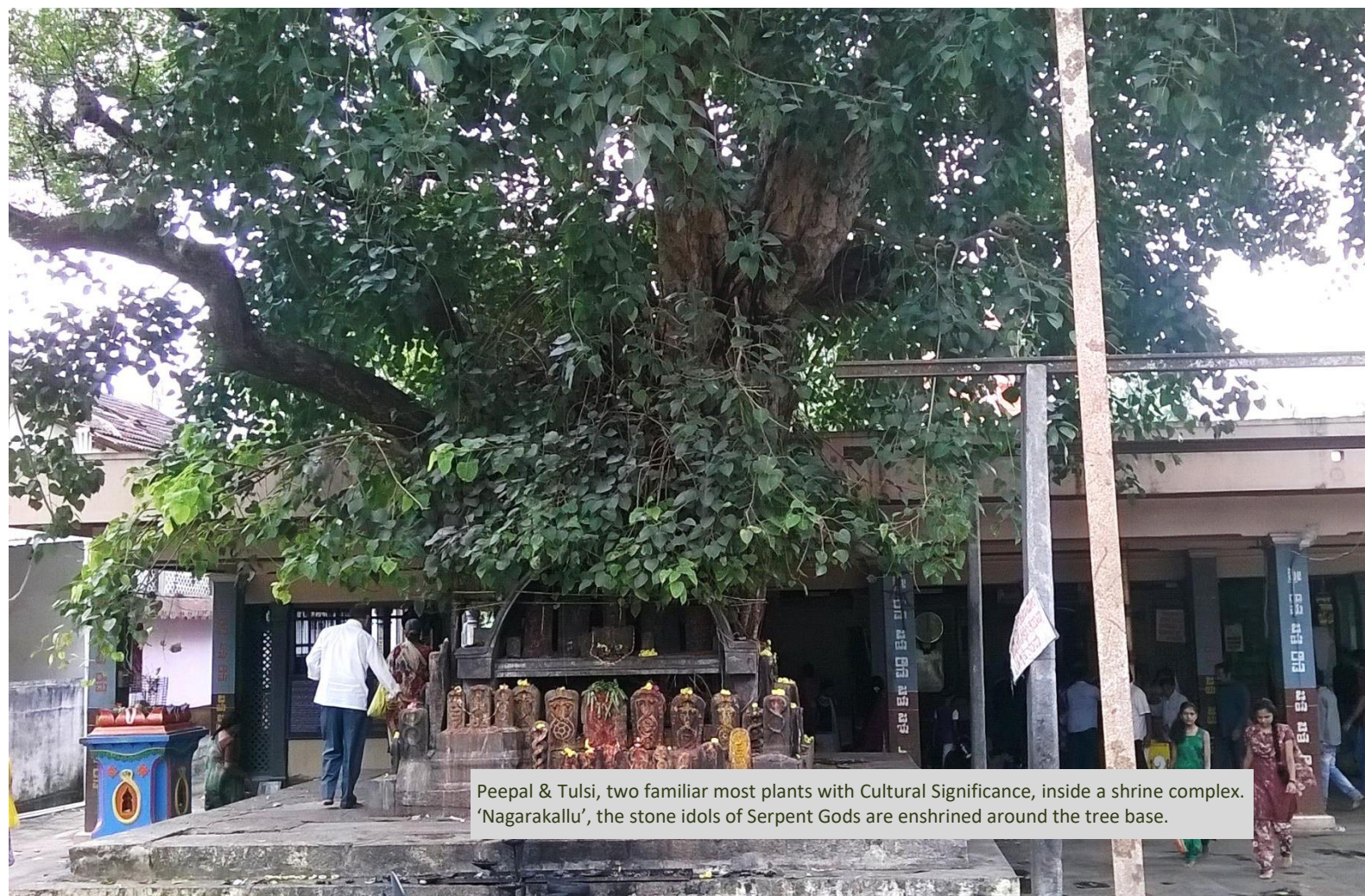
The current project on “**Baseline Profiling of Cultural-Heritage Biodiversity Resources in select Eco zones of Karnataka**” sanctioned by the Karnataka Biodiversity Board, Bangalore, Govt. of Karnataka, to IINDICUS (Institute for Indigenous Cultures and Studies) is therefore a promising and innovative step to help fill this information void in Karnataka.

1.4 Project Objectives

The present study focused on the following study objectives.

- To carry out a Baseline profiling of Cultural Biodiversity resources in select agro-eco-zones of Karnataka
- To prepare Cultural Biodiversity resource mapping of select villages
- To carry out Baseline enumeration of Cultural Biodiversity resources

2. PROJECT AREA & STUDY SITES



Peepal & Tulsi, two familiar most plants with Cultural Significance, inside a shrine complex. 'Nagarakallu', the stone idols of Serpent Gods are enshrined around the tree base.

2.1 Project area & Study sites

The present study attempted to explore and examine the different Cultural Biodiversity resources in select localities across the Eastern plains of Karnataka. Necessary field work and documentation were carried out during June 2011-May 2013, as per the approved proposal. Following are the details.

The project considered five agro climatic zones in the eastern plains of Karnataka spread across 13 districts as the focal area of the study (map 1). These are:

- North Eastern Dry zone (NED)
- Northern Dry zone (ND)
- Central Dry zone (CD)
- Eastern Dry zone (ED) and
- Southern Dry zone (SD)

Given the limited project duration and wide geographic area to be covered, we had to restrict the focus of the study to select 50 sites within these 5 zones. Given the diversity of natural vegetation of this area and the presence of different human communities possessing unique traditions, the study sites were to be selected primarily based on the presence of 'significant' and 'striking' bio-cultural elements which are living and found practiced by the local communities in the villages.

In order to prioritise the villages for the study, experts from the field of Folklore and Cultural Anthropology were approached; additionally, the network of field resource persons of IINDICUS located in different parts of the region was consulted. Taking cues from their feedback, a selection criterion was drawn as below.

Villages with 'Cultural Significance' of Plants- Selection Criterion

- A village with a history of at least ~100 years or 3 successive generations of human living i.e., people in the village, should be able to recollect memories from their grandfathers' era.
- The village should be home to a striking element of cultural significance associated with plants that has been accepted by the community as a part of its living traditions.
- Such cultural significance should be distinct, unique and interesting, and not a mere copy of biocultural significance found elsewhere.
- Such cultural significance with plants be in practice for at least 3 generations
- Such cultural significance as manifested in a plant should be accessible for the study, without any difficulty.

Villages fulfilling these elements were shortlisted for the study.

Villages meeting this criterion were shortlisted by consulting the District Gazetteers, District Handbooks, Census reports and in-house Database. This list was further scrutinized for its appropriateness and a second set of guidelines was applied as below.

- **Towns and villages** located along the high ways, even though having >100 years of history, were excluded from the list. This was to ensure that the unique elements of cultural significance of plants are unaffected by urbanization and modernization, but have retained their true flavor.
- **Well known historical and heritage places** found within the study area, which are culturally rich and sufficiently covered by other Historical and cultural studies were not included (this is the reason, popular culturally significant places such as Hampi, Mysore, Srirangapattana, Somanathapur, Chitradurga, Sandur and Surpur in the study region were excluded).
- **Those places and landscapes** sufficiently studied by Folklore and Anthropology studies (places such as Biligiri Ranga Hills, Heggada Devana Kote, Magadi, Nidagallu, Kanakapura, and such landscapes known for tribal habitation) were excluded from the priority list.

After applying these two criteria the list of priority sites was finalized. However, as the project progressed, some villages from the list were to be deleted as it was realized that, no culturally significant plant was found which was distinctly different from the ones already documented in the study. In such cases it was necessary to look for alternative sites possessing noteworthy elements of cultural significance within the agro climatic zone. Hence many shortlisted villages in the Northern Dry Zone which were found to be mere replications of the cultural significance associated with Neem and Shami trees were not considered for the study. Likewise, at certain times, the study team would be prompted by extra leads by enthusiastic villagers, which would direct us to locate culturally significant plants in the nearby villages too. In some cases, such additional leads did result in some examples, worth considering.

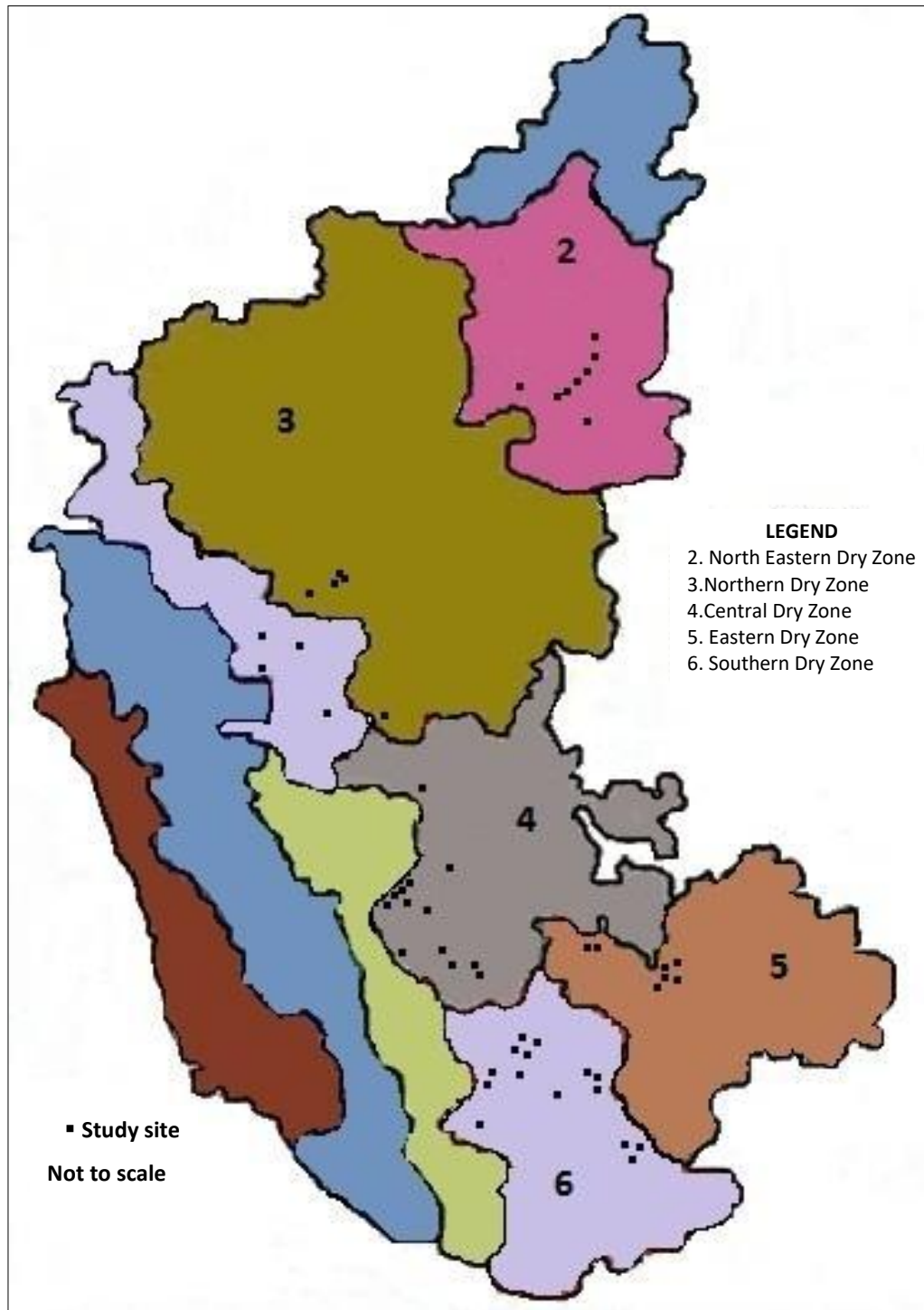
Additional entries: Accordingly, a few more sites were added to the list in the light of such recommendations. Even though these were falling outside the boundaries of the project area, we included in the overall list, considering the merit of the specific cultural significance associated with plants in such sites. Such entries added during the course of implementation are shown separately. At the end of all these revisions, the list of study sites was as below.

Table 1: Study sites across 5 Agro climatic zones

Agro-Climatic Zone	District	Study sites
North Eastern Dry zone (NED)	Yaadgir	Thintini, Vadagera
	Raichur	Sirivara, T.Karadigudda, Googallu, Gaagal, KyatheKere Doddi
Northern Dry zone (ND)	Dharwar	Bhadrapura
	Gadag	Kappathgudda, Anthoor-Benthoor, Nagasamudra
	Haveri	Pathrematti, Adavi Somapur, Tadas, Suttakoti, Keroor
Central Dry zone (CD)	Davanagere	Mayakonda
	Chitradurga	Tanigekallu
	Chikkamagaluru	Antharaghatte, Sakharayapatna, Santhedibba, Annappana Gudda, Kenchaapura, Hunasaghatta, Belenahalli
	Tumakuru	Baguvaala, Haalkurike
	Hassan	Kere Kodihalli, Lakshmi Devarahalli
Eastern Dry zone (ED)	Tumakuru	Kunduru, Bidare
	Bengaluru Rural	Doddabelavangala, Kaarapura, Mallenahalli, Aladahalli, Madagondanahalli
Southern Dry zone (SD)	Mandya	Kergodu, Bettada Mallenahalli, Doddabaala, Alur, Besagarahalli, Ooganahalli, Matthithala, Vaidyanathapura, Basavanapura, Kambadahalli, Gavimatha, Gollarakoppalu, Keremegala koppalu
	Mysuru	Mirle
Additional Sites	Mandya, Mysuru, Kolar, Tumakuru, Shivamogga, Uttara Kannada	Melukote (Mandya), Paduvarahalli (Mysuru), Tamaka (Kolar), Gaadikoppa (Shivamogga), Ayanur (Shivamogga), Upparahalli (Tumkur),Yadalli (Uttara Kannada), Nirnalli (Uttara Kannada)

These study sites are spread between 15⁰08'-12⁰23' N and 75⁰07'-77⁰54'E coordinates and are shown in Map 1.

Map1: Agro-Climatic Zones in the Eastern Plains of Karnataka with Study sites



3. FIELD SURVEY METHODOLOGY



A gigantic Mahua tree in a temple grove. > 200 trees are traditionally maintained as the source of oil for lighting lamps. Alur, Mandya.

Methodology adopted for documenting Cultural Significance of Plants

In order to enable the study team to recognize the focal concepts in the field without any ambiguity, and to carry out the project activities as per the project strategy, it was necessary to arrive at a clear understanding about 'Cultural Heritage Biodiversity Resource', as a part of fulfilling the project objectives. Consultations with our subject experts and discussions with the review panel during the interim project reviews helped us to obtain clarity about the understanding, which is as below.

3.1 What is a 'Cultural Heritage Biodiversity Resource'?

Although, the prevailing understanding of '**Culturally Significant Plant**' readily points to a 'sacred plant' or a 'venerated plant', however in reality, the concept of "cultural significance" associated with plants, would mean more than a mere 'sacred plant' or a 'venerated plant', and hence there is a need to ensure clarity in the definition of the concept, '**Culturally Significant Plant**'. ghosts and spirits,

In order to ensure clarity in the definition, let us relook at our understanding of the same. If one were to brainstorm to help recollect those different plants having an inseparable role in the diverse traditions and cultures across India, one would come up with a long list of plants that fulfill different 'cultural needs'. It is quite interesting to note that in this long list, there are some plants which are considered 'sacred' and offered puja, while some are used for performing a puja; some plants are considered as the manifestations of deities, their accomplices and consorts, while some are considered as their dwelling places or hideouts; some are forbidden from using in a cultural context, while some have irreplaceable role in completing a cultural process; some plants are preferred during auspicious occasions, while some are meant for use only during inauspicious contexts such as death rites; some plants are attached with bad omen, while some are considered mascots of good fortune; some are considered 'cultural landmarks' while the age-old gigantic trees are considered 'cultural assets'; some plants are considered as cultural emblems, while some are considered the salient features and signature elements of certain communities; some are accessible to all while some are restricted to a few. Thus, the elements connecting plants with different facets of human cultures are quite diverse.

It is quite interesting to note that these 'special' plants exert a great influence on the communities' lives and their cultures. This influence is so high that, often they command irreplaceable role in the communities' traditions. Their presence is quite pivotal, as these cultural associations are quite vital in completing the community's

image in a local milieu. Since this affiliation is quite distinct and irreplaceable, and since the communities believe that continuing their traditions reassures them the nature, structure, image and existence of their groups, they sustain their affiliation with such 'special' plants in order to continue their traditions. Consequently the community considers such plants important, while these plants become "Culturally Significant", in a local community context.

Subsequently, the community holds such special plants with high degree of esteem, often venerates them, performs puja and makes offerings. Such special plants become conspicuous from other plants of the same species, and eventually remain as the centres of attraction in a given landscape. Eventually, many different cultural processes, rituals, customary observances, festivals, fairs, processions, ceremonies and celebrations slowly take shape around such special plants. Consequently, different strategies to augment, protect and manage such special plants come into force. Such 'influential' plants considered important and commanding reverence in a local socio-cultural context, are termed here as "**Culturally Significant Plants**" (CSP hereafter). Such CSPs, which contribute to the local heritage, are termed as "**Cultural Heritage Bio-resources**", in the context of this project.

3.2 Categories of CSPs

Based on the particular cultural need and function a plant can fulfill in a local context, these special plants may be grouped under the following categories of "cultural significance".

- a) Plants associated with Deities/ Gods/ Accomplices & Consorts of deities/ Spirits & Ghosts/ Ancestors & ancestral souls/ Personalities in different faith/ religion/ community culture & tradition.
- b) Plants with Mystical powers, and spiritual values.
- c) Plants associated with the basic nature and image of a group or sub group within human communities, and with its worldviews, origin, legends, myths, beliefs, memories and folklore and traditional knowledge; plants associated with the local history, legend and heritage.
- d) Plants having inseparable association with traditional occupations, family professions, vocations, traditional arts, skills & technology of communities.
- e) Plants associated with rituals, customary observances, puja, worship, ceremony, celebration and such ritualistic actions in a community, by being the source of irreplaceable ingredients, objects and material used exclusively for their performance.
- f) Plants being the source of irreplaceable ingredients for preparing exclusive food, feast, context specific special dishes and preparations for the offering,

as well as formulations and medications exclusively prepared for completing a cultural process or event or context in a community.

- g) Plants fulfilling the contemporary socio-cultural needs of a community, and are considered 'community assets'.
- h) Plants which have a significant cultural influence on a community.

It is interesting to note that, **the first category** predominantly includes those plants which are considered by local communities as the seats and dwelling places of different deities, consorts & accomplices of deities, spirits & souls of community ancestors & heroes.

The second category of plants includes those with mystical powers, healing virtues, and spiritual & religious values, as recognized by the local communities.

The third category of plants includes those which are associated with the origin, worldviews, myths & legends, history, tradition of local communities; plants associated with the identity, nomenclature, and social image of groups/ sub groups, and plants as cultural emblems are found here. Plants inseparably associated with community rites, rituals, customs, cultural memories, beliefs, taboos are also found.

The fourth category of plants includes those associated with traditional occupations, and family professions, and which have nurtured community vocations, traditional arts and skills, which are the salient features of a community.

The fifth category of plants includes those which are the prime source of diverse range of irreplaceable ingredients (in the form of a specific plant part or produce) for making an object or material or an offering exclusively used while performing a puja, rite, ritual, customary observance, process or practice without which a particular cultural process remains incomplete, in a community context.

The sixth category of plants includes those plants whose specific part or produce is exclusively used for preparing festival food, feast, context specific dish, special food preparation, specific offering to deities, which are exclusively used in a ritual, festival, ceremony, celebration, during a cultural process or event or context.

The seventh category of plants includes those which are quite distinct, unique and constitute the salient features of a village or local culture. Thus, solitary tree giants, tree clumps and old village groves are found here. Likewise, plants used to delineate socio cultural elements in the form of lag posts, boundary posts, cultural landmarks, memorial trees, community venues and social hubs are found here.

The eighth category of plants includes other plants which are quite distinct and exert cultural influence on the community lives.

In the context of the present study, those plants in any of the categories listed above have been considered as “**Cultural Heritage Bio-resources**” for the study.

3.3 Priority CSPs Considered for the study

Although the cultural heritage bio-resources in principle could be found in all the above categories, the study restricted its focus on select categories, in order to effectively address the project objectives. It particularly focused on:

- Plants with ‘striking’ or ‘noteworthy’ elements of Cultural Significance which are quite unique and distinct and not mere replicates of some form of Cultural Significance expressed elsewhere, and already recorded.
- Plants which are quite confined to a local context, and hence are endemic, whose produce finds an irreplaceable place in a local ritual or custom, because of its distinct nature.

Whatever be the focal CSP category, care was taken to recognize those plants with an element of cultural significance, which is distinct, unique and striking. Extra care was taken not to merely record either the presence or cultural value of a focal CSP on a repetitive mode, but to attempt to locate a cultural value hitherto not found.

CSPs kept out of the focus

- CSPs from the category #5 and #6 were kept out of focus, as they correspond to the ingredients used for rituals and offerings, whose cultural significance is already known (ingredients used for puja, ritual and ritual offerings such as coconut, arecanut, banana, betel leaf, mango leaf, turmeric, sandalwood, frankincense, oil, even though exclusively planted in a village were not considered).
- Commonly found venerated plants, Tulsi (*Ocimum sanctum* Linn.) and Aak (*Calotropis gigantea* [L.] R.Br.).
- Popular examples of venerated trees (tree duo of Peepal-Neem at village entrance, Belliric myrobalan next to shrine of lord Shani) were excluded as their cultural significance, is well established.

Tree duo of Peepal-Neem, a popular form of venerated plants, at the village entrance, Sannappanapalya, Tumakuru



3.4 Field Explorations

Accordingly, the project team began its field studies; repeated visits were made to the chosen villages during June 2011-May 2013; necessary field observations and interviews were carried out. Standard Survey methodology followed in Comparative Cultural studies and Cultural Anthropology was followed.

Identification of knowledgeable individuals in the focal villages was the prelude to the field studies. Accordingly, attempts were made to identify knowledgeable individuals capable of providing comprehensive information about the striking 'cultural significance associated with plants' in the focal village. Using the IINDICUS' network of field resource persons, first level introductions were established with such knowledgeable individuals. Necessary rapport was developed and subsequently the project team visited them on a compatible date.

During the field visits, the knowledgeable individuals were approached and the intention and purpose of the present study were clearly reiterated to them; they were requested and encouraged to share the information about the 'focal element of cultural significance' associated with select plants in the study sites. Further, they were requested to share relevant information about the particular 'cultural significance associated with plants' found in the village. One-to-one dialogues and open ended semi-structured interviews were used to facilitate the information flow; relevant questions were posed to elicit authentic information related to the *what-why-how-who-when-whereof* the cultural significance under focus. Accordingly, the knowledgeable individuals would share their information with enthusiasm and pride, while their responses were documented in the data entry format developed for this purpose (see Appendix1).

Every field interaction was further supplemented by actual visits to the sites where the culturally significant plants under focus were located. Necessary photographic documentation of different elements of the focal plants was done so as to capture the 'cultural significance' under focus.

Further, necessary botanical and ecological observations of the focal CSP were made. Accordingly, local name of the CS plant was recorded while its botanical identity was confirmed with the help of published floras of the region. Girth at Breast Height (GBH) and Height were measured wherever possible. Likewise, the seed or fruit or bark and such plant material of the focal plant were gathered wherever allowed and feasible. Ocular and qualitative observations were made in respect of the phenology, regeneration status, seedling recruitment around the plant, presence of nests & dwelling places of birds if any, presence of insects, pests

and other threats due to anthropogenic activities, and overall physical health of the focal plant. The field data were subsequently organized and analyzed.

3.5 Focal Questions for Analysis of the Field Data

Since all the CSPs are quite distinct and unique in respect of culturally significant plants, each one provides a picture which is altogether different from the other. Thus dataset pertaining to a focal CSP thus needs to be treated as a distinct profile. However, in order to facilitate the data analysis, as well as to understand the 'cultural significance' associated with a plant along with its subtle details in a socio-cultural setting, the following lead questions were considered as triggers. These questions not only help us discuss the project findings, but also help unfold the different facets of Culturally Significant Plants or Cultural-Heritage Biodiversity Resources in the project area. These are as below:

- 1. What is the diversity of Culturally Significant Plants in the project area?*
- 2. How many plant species are considered culturally significant?*
- 3. What is the range and depth of Cultural Significance associated with plants?*
- 4. What are the different forms of Cultural Significance associated with plants?*
- 5. Are there specific species for a particular kind of Cultural Significance? What is the Cultural resilience of a plant species?-What makes a plant species to be culturally significant?*
- 6. What are the different elements of Cultural Significance a plant species can be associated with? What are the dimensions of multiple significance v/s singular significance associated with plants?*
- 7. What makes a human group to choose a single plant in the vicinity as CS, while other plants of the same species are NOT considered?*
- 8. Do the lifesaving virtues of a plant species elevate it to a venerated position?*
- 9. What are the other factors that render a plant species unique Cultural Significance?*
- 10. To what extent the cultural value assigned to a plant species contributes to its conservation?*
- 11. What are the triggers and prompts that make local communities to take special care of Culturally Significant Plants?*
- 12. What are the representative profiles of Cultural Significance associated with plants?*

4. FINDINGS FROM THE STUDY



A pair of procession idols carved exclusively with the heartwood of a wild tree. Belenahalli, Chikkamagaluru



Devotees perform puja and make offerings to an Arjuna tree, believed to possess healing powers. Matthithala, Mandya

Findings from the present study reveal many interesting facets of cultural significance associated with plants. The findings also bring to light several plants associated with different elements of cultural significance from across the study area, which are otherwise not popular as 'Culturally Significant'.

The study has identified that Culturally Significant Plants are found in different forms. From the solitary tree giants in the village centre, to an age old tree next to a village shrine; from a tree clump in the open field, to a village grove; from a tree planted next to a tomb, to a lone tree atop a hillock, the Culturally Significant Plants come in many forms and categories. While many of these constitute the common resources in a village, in certain cases, it was noted that, select community or a family or a religious institution and temple trusts were serving as custodians of such CSPs.

It was also found that, some plants were meant for the benefit of the entire community and hence accessible to all, while some were confined to the members of a specific community. It was interesting to note that, while some plants were venerated by a majority of the community in a landscape, as the seat of a local deity, some plants were revered by select sections of a community, since the focal plants were associated with the cultural elements of that particular section of the community. Another interesting finding is that, there were plants associated with ghosts and spirits, so as there are sacred plants and plants associated with deities. Following are the highlights.

4.A Diversity of Culturally Significant Plant Species in 5 Agro Climatic Zones of Karnataka

4.A.1 50 different sites and 100 Culturally Significant Plants!

The field surveys carried out across 5 agro climatic zones of Karnataka initially brought to light >150 different Culturally Significant Plants, as recognized by local communities.

However, it was evident that, among this 150 and odd plants associated with an element of cultural significance, some were not so striking, as they were mere replicates of a Culturally Significant Plant, which is already recognized in the same village, while some appeared as minor variants of another Culturally Significant Plant already described in another village. Such repeated and identical sightings, found within a village/ adjacent villages, are not included for detailed analysis here.

Similarly, the popular Peepal-Neem tree duo sighted in the study sites was also kept out of the analysis, as we found that its repeated occurrence was only adding to the number, but not widening the scope of the element of Cultural Significance, under

focus. Additionally, in the light of suggestions made by experts during the interim project review meetings, the study team carried out field documentation in 10 other sites which are included for the analysis.

Thus, after taking into consideration such repetitive and identical entries, as well as additional entries, we were left with 117 unique plants which are considered Culturally Significant (See Appendix II). Table 1a and 1b provide the list of such CSP species found out during the study.

MYTHOLOGICAL ASSOCIATION OF PLANTS AND ANIMALS

Mythological association of plants and animals is a major human aspect and some categories of such associations include:

Deities reside in certain forests; deities reside on certain plants; enlightenment of saints under certain trees; association with planets; origin of certain trees from body of Gods; creation of human race under a tree; trees as savior of honor; souls of the dead rest on trees; plants as food of Nature God; avert evil eye; are sacred, divine and so worshipped; Plants and animals are linked with gods and goddesses as their symbols, or their carriers or favorites, and so are biological entities for various planets.

In: Jain, S. K. 2000. Human Aspects of Plant Diversity. *Economic Botany*, 54(4): 459-470.



A village shrine built around a huge Neem tree, believed to be the dwelling place of a village deity called, 'Pleginamma'. Halkurike, Tumakuru

Table 1a: Culturally Significant Plant species and their sightings

Sl. No.	Botanical Name	Botanical Family	Popular Name		No. of sightings
			English	Kannada	
1.	<i>Azadirachta indica</i> A. JUSS.	Meliaceae	Neem	ನೀಮ	24
2.	<i>Ficus benghalensis</i> L.	Moraceae	Banyan	ದಿಂಟೆ	15
3.	<i>Aegle mormelos</i> (L.) CORREA EX. SCHULTZ	Rutaceae	<i>Bilva</i>	ಬಿಲ್ವೆ	11
4.	<i>Ficus infectoria</i> SENSU ROXB.	Moraceae	White Country Fig	ಪಿಂಚು	9
5.	<i>Acacia ferrugenia</i> DC. and <i>Prosopis cineraria</i> (L.) DRUCE	Mimosaceae	<i>Shami</i>	ಶಮಿ	8
6.	<i>Tamarindus indica</i> L.	Caesalpiniaceae	Tamarind	ತಮರಿಂಡು	7
7.	<i>Ficus religiosa</i> L.	Moraceae	Peepal	ಪಿಪ್ಪಲ	5
8.	<i>Albizia amara</i> (ROXB.) BOIVIN	Mimosaceae	<i>Krishna Shirish</i>	ಶಿರೀಷೆ	3
9.	<i>Cassia fistula</i> L.	Caesalpiniaceae	Indian Laburnum	ಪಿಪ್ಪಲೆ	3
10.	<i>Ficus racemosa</i> L.	Moraceae	Cluster Fig	ಕುಲಿ	3
11.	<i>Alangium salvifolium</i> (L.F.) WANG.	Alangiaceae	Sage leaved Alangium	ಕಾಪಿಲೆ	2
12.	<i>Ficus microcarpa</i> L.F.	Moraceae	Small leaved Fig	ಪಿಂಚು	2
13.	<i>Phoenix sylvestris</i> ROXB.	Arecaceae	Country Date Palm	ಫಿಜಿ	2
14.	<i>Madhuca longifolia</i> (KOEN.) MACLER	Sapotaceae	<i>Mahua</i>	ಮಹು	2
15.	<i>Thespesia populnea</i> (L.) SOL. EX. CORREA	Malvaceae	Indian Tulip Tree	ಶಾಲು	2
16.	<i>Mangifera indica</i> Linn.	Anacardiaceae	Mango	ಮೆಂಗು	2
17.	<i>Cordia oblique</i> WILLD.	Boraginaceae	Indian Cherry	ಕೋಟೆ	1
18.	<i>Zizyphus mauritiana</i> LAM.	Rhamnaceae	Indian Jujube	ಜಿಜುಬೆ	1
19.	<i>Diospyros montana</i> ROXB.	Ebenaceae	Mountain Persimmon	ದುಂಬು	1
20.	<i>Ficus mysorensis</i> Var. <i>pubescens</i>	Moraceae	Mysore Fig	ಮೈಸೂರು ಪಿಂಚು	1
21.	<i>Sterculia foetida</i> L.	Sterculiaceae	Fetid Sterculia	ಸೇವೆ	1
22.	<i>Arundo donax</i> L.	Poaceae	Greater Reed	ಅರಣ್ಣೆ	1
23.	<i>Delonix elata</i> (L.) GAMBLE	Caesalpiniaceae	White Gulmohur	ವಿಳಿಗುಲಮೂರು	1
24.	<i>Diospyros melanoxylon</i> ROXB.	Ebenaceae	<i>Tendu</i>	ತೆಂಡು	1
25.	<i>Dodonea viscosa</i> (L.) JACQ.	Sapindaceae	Jamaica Sorrel, Hop Bush	ಸಾಜೆ	1
26.	<i>Erythrina variegata</i> L.	Fabaceae	Indian Coral tree	ಕೊಂಬು	1
27.	<i>Syzygium cumini</i> (L.) SKEELS	Myrtaceae	<i>Jamun</i>	ಜಮುನು	1
28.	<i>Terminalia arjuna</i> (ROXB.) WIGHT & ARN	Combretaceae	<i>Arjuna</i>	ಅರ್ಜುನು	1
29.	<i>Erythroxylum monogynum</i> ROXB.	Erythroxylaceae	Bastard Sandal	ಬಾಸ್ಟರ್ಡ್ ಸಾಂಡಲ್	1
30.	<i>Lannea coromandelica</i> (HOULT.) MERRILL	Anacardiaceae	<i>Jhingan</i>	ಜಿಂಗು	1
31.	<i>Nyctanthes arbor-tristis</i> L.	Oleaceae	Night Jasmine	ನೈಟ್ ಜಾಸ್ಮಿನ್	1
32.	<i>Plumaria rubra</i> L.	Apocynaceae	Temple Tree	ಪಿಂಚು	1
33.	<i>Holoptelia integrifolia</i> Planch.	Ulmaceae	<i>Tapasi</i>	ತಾಪಸಿ	1
Total					117

The zone wise occurrence of culturally significant species is as below:

Table 1b: Zone wise occurrence of Culturally Significant Plant species and their sightings

Sl. No.	Botanical Name	No. of sightings						Total sightings
		NED	ND	CD	SD	ED	ADD	
1.	<i>Azadirachta indica</i> A. JUSS.	9	8	6	0	1	-	24
2.	<i>Ficus benghalensis</i> L.	1	3	5	4	0	2	15
3.	<i>Aegle mormelos</i> (L.) CORREA EX.SCHULTZ	0	2	2	2	3	2	11
4.	<i>Ficus infectoria</i> SENSU ROXB.	5	3	0	1	0	-	9
5.	<i>Acacia ferrugenia</i> DC. and <i>Prosopis cineraria</i> (L.) DRUCE	2	3	1	2	0	-	8
6.	<i>Tamarindus indica</i> L.	2	3	2	0	0	-	7
7.	<i>Ficus religiosa</i> L.	0	0	2	0	3	-	5
8.	<i>Albizia amara</i> (ROXB.) BOIVIN	1	0	1	1	0	-	3
9.	<i>Cassia fistula</i> L.	0	0	1	1	1	-	3
10.	<i>Ficus racemosa</i> L.	0	0	1	0	1	1	3
11.	<i>Alangium salvifolium</i> (L.F.) WANG.	0	2	0	0	0	-	2
12.	<i>Ficus microcarpa</i> L.F.	0	1	0	0	1	-	2
13.	<i>Phoenix sylvestris</i> ROXB.	0	0	2	0	0	-	2
14.	<i>Madhuca longifolia</i> (KOEN.) MACLER	0	0	0	2	0	-	2
15.	<i>Thespesia populnea</i> (L.) SOL.EX. CORREA	0	0	0	2	0	-	2
16.	<i>Mangifera indica</i> Linn.	-	-	-	-	-	2	2
17.	<i>Cordia oblique</i> WILLD.	1	0	0	0	0	-	1
18.	<i>Zizyphus mauritiana</i> LAM.	0	1	0	0	0	-	1
19.	<i>Diospyros Montana</i> ROXB.	0	0	1	0	0	-	1
20.	<i>Ficus mysorensis</i> Var. <i>Pubescens</i>	0	0	1	0	0	-	1
21.	<i>Sterculia foetida</i> L.	0	0	1	0	0	-	1
22.	<i>Arundo donax</i> L.	0	0	0	1	0	-	1
23.	<i>Delonix elata</i> (L.) GAMBLE	0	0	0	1	0	-	1
24.	<i>Diospyros melanoxylon</i> ROXB.	0	0	0	1	0	-	1
25.	<i>Dodonea viscosa</i> (L.) JACQ.	0	0	0	1	0	-	1
26.	<i>Erythrina variegata</i> L.	0	0	0	1	0	-	1
27.	<i>Syzygium cumini</i> (L.) SKEELS	0	0	0	1	0	-	1
28.	<i>Terminalia arjuna</i> (ROXB.) WIGHT & ARN	0	0	0	1	0	-	1
29.	<i>Erythroxyllum monogynum</i> ROXB.	0	0	0	0	1	-	1
30.	<i>Lannea coromandelica</i> (HOULT.) MERRILL	0	0	0	0	1	-	1
31.	<i>Nyctanthes arbor-tristis</i> L.	0	0	0	0	1	-	1
32.	<i>Plumaria rubra</i> L.	0	0	0	0	1	-	1
33.	<i>Holoptelia integrifolia</i> Planch.	0	0	0	0	0	1	1
Total		21	26	26	22	14	8	117

NED- North Eastern Dry Zone, ND-Northern Dry Zone, CD-Central Dry Zone, SD-Southern Dry Zone, ED-Eastern Dry Zone.

As can be seen from Table-1a, the present study has brought to light 117 Culturally Significant Plants as recognized by the local communities. These plants represent the depth and breadth of Cultural Significance associated with plants in the study region. These 117 plants correspond to 33 plant species, of which 31 are trees, 1 is a shrub and 1 is a reed. These 33 species thus constitute the representative diversity of Culturally Significant Plants of the project area. Detailed examination of these profiles reveals many interesting findings and some of which are presented below:

4.A.2 Culturally Significant Plants are quite diverse!

It is interesting to note that the plant species in Table-1a help construct a realistic picture of the diversity and heterogeneity of Culturally Significant Plants considered by local communities across Karnataka, as against a stereotypic version. The list also points at many interesting elements associated with Culturally Significant Plants.

A cursory look at the tables informs us that, except for a few familiar plants such as Neem, *Bilva* and *Shami*, most of the Culturally Significant Plants identified in the present study are quite unfamiliar to the common people at large. In fact, this is one of the major findings of the study, i.e., **the study has added many new plant species to the existing list of CS plants.**

It is quite interesting to note that, as against the popular understanding which points at Peepal tree as the common CSP, the present study has brought to light several other plant species preferred in place of Peepal as 'Culturally Significant' plant. The study has thus added many new plant species to the existing list of CSPs, hitherto unheard of, and has enlarged the current understanding of venerated plants or Culturally Significant Plants.

4.A.3 Zone wise diversity of Culturally Significant Plant species & Total Sightings

Another major finding from the present study lies with the distribution of CSPs in different zones. It is interesting to note that the diversity of CSPs in one agro climatic zone is quite unique and distinct from the diversity of CSPs found in another zone.

It was found that, of the five agro climatic zones, the diversity of CSPs in Southern Dry zone (SD) is richer than in many other zones. It ranks first with 15 CSP species while North Eastern Dry zone (NED) comes last with 7 CSP species. Central Dry zone (CD) with 13 species, Eastern Dry zone (SD) with 10 species and Northern Dry zone (ND) with 9 species follow in a descending order, though. Additional search in select sites from Eastern Dry zone, Southern Dry zone and Transition zone

Zone	No. of CS species	Total No. of sightings
NED	7	21
ND	9	26
CD	13	26
SD	15	22
ED	10	14
Addtl.	5	8
Total		117

brought to light 8 more plants corresponding to 5 plant species.

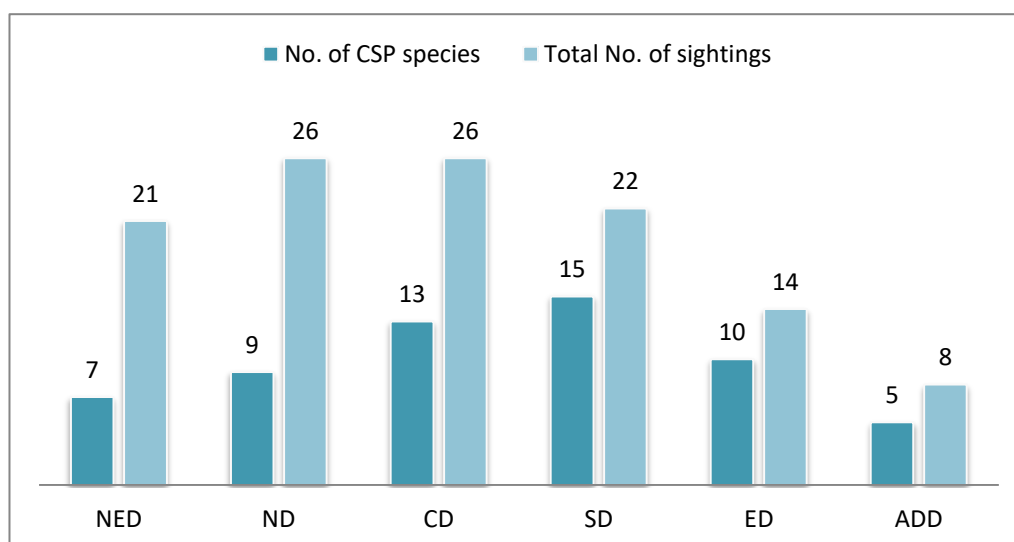


Fig.1. Number of Culturally Significant Plant species and Sightings in 5 Agro Climatic Zones

Likewise, the total number of sightings of Culturally Significant Plant species also varies within an agro climatic zone. Northern Dry zone (ND) and Central Dry zone (CD) lead the list with 26 sightings each. They are followed by SD, NED and ED zones with 22, 21 and 14 sightings respectively. The zone wise diversity of CSP species with their respective number of sightings is presented in Table-2 and Fig.1.

4.A.4 Prominent Culturally Significant Plant species in 5 Agro Climatic Zones

A critical look at the list brings out some surprising findings. Among the 33 species of CSPs, Neem and Banyan occupy the top 2 positions as the most frequently sighted CSPs, with 24 and 15 sightings respectively. Likewise, Bilva, White Country Fig, Shami complex and Tamarind are the next 4 toppers with >5 sightings each. Among these, White Country Fig is a surprising inclusion which ranks fourth with 9 sightings. This species is generally not heard of as a CSP and hence makes a significant addition.

Another surprise is with the Peepal tree. This popular Culturally Significant Plant occupies 7th place with just 5 sightings. Likewise, Krishna Shirish and Indian Laburnum respectively occupy 8th and 9th positions in the list, with 3 sightings each.

However, for the sake of better understanding, if we were to keep aside for a while these two species, and consider the other 3 species of Figs which appear next in the list (Small leaved Fig, Mysore Fig and Cluster Fig), and consider them as a species collective, then it occupies the 7th place with 6 sightings and displaces Peepal. Consequently, Krishna Shirish and Indian Laburnum would be pushed to 9th and 10th positions respectively. With this altered ranking, the top 10 species across the zones appear as below (Table-3)

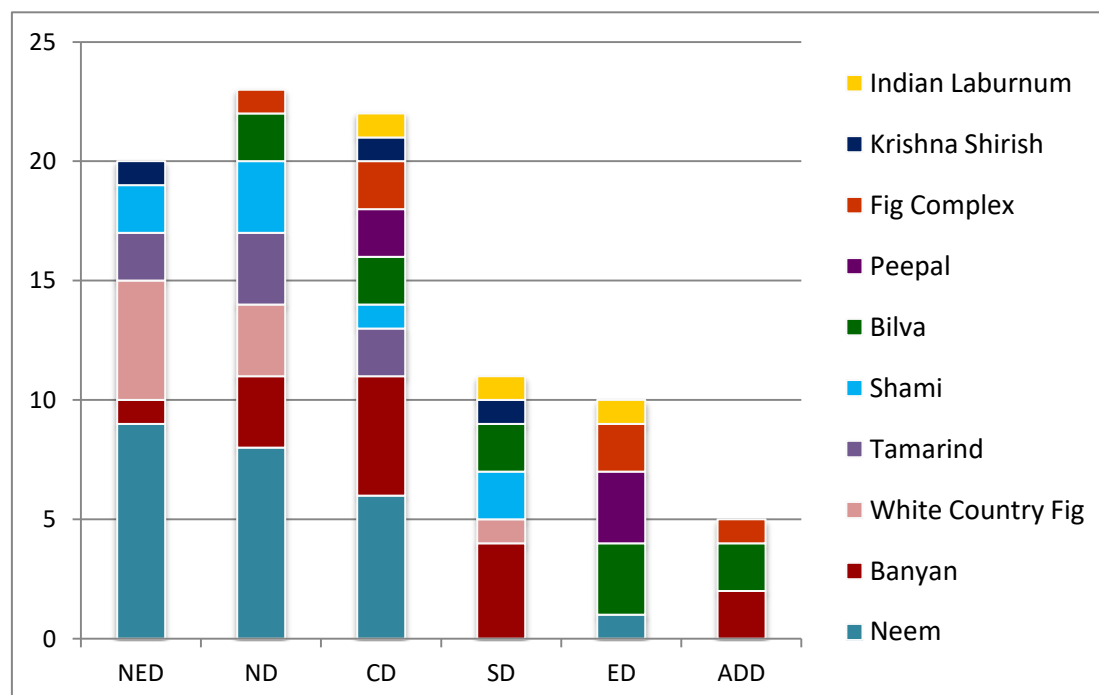
Table 3: Top 10 species of CSPs

Sl. No.	Culturally Significant Plant	No. of sightings						Total sightings
		NED	ND	CD	SD	ED	ADD	
1.	Neem (<i>Azadirachta indica</i> A. JUSS.)	9	8	6	0	1	0	24
2.	Banyan (<i>Ficus benghalensis</i> L.)	1	3	5	4	0	2	15
3.	Bilva (<i>Aegle mormelos</i> (L.) CORREA EX. SCHULTZ)	0	2	2	2	3	2	11
4.	White Country Fig (<i>Ficus infectoria</i> SENSU ROXB.)	5	3	0	1	0	0	9
5.	Shami (<i>Acacia ferrugenia</i> DC.)	2	3	1	2	0	0	8
6.	Tamarind (<i>Tamarindus indica</i> L.)	2	3	2	0	0	0	7
7.	Fig Complex (<i>Atthi-Goni-Basari</i>)*	0	1	2	0	2	1	6
8.	Peepal (<i>Ficus religiosa</i> L.)	0	0	2	0	3	0	5
9.	Krishna Shirish (<i>Albizia amara</i> [ROXB.] BOIVIN)	1	0	1	1	0	0	3
10.	Indian Laburnum (<i>Cassia fistula</i> L.)	0	0	1	1	1	0	3

* Fig Complex is made up of 3 Fig species: *Ficus racemosa* L., *Ficus mysorensis* Var. *pubescens*, & *Ficus microcarpa* L.F.

A relook at the top 10 species brings to light some more interesting findings. The most interesting facet is the unique and distinct composition of CSP species in each zone. It is interesting to note that, as one traverse from north downwards, i.e., from North Eastern Dry zone towards Southern Dry zone, a select set of CSPs assume prominence within the agro climatic zone. Such distinct assemblage of plant species appears quite unique to the zone under question, since the species composition does not extend to an adjoining zone. As one enters the next agro climatic zone, this

Fig.2: Top 10 species of CSPs in 5 Agro Climatic zones



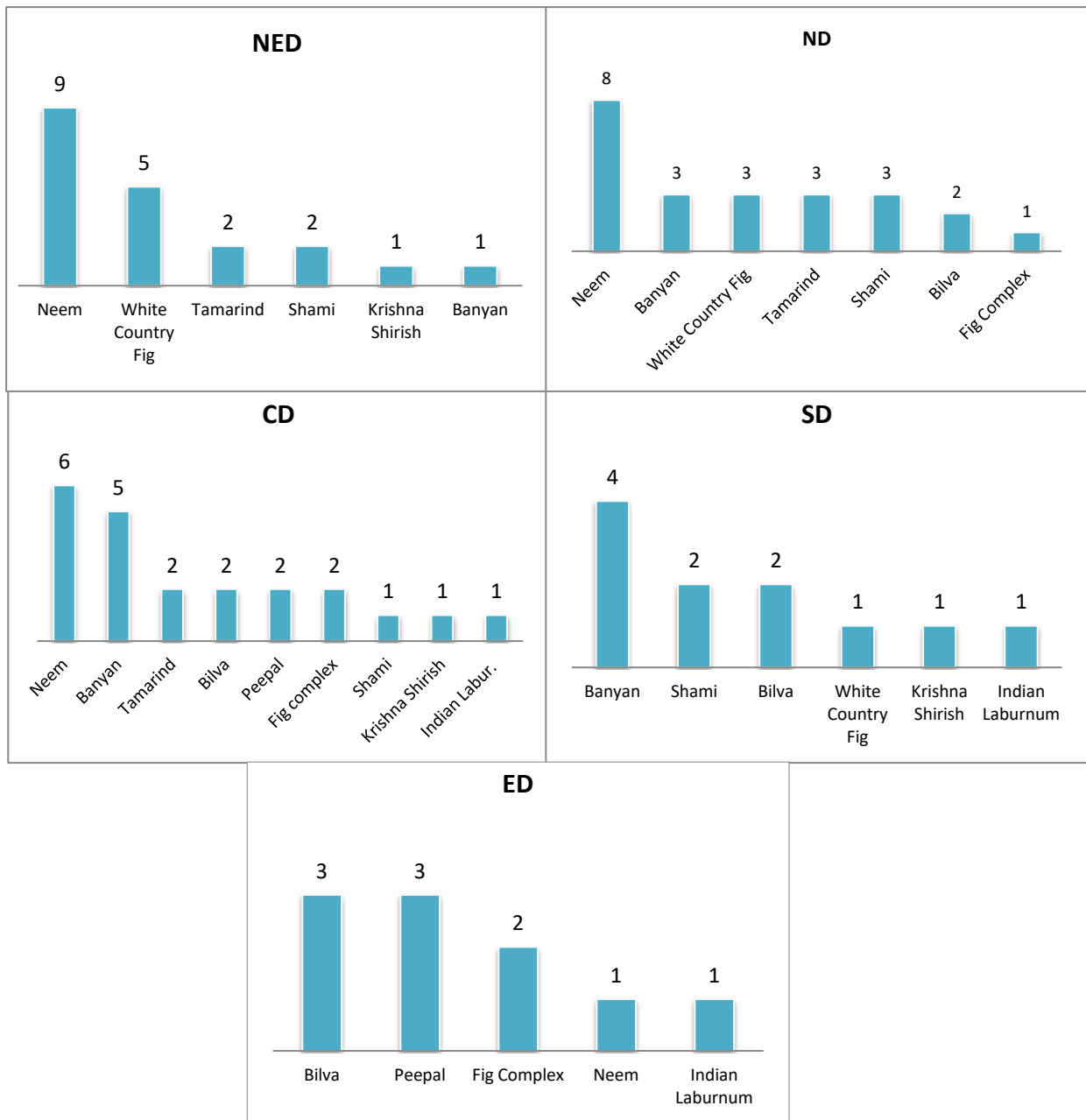
distinct set of species disappears while another set of species gains prominence. This trend indicates that the predominance of a plant species remains confined to a zone while the species composition changes gradually as one moves to the next zone.

Fig.2 illustrates this changing species composition across the 5 zones. Thus White Country Fig, a predominant species in North Eastern Dry zone and Northern Dry zone which records 5 and 3 sightings respectively, is absent in Central Dry zone and Eastern Dry zone, while it records its re-appearance in Southern Dry zone by a solitary tree. Similar is the situation with Neem. It records its presence in a decreasing order in NED, ND, CD, SD and ED zones with 9, 8, 6, 0 and 1 sighting respectively. On the contrary, predominance of Banyan is on the rise, as one traverse from north downwards. From just one sighting in NED, Banyan records its presence in an increasing order with 3, 5 and 4 sightings in ND, CD and SD zones respectively. Banyan when compared to Neem, is frequently found in the countryside especially in the central and southern parts of Karnataka.

The list also brings out some surprising additions to the prevailing understanding of Cultural Significance associated with plants. One such surprising addition is the Tamarind tree. Going by the popular belief among the people in the *maidan* area of Karnataka, this tree is generally considered as the dwelling place of ghosts and spirits, and hence not considered to be culturally significant when it comes to veneration. However, the present study paints a completely different image of Tamarind. The field data show that it is one among the top 10 Culturally Significant Plants preferred by local communities, especially in NED, ND and CD zones. However Tamarind did not record its cultural presence in SD and ED zones.

The zone specific species predominance continues with *Shami* and *Bilva* too. These two species occupy the 4th and 5th positions among the most preferred CSP species. *Shami* is a tree which is found dotted the countryside across northern Karnataka. It is a practice among the farming community here to retain its saplings coming up naturally on crop land bunds. The farming community often considers such saplings as ready-to-recognise natural landmarks and makes use of them to realign the boundary line of cultivation plots. This particular practice was commonly noticed among the farmers in Gadag and Haveri districts. Further, whenever a *Shami* tree is found growing along with a Neem tree, the farming communities would consider it a good omen. Such tree pairs would be given special attention and care; sometimes exclusive stone platform are built around them. However, in the context of the present study, we considered only those *Shami* trees having unique and striking cultural significance. It was found that *shami* was a preferred species in all the zones except ED. It recorded 2, 3, 1, and 2 sightings respectively in NED, ND, CD and SD.

Fig.3: Occurrence of Top 10 species of CSPs in 5 Agro Climatic Zones



While *Shami* was naturally found in many places across northern Karnataka, *Bilva* was generally confined to shrines and temple complexes in southern Karnataka, which are associated with lord Shiva. Its presence was more frequent in the SD and ED zones than in NED and CD zones, although it was not found in NED. Likewise Peepal was confined to CD and ED zones, while it did not record its cultural significance in NED, ND and SD zones.

It was found that the zone-wise presence of top 10 CSPs is not uniform. As can be seen from Fig.3, CD is the most diverse zone with 9 of the top 10 CS species represented. It is followed by ND with 7 CS species represented, while NED and SD come next with 6 species. ED appears last with only 5 CS species represented.

4.A.5 Culturally Significant Plants are quite singular in nature!

Besides the top 10 species, the list shows 4 other species with 2 occurrences each and 16 other species with single occurrence each (Table-1a). It may be stated here that, these 20 species are largely *unfamiliar* in the context of Cultural Significance associated with plants. However, it is important to note that, the fact that, these are *unfamiliar* lends a special position and hence attract attention, become distinct and make interesting addition to the prevailing list of Culturally Significant Plants.

It is also to be noted here that, as one traverse from north downwards, i.e., from NED zone towards SD zone, more and more distinct species, not reported earlier, begin to join the list of CSPs. This is conspicuous with CD, SD and ED zones with 3, 7 and 4 unique species respectively, being added to the list.

Interestingly, all of these new additions record only single occurrence. It thus makes us to state that such solitary occurrence of a plant species is an indication of its uniqueness and brings out its irreplaceable Cultural Significance as attributed by local communities. This particular finding is of great significance as this defies the common understanding held by many, which indicates that, "*Choice of a plant to denote a cultural significance is only arbitrary*".

Noteworthy among such singular sightings are Indian Coral tree, Indian Tulip tree, Temple Tree and Night Jasmine which are otherwise known for their attractive mass flowering. Likewise, certain wild fruit trees including *Jamun*, Country Date Palm, *Ber*, Indian Cherry, *Tendu* and Mountain Persimmon find a place in this list. *Arjuna* and *Mahua* which are known for their lofty stature also figure in the list. Likewise two forest tree species, Fetid Sterculia and *Jhingan* are the surprising additions. A species of reed, the Greater Reed is another significant addition. Equally interesting addition is that of White Gulmohur, an exotic tree species. Bastard Sandal and Jamaica Sorrel, the two bushy species commonly found in degraded and thorn forests are two more surprising additions. All of this reconfirm: "*Cultural significance ascertained to plants extends much beyond 'venerated trees' generally found in temple premise*".

One more interesting finding needs to be mentioned here: Certain plant species which are typically found in graveyards and wastelands and are therefore excluded from an auspicious context were found to command their veneration at many sites in the project area. Species such as Country Date palm, Bastard Sandal, Jamaica Sorrel, and Sage leaved Alangium which are otherwise considered to cast bad omen, are the ones considered *benevolent*, contrary to their common image.

4.B Multiple Manifestations of Cultural Significance of Plants

4.B.1 What makes a plant species Culturally Significant?

The present study has brought to light 117 different plants corresponding to 31 species, which are culturally significant, many of which are hitherto unknown. Going by the uniqueness and distinctness of Cultural Significance attributed to a plant species, these plants qualify to be considered as 117 distinct manifestations of cultural significance showcased by different plants.

But, what makes only these 117 plants corresponding to 31 species, and not the other hundreds of plant species found in the region, to be the true representatives of cultural significance associated with plants?-becomes an intriguing question.

Let us try to find an answer to this question by first reviewing the range of cultural significance as manifested in these plants. This would help us identify their 'special' features which may have served decisive in attributing a specific element of cultural significance. Such analysis brings before us the following account.

Firstly, the range of cultural manifestations these plants anchor is quite astounding: From being the seat of a village deity, to the seat of a clan deity; from being the

dwelling place of a spirit, to the seat of ancestral souls; from being a venerated tree next to the village shrine, to a memorial tree planted next to the tomb of a community hero; from serving as a focal point for a ritual, to an irreplaceable ingredient to perform a ritual; from serving as a community shelter, to a temporary halting place on a pilgrim route; from being a cultural asset of a village deity, to a key element in a cultural process; from being a

A plant assumes a definite cultural significance when a local community recognizes a specific cultural attribute in it or when the community attributes a definite cultural value to it. Accordingly, such a chosen plant gets accepted as a Culturally Significant Plant by the community which then after treats it as its asset, and holds it in high esteem. When the focal CS plant dies due to some reason, the community members plant a sapling of the same species in the same place where the CS plant was growing when it died. Thus the local community ensures continued availability of the venerated plant for its use.

source material to carve the procession idol of a village deity or a temple care, to the source of an irreplaceable offering to a village deity, ...thus goes the long list of different elements of cultural significance as attributed to different plants by local communities. Each one is striking, distinct and opens up an interesting dimension of Cultural Significance associated with Plants.

Although the 117 individual manifestations of cultural significance are quite distinct, they do share some commonalities, based on which these plants may be clustered into the following 12 categories. This clustering will facilitate further data analysis and logical comprehension of the findings.

Table 4: Major forms of Cultural Significance associated with Plants

Cultural Significance assigned/recognized in a Plant	
1. Seat of Village Deity	One of the predominant forms of cultural significance associated with plants. A particular tree of the culturally significant species would be identified to be the seat of the village deity. A platform or a shelter or a shrine may be built around it based on the context.
2. Seat of Clan Deity of a particular community	Another predominant form of cultural significance associated with plants. A particular species of tree considered by a local community to be the seat of its Clan deity. The tree commands reverence by its members.
3. Seat of Consorts and Accomplices of Deities	Another form of cultural significance associated with plants. A particular plant species growing in the premises of a village shrine or in the village grove next to the shrine, would be considered to be the seat of a consort / accomplices of a village deity. The plant commands reverence.
4. Seat of Farming Deity	Another form of cultural significance noticed with plants. The plant or tree of the farming deity is usually seen amidst the farm lands. The farming communities venerate the tree during different occasions of farming operations. The farming deity and the chosen tree to be its seat vary with the communities.
5. Seat of Vocation/ Profession related Deity	This form of cultural significance would be recognized by the local communities which practice traditional professions-toddy tapping, wood carving, and mud burrowing and such. A particular tree is recognized by them to be the seat of the deity/lord who administers/ governs the Profession. Members of the community, venerate the chosen tree.
6. Seat of Guardian Deity/ Healing Deity/ Wish fulfilling Deity	Based on the context, different tree species would be recognised as the seats of different Guardian deities, which safeguard and protect the communities' or the village, the communities, believe.
7. Seat of Spirits & Souls of Ancestor/ Community Hero/Cultural personality	Based on the context, different tree species would be recognised as the seats of the Community ancestors/ Community heroes. Members of the particular community perform puja and make offerings to the tree.
8. Focal Point of a Puja/ Ritual/ Festival/ Cultural process	This form of cultural significance is quite context specific; certain plant species become significant when a specific element worthy of veneration is recognized in it. Soon the plant becomes the centre of attraction of a ritual.
9. Memorial Tree	A tree which is planted in memory of a local personality; a tree which is supposed to have been planted by a local ruler/ king; a tree which is supposed to have been associated with a historical / cultural event.
10. Landmark Tree	A tree found growing in a strategic location which eventually becomes a landmark / identification mark because of its exquisite features.
11. Socio-cultural venue in the village	A tree found in a strategic location of the village and remains accessible to everybody. It is usually majestic looking, gigantic and offers shade.
12. Source of irreplaceable ingredients for ritual and customary observances	This is another form of cultural significance associated with plants; the focal plant species commands its reverence due to its irreplaceable value in a ritual or customary observance in a community context.

This diverse range of Cultural Significance is quite interesting. It is important to note that, similar kinds of Cultural Significance with plants have been reported from other parts too. For instance Dafni *et.al.*, (2006) report 10 tree species which are considered as the preferred places in northern Israel for performing the rites of passage. In another study, Dafni (2007a) identifies 25 types of Cultural Significance associated with plants in different villages of the Middle East. Noteworthy among such types were: plants being the religious meeting places, pilgrimage gathering sites, places for passing judgment, hub of rituals and religious ceremonies, source of ingredients for daily rituals, places of performing rites of passage, wish fulfilling trees. Likewise, in a study from south west China, Staub *et.al.*(2011) report 17 plant species used as the source of incense for worshipping and performing the rituals

Likewise, some illustrations from the recent studies from within the country are interesting: 20 totemic plants regarded as ‘the group’s identity’, by 5 tribes of West Bengal as reported by Deb and Malhotra (2001); thirty six plant species of cultural significance found in the temple yards of Orissa, as reported by, Mohanty *et.al.* (1997), which includes 19 plant species for performing rituals, 7 plant species for making ritual fire, and 10 plant species as the dwelling places of village deities; sixty plant species being considered as ‘Sthalavrikshas’ in 201 groves of Kanyakumari district of Tamil Nadu as reported by Sukumaran & Raj (2008); thirty plant species used in the rituals by the *Mising* tribe of Assam, as reported by Sharma & Pegu (2011); Seventy five tree species retained as ‘Sthalavrikshas’ across 1165 village shrines in Tamil Nadu, as reported by Gunasekaran & Balasubramanian (2012).

All of these bring before us a wide range of plants recognised ‘Culturally Significant’, however, the question *What makes a plant culturally significant?* –is still unresolved.

4.B.2 Is Cultural Significance synonymous to Puja & Venerated Status of a plant?

‘Sacred tree’ or ‘Venerated tree’, is not the sole form of cultural significance associated with plants - is another major finding from the present study.

While the prevailing understanding of ‘Culturally Significant Plant’ readily equates it with a sacred plant or a temple tree, to which the local communities perform puja and make offerings, it is interesting to note that the present study has brought to light the prevalence of different forms of cultural significance associated with plants, much beyond the stereotypical understanding of ‘sacred tree’ or ‘venerated tree’.

It was found that, at least 20 different kinds of cultural significance were associated with plants in the study area. However to make a logical comprehension, these different kinds of cultural significance may be grouped under 12 different categories as above. The Zone wise representation of the 12 categories is as below.

Table 5: Different manifestations of Cultural Significance sighted

Cultural Significance assigned/recognized in the Plant	No. of Occurrence						Total sightings
	NED	ND	CD	SD	ED	ADD	
1. Seat of the Clan Deity	6	4	6	3	5	3	27
2. Seat of the Village Deity	3	4	5	3	0	0	15
3. Seat of the Guardian Deity/Healing Deity/ Wish fulfilling Deity	2	4	5	3	1	4	19
4. Seat of the Farming Deity	1	2	0	2	1	0	6
5. Seat of Consort & Accomplice of Deities	0	3	1	0	0	0	4
6. Seat of family profession/ vocation related Deity	0	0	1	1	0	0	2
7. Seat of souls of Ancestors/ Community Hero/ / Cultural personality	4	3	0	0	0	0	7
8. Memorial Tree	1	1	1	0	0	0	3
9. Landmark Tree	0	1	0	0	1	0	2
10. Focal Point of a Community Ritual/ Puja	4	3	3	4	1	0	15
11. Socio-cultural venue in the village	1	1	1	6	2	0	11
12. Source of principal ingredients for Ritual	1	1	3	6	4	3	18
Grand Total	23	27	26	28	15	10	129

4.B.3 Predominant forms of Cultural Significance attributed to plants

As may be seen from table 5 above, of the 12 forms of cultural significance, 5 specific forms were found more frequently than others. The top 5 forms of cultural significance observed during the study are:

- a) Plants being the Seat of Clan deities-with 27 sightings
- b) Plants being the Seat of Guardian/Healing deities-with 19 sightings
- c) Plants being the Source of Ingredients for different rituals-with 18 sightings
- d) Seat of Village deities-with 15 sightings
- e) Plants being the Focal point of Community Rituals-with 15 sightings

It is interesting to note that, despite being found on community land and qualify to be termed as 'Cultural assets of a village' not all the CSPs found in the study area were accessible to all. While some were meant for all the villagers, some had restricted access. All the 12 forms of Cultural Significance are discussed in detail, as below.

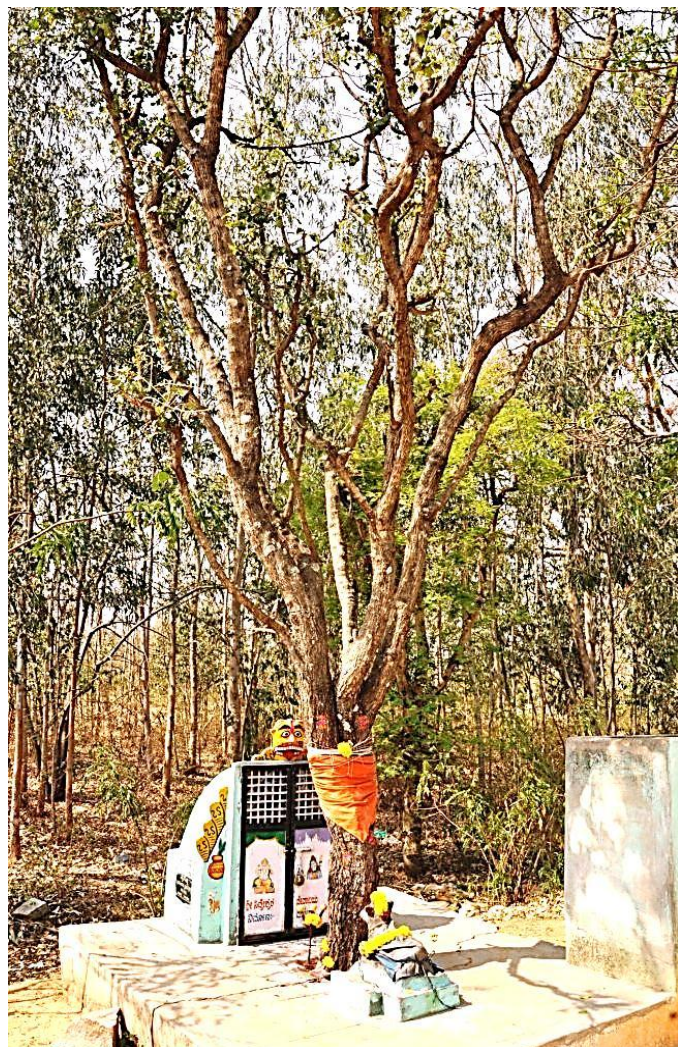
4. C. Plants Being the Seat of Different Deities

It was found that, the local communities have established quite a wide variety of affiliations with plants. The predominant form of Cultural Significance associated with plants was in the form of plants being the dwelling places of different kinds of deities, spirits and ancestral souls, and other cultural personalities. There were trees associated with guardian & healing deities, and profession related deities. Among these different forms, *Plants being the seat of Clan deities* were, more frequently seen than the *Plants being the seat of Village deities*. It was interesting to note that the former category recorded 27 sightings as compared to 15 sightings by the latter. Equally interesting finding was with, *Plants being the seat of Guardian deities* which recorded 19 sightings.

Seat of Clan deities: Altogether 27 sightings were recorded in this category. Fourteen plant species were found to be preferred as the seat of Clan deities, of which Neem appears to be the most preferred choice with 6 sightings, followed by Shami and Tamarind with 3 sightings each. Similarly, Banyan, Krishna Shirish and Bilva are the other species in the order of preference with 2 sightings each. Additionally, Country Date, White Gulmohur Jhingan, Night Jasmine, Small leaved Fig, White Country Fig and Cluster Fig were also found to be the seats of Clan Deities with single sightings.

At least 8 communities were found to have associated different trees with their clan deities as their dwelling places. This practice was particularly noticed among *Chitragaara*, *Agasa* and *Uppara* communities at Kyathekere doddi

village, *Panchamsaali* community at Bhadrapur village, *Kuruba* community at Keroor village, *Beda* community at Mayakonda village, *Maadiga* community at Bettada Mallenahalli village and *Kunchitiga* community at Aladahalli and Karapura villages.



Bilva: Seat of a local deity, Siddeshwara, an accomplice of Lord Shiva. Tamaka, Kolar.

Seat of Village deities: Altogether 15 sightings were recorded under this category. Seven tree species were found to be venerated as the seat of Village deities. Of these, Neem, Banyan, White Country Fig were the 3 most preferred species with 6, 3 and 2 sightings respectively. Besides, Mountain Persimmon, Mysore Fig, Country date and Indian Tulip Tree were the other species, which recorded single sightings, though.

It is quite interesting to infer from the above that, the species choice for associating with village deities is less diverse as compared to the species choice for clan deities. It was found that fewer plant species were preferred as the seats of village deities as against comparatively higher number of species preferred for clan deities.

The study showed that only 7 tree species were preferred for the former, while 14 tree species were being venerated in the latter category.



Banyan: Seat of a local village deity. Villagers throng, perform puja and make offerings to the tree giant during annual fair. Baaguvaala, Tumakuru.

It is interesting to note that, 11 among these 14 species are unique and obligatory, while 3 species (Neem, Banyan, and White Country Fig) were facultative in nature, i.e., they were also found to be preferred as the seats of village deities. It may be thus argued that, a community's bonding with a chosen plant as the seat of clan



Mysore Fig: The Tree in which village deity, *Antharaghattamma* resides, the villagers assert. Antharagatte, Kadur.

deities is quite distinct from the set of plants preferred for this purpose by other communities in the same region.

Such distinct plants being the dwelling places of different village deities were sighted at Vadagera, Gogallu, Kenchaapura, Keroor, Mayakonda, Halkurike, Antharagatte, Doddabala, Besagarahalli, and Lakshmidivarahalli villages.

Seat of Guardian & Healing deities: These trees were recorded at 19 sites. Ten tree species were found to be preferred by the local communities. Among these, it is Banyan, White Country Fig & Neem with 3 sightings each and Mango with 2 sightings were found to be somewhat frequent. Likewise Tamarind, Mysore Fig, Ber, Cluster Fig, Arjuna and Indian Tulip Tree were also found though with single sighting.

Trees being the dwelling places of different Guardian/ Healing/ Wish fulfilling deities as believed by local communities to cure/heal various diseases, fulfill their wishes and protect them from the worldly misery were sighted particularly at Sirivara, Antharagatte, Adavi Somapur, Nagasamudra, Tadas, Bhadrapura, Baagavaala, Halkurike, Kergodu, Matthithala and Bidare villages, with additional sightings at Ayanur and Sirsi.



Top: *Hulidevaru*, the Tiger God dwells in the giant Mango tree, assert local villagers, who propitiate it as a Guradian deity. Stone figurine of tiger is installed in front of the tree and a shelter is constructed over the idol. Nirnalli, Sirsi.

Bottom: *Arjuna*: A healing deity resides in the tree, villagers assert. People suffering from skin infections perform puja and make offerings to the tree to get cured. Matthithala, Malavalli.

Seat of Consort & Accomplice of Village deities: Four tree species were found to be preferred here. Tamarind, Banyan, Shami and Country Date Palm with single sightings were recorded at Mayakonda, Tadas, Bhadrapur, Keroor and Halkurike villages.

Dwelling place of Ancestral Souls and Community Heroes: Five tree species were found to be preferred as the dwelling places of departed souls and spirits of community ancestors, wise men and sages who once lived in the community. White Country Fig and Shami recorded 2 sightings each while, Banyan, Tamarind and Indian cherry were found associated with this cultural significance though with single sighting. These trees were sighted at Thinthini, Sirivara, Bhadrapura, and Keroor villages.



Shami tree and 'Maasti' stone: The *Shami* tree is considered the seat of the departed soul of a local village lady called, *Ittigi Kariyamma* who jumped into the funeral pyre of her husband, who had died in a war, several decades ago. Subsequently, recognizing her benevolent deed, a 'Maasti' stone depicting her story was erected in her honour in the village. The lady in due course was elevated to the status of a local deity by the villagers. Mayakonda, Davanagere.

Seat of Farming & Profession related Deities: Likewise, 6 tree species were found preferred as the seats of deities associated with farming. Sage Alangium with 2 sightings and Krishna Shirish, Banyan, Indian Laburnum, Jamaica Sorrel, Bastard Sandal with single sightings were found during the study. In respect of the deities associated with family professions, 2 tree species i.e., Indian Laburnum and Indian tulip tree were being considered as the seats of such deities and therefore found venerated. These trees were sighted particularly at Kyathekere Doddi, Suttakoti, Gollara Koppalu, Bettada Mallenahalli, Ooganahalli, and Melukote villages.



Indian Tulip Tree: Barbers believe that, a deity favouring their profession resides in this tree; they believe it is auspicious to tonsure the heads of devotees under the tree. Melukote, Mandya

4.D Plants associated with Non-Spiritual forms of Cultural Significance

The study also brought to light many culturally significant trees, which are not necessarily associated with any deities or spiritual elements. Such trees, with an altogether different manifestation of cultural significance, were however, found to be important in local traditions. These were being manifested as below.

Memorial Trees: This was one of the major forms of cultural affiliations of a tree sans a deity. It was found in certain villages, where specific trees were retained in memory of historical and cultural personalities of the community or village. Three tree species were found to be retained under this category. Neem with 2 sightings, Banyan and Bilva with single sighting were recorded. A giant Neem tree at Googallu village in NED was being venerated, as a cultural landmark.



Banyan: Tree planted next to the tomb of a local ruler Madakari Nayaka, in his memory. Mayakonda.

This tree was the place, the villagers assert, where the Kannada poet Allama Prabhu of 12th century AD spent his days composing 'Vachana' (a form of philosophical couplet). Likewise, a Bilva tree at Gavimatha village was found retained in memory of poet Shadakshara deva of late 17th century AD.

Likewise, 2 more trees were retained as memorial trees: In Mayakonda village of Davanagere district, where the tomb of Madakari Nayaka, the ruler from the Nayak dynasty of Chitradurga of 18th century AD is situated, a banyan tree is planted next to the tomb, and local villagers believe that the departed soul of this ruler takes shelter in this tree. Another identical example is with a Neem tree at Bhadrapur village of Gadag district. This tree, assert the villagers, was used by the Maratha ruler Shivaji of late 16th century, as the night shelter for his stallion when he visited this village. Local communities consider these trees as the elements of socio-cultural pride.

Landmark Trees: In some villages, the cultural affiliation was also seen in the form of Landmark trees. Such trees were traditionally being used as landmarks. Four tree species were associated with this form of Cultural Significance. A Banyan tree and a Tamarind tree were being considered as the gateway to the village Tadas in Haveri district; a Neem tree at Keroor village in Gadag district was used as flag post to hoist the emblem flags of village shrine; a Peepal tree at Bidare village in Tumakuru district was considered as the local benchmark to demarcate village boundary.

Plants being the focal point of Rituals & Customary observances: Twelve different plant species were found to be serving this cultural need. Neem, Shami, and Peepal appeared to be the popular choice with 2 sightings each. Additionally White Country Fig, Small Leaved Fig, Bilva, White Gulmohur, Jamun, Ber, Krishna Shirish, Mahua and Indian Tulip Tree were the other tree species which recorded single sighting though. These were in use as the focal points of diverse rituals and customary observances, ranging from performing daily puja to a special puja by the newlywed couples; from making a routine offering to a ritual sacrifice; from being a temporary resting site for pilgrims enroute their pilgrimage, to serving as a temporary hideout for a village deity or its consort.



Ber tree: Hub of a community ritual during an annual fair. Devotees tie rags to its branches, and plead with the local deity *Mallappa* residing in it, to fulfill their desires. Kappatthagudda, Gadag.

These trees were particularly sighted at Anthoor, Vadagera, Bhadrapura, Alur, Pathrematti, Tanigekallu, Kerekodihalli, Bettada Mallenahalli, Kappattha gudda, Melukote, Bidare, and Basavanapura villages.

Plants as Socio-Cultural venue:

While specific trees were treated as the focal points of different rituals as stated above, certain other trees were considered as the hub of different cultural activities. The study identified 8 tree species preferred for this purpose. Neem, Bilva and Peepal with 2 sightings each were the preferred social venue. Likewise Banyan, Shami, Mahua, Indian Tulip tree and Jamaica Sorrel were also recorded with single



Cluster Fig tree: Devotees offer puja to this tree in the premise of Avadhoota matha, Paduvaarahalli, Mysore.

sightings. These were particularly sighted at Vadagera, Bhadrapura, Halkurike, Kerekodihalli, Gollara Koppalu, Ooganahalli, Melukote, Basavanapura, Karapura and Dodda Belavangala villages.

Plants being the prime source of irreplaceable ingredients for village rituals: Eleven species were preferred as the prime source of ingredients for village rituals in the

project area and hence were considered special. These were: Banyan, Neem, Bilva, Fetid Sterculia, Tendu, Greater Reed, Krishna Shirish, Mahua, Indian Coral Tree, White Country fig, and Cluster Fig. Of these, Bilva appeared to be frequently used, as it was recorded at 5 places, while all others were sighted once. The prime forms of irreplaceable ritual ingredients were as below.



Indian Coral Tree: Softwood exclusively used to carve procession idol of village deity and other ritual material. Mirle, Mysore.

- Material for the offerings to a deity (Bilva, Neem, White Country Fig)
- Poles and thatching material for erecting shelter/ pandal during the rituals (Banyan, Greater Reed, Cluster Fig, White Country Fig)
- Oil/ Fuelwood for making the ritual fire (Krishna Shirish, Mahua)
- Ritual lamp post used during the procession of the deity (Tendu)
- Heartwood for carving the procession idol (Fetid Sterculia and Indian Coral Tree)

These trees were sighted at Vadagera, Adavi Somapura, Halkurike, Kalmaradi matha, Belenahalli, Bettada Mallenahalli, Alur, Viadyanathapura, Gavimatha, Mirle, Bidare, Kundur, Dodda Belavangala and Karaapura Villages.

Table 6 shows the consolidated list of plant species associated with different forms of Cultural Significance.

Table 6: Species recurrence within a given form of Cultural Significance

Form of Cultural Significance	No. of Sightings	No. of Species	Plant Species
Seat of Clan Deity	27	14	Neem(n=6), Shami(n=3), Tamarind(n=3), Krishna Shirish (n=2), Banyan(n=2), Bilva(n=2), Country Date palm, Night Jasmine, White Gulmohur, Jhingan, Small leaved Fig, White Country Fig, Cluster Fig, Tapasi
Seat of Guardian/ Healing / Wish fulfilling Deity	19	10	Banyan(n=5), White Country Fig(n=3), Neem(n=3), Mango(n=2), Ber, Tamarind, Mysore Fig , Cluster Fig, Arjuna, Indian Tulip Tree
Source of ingredients for Community Rituals	18	11	Bilva (n=7), Cluster Fig (n=2), White Country Fig, Banyan, Fetid Sterculia, Neem, Tendu, Greater Reed, Krishna Shirish, Indian Coral Tree, Mahua
Seat of Village Deity	15	7	Neem(n=6), Banyan(n=3), White Country Fig (n=2), Country Date Palm, Mountain Persimmon, Mysore Fig, Indian Tulip tree
Focal point of Rituals & Customary observances	15	12	Neem(n=2), Shami(n=2), Peepal(n=2), White Country Fig, Small Leaved Fig, Bilva, White Gulmohur , Jamun, Ber, Indian Tulip Tree, Krishna Shirish, Mahua
Socio-Cultural venue	11	8	Neem(n=2), Bilva(n=2), Peepal(n=2), Banyan, Shami, Mahua, Indian Tulip tree, Jamaica Sorrel
Seat of Farming Deity	7	6	Sage Alangium(n=2), Krishna Shirish, Banyan, Indian Laburnum, Jamaica Sorrel, Bastard Sandal
Seat of Ancestral Souls and Spirits	7	5	White Country Fig(n=2), Shami(n=2), Banyan, Tamarind, Indian Cherry
Seat of Consort or Accomplice of a Deity	4	4	Tamarind, Banyan, Neem, Country Date Palm
Memorial tree	3	3	Neem,, Banyan, Bilva
Landmark tree	2	2	Banyan, Tamarind
Seat of Profession specific Deity	2	2	Indian Laburnum, Indian Tulip Tree
Names in bold indicate that, the plant represents more than one kind of cultural significance, in its location.			

4.E Species Choice for a Specific element of Cultural Significance

4.E.1 Attributes of a Plant species associated with a specific form of Cultural Significance

It is quite evident from the above that, local communities have exercised some intelligent criteria to recognise and accept a particular plant species as the champion representing a certain Cultural significance in any given cultural context. It is to be noted that, any random plant available in the vicinity was not arbitrarily chosen to address the cultural significance under question, is the finding from the study. Plants identified as *culturally significant* under any category, are the specific choices exercised by the local communities, the study ascertained. This was evident in the case of trees being the dwelling place of different local deities. It was found that only select species were chosen to represent a specific kind of cultural significance. It is however not clear, as to how only a specific plant species is chosen for the purpose. It is quite a puzzle, whether or not some attribute in a *culturally significant* plant is recognised by local communities, though implicitly, as a qualifier or decisive element in order to get selected to represent a specific form of cultural significance.

It was observed that, not all CSPs were chosen to be the dwelling places of village deities, how much ever the species is considered culturally important. This was quite evident with Bilva tree. This species, which is one of the most preferred choices as a source of irreplaceable ritual ingredient (in the form of leaves, nibbles and tender shoots for the offering) was not considered as the seat of any village deity. Its only exceptional occurrence was with a clan deity at Tamaka in ED. Likewise, another popular CSP, the Peepal tree, was not at all a choice as the seat of village deity or a clan deity. Its cultural significance was however limited to it being a focal point of customary observance or landmark tree or social venue, although the popular belief elsewhere associates it as a dwelling place of lord Ashwathanarayana. It was quite surprising to find that no significant village fair, community ritual, or festival was exclusively associated with Peepal tree among any community in the project area.

This obligatory species choice embodying a particular cultural significance was also reflected with other manifestations of cultural significance. It was observed that, only 2 tree species were preferred as the source of heartwood to carve out the procession idols of village deities. These were Fetid Sterculia (*Sterculia foetida* L.) and Indian Coral tree (*Erythrina variegata* L.). It was observed that these two species were not chosen arbitrarily by local communities, although community elders asserted that, it was nothing but an age old practice, to use the heartwood of that tree species only and they believed that, the deity had instructed them to do so. However the answer was not so convincing.

However, it is logical to expect that, these two trees with the softwood were the obvious choice for meeting the needs. It is nothing more than an intelligent strategy that encapsulates communities' traditional knowledge (related to timber and wood for carving) and transmits the same in the form of an annual ritual of bringing the wood of these two tree species from the forest for carving out the procession idols.

Another interesting finding related to species choice was with the plants associated with Guardian deities, and with the plants having medicinal virtues being venerated. It was found that, 9 different tree species were associated with Guardian or Healing or Wish fulfilling deities and were eventually found venerated. These include: White Country Fig, Tamarind, Banyan, Neem, Ber, Mysore Fig, Cluster Fig, Arjuna, and Indian Tulip Tree. It is interesting to note that, excepting Neem and Arjuna, other species as above are not familiar for their striking medicinal virtues. However, it was noticed that, the local communities believed that, some healing deity resides in these trees who is benevolent to them, and which is why they experienced the healing properties. Having been benefitted, the local communities transform their indebtedness to the benevolent trees by paying obeisance and making offerings; in due course, when the word had spread, other community members too would begin performing puja, make a wish, tie a rag or thread to the trunk of the focal tree, plead with the residing deity for their wellbeing. A community practice takes shape slowly.

Certain trees with exquisite medicinal virtues and magical healing powers were found elevated to the status of venerated tree which is quite restricted only to that particular tree and not to other trees of the same species in the vicinity.

Assigning such cultural significance to select trees whose benevolence was noticed, was conspicuous in select villages. These trees were found to have been selectively chosen by the local communities, to be the seats of different healing deities in the respective regions, owing to the trees' unique healing powers. Such trees were the focus of community attention, where devotees throng in large numbers to perform puja, make offerings. Noteworthy among such healing trees attracting large gatherings were found with: the Arjuna tree at Matthithala, Mysore Fig tree at Antharagatte, Neem tree at Halkurike and Nagasamudra, Banyan tree at Adavi Somapur, White Country Fig tree at Tadas and Indian Tulip tree at Kergodu.

4.E.2 Multiple Significance V/s Singular Significance: Popularity Index of CSPs

Which is the most preferred plant species to anchor a cultural significance?-is one question worth probing. Table 8 shows a list of most preferred tree species for different cultural significance elements. It may be treated as the popularity index of different plant species in the context of different forms of cultural significance. A quick look at the table brings out the following points.

Neem appears to be the most popular and culturally resilient species. Its popularity reflects in the multiplicity of cultural attributes it is associated with. It is found to associate with 10 different forms of cultural significances: It serves as the seat of Village deity, Clan deity, Consort or accomplice of a deity, Healing deity, and dwelling place of ancestral souls. It is also the Focal point of village rituals; it is a Memorial tree, and Landmark tree, it is the Socio-Cultural venue and a source of ingredients for village rituals too.

Likewise, Banyan is the equally best choice which reflects 10 attributes of Cultural Significance, which reflects all the attributes as above, except as the Focal point of rituals. However, Banyan unlike Neem, serves as the seat of a farming deity.

Table 7: Extent of Preference of a CSP (as No. of occurrence) for different attributes of CS

Culturally Significant Plant	Category of Cultural Significance*												CS categories represented
	1	2	3	4	5	6	7	8	9	10	11	12	
Neem	6	6	1	-	-	3	1	2	2	1	2	1	10
Banyan	3	2	1	1	-	3	1	-	1	1	1	1	10
White Country Fig	2	1	-	-	-	3	2	1	-	--	--	1	6
Tamarind	--	3	2	-	-	1	1	-	-	1	--	--	5
<i>Bilva</i>	--	2	-	-	-	--	-	1	1	--	2	5	5
Indian Tulip Tree	1	--	-	-	-	1	-	1	-	--	1	1	5
<i>Shami</i>	--	3	-	-	-	--	2	2	-	--	1	--	4
<i>Krishna Shirish</i>		2		1	-	--	-	1	-	--	--	1	4
Country Date Palm	1	1	1	-	-	--	-	-	-	--	--	--	3
Peepal	--	--	-	-	-	--	-	2	-	1	2	--	3
Indian Laburnum	--	--	-	1	1	--	-	-	-	--	--	--	2
White Gulmohur	--	1	-	-	-	--	-	1	-	--	--	--	2
Small leaved Fig	--	1	-	-	-	-	-	1	-	--	--	--	2
Mysore Fig	1	--	-	-	-	1	-	-	-	--	--	--	2
Cluster Fig	--	--	-	-	-	1	-	-	-	--	--	1	2

* for the type of cultural significance, refer to Table-4

While the popularity index points at select tree species being more resilient than others, it also indicates that such species are widely accepted to be the choice species for representing certain forms of cultural significance. The table above points at certain tree species being less resilient, as they represent only select few elements of cultural significance, which thereby makes them quite unique. Such less resilient species remain restricted to one or two places. Table 1b enlists 17 such unique species, which indirectly tell that, species choice is quite a region specific and context specific phenomenon which cannot be applied to different regions.

4.E.3 Zone wise frequency of occurrence of CSPs under different forms of Cultural Significance

Zone wise frequency of occurrence of plant species under different forms of cultural significance is as below.

Table 8: Zone wise frequency of Occurrence of CSPs under different forms of Cultural Significance

Cultural Significance	NED	ND	CD	SD	ED	ADD
Seat of Village Deity	White Country Fig, Neem, Neem	White Country Fig, Neem, Neem, Neem	Banyan, Neem, Mysore Fig, Country Date, Mountain Persimmon	Indian Tulip tree, Banyan, Banyan, Neem	-----	-----
Seat of Clan Deity	White Country Fig, Neem, Neem, Shirish, Shami	Tamarind, Tamarind, Neem, Banyan	Neem, Neem, Krishna Shirish, Shami Country Date Palm Tamarind	Shami, Banyan White Gulmohur	Bilva, Bilva Jhingan, Small leaved Fig, Night Jasmine,	Cluster Fig, Tapasi, Bilva
Seat of Consort or Accomplce of Deities	-----	Banyan, Tamarind, Neem	Tamarind	-----	-----	-----
Seat of Farming Deity	-----	Sage Alangium, Sage Alangium	-----	Banyan, Indian Laburnum, Jamaica Sorrel	Bastard Sandal	-----
Seat of Profession specific Deity	-----	-----	Indian Laburnum	-----	-----	-----
Seat of Guardian / Healing /Wish fulfilling Deities	White Country Fig, Tamarind	Banyan, White Country Fig, Neem, Ber	Banyan, Banyan, Neem, Mysore Fig, Cluster Fig	Arjuna, Indian Tulip Tree , White Country Fig	Neem	Mango, Mango, Banyan, Banyan
Seat of Ancestral Souls and Spirits	Banyan, Indian Cherry, White Country Fig Neem	Shami, White Country Fig	Banyan	-----	-----	-----
Focal point of Rituals and Customary observances	White Country Fig, Neem, Shami, Neem	Shami, Neem, Small Leaved Fig	Bilva, Peepal, Neem,	Shami, White Gulmohur , Jamun, Indian Tulip Tree	Peepal	Cluster Fig
Memorial trees	Tamarind,	Neem	Banyan	-----	-----	-----
Landmark tree	-----	Shami	-----	-----	Peepal	-----
Socio-Cultural Venue	Neem	Bilva	Peepal	Mahua , Mahua	Peepal	-----
Source of ingredients for Rituals	-----	Bilva	Fetid Sterculia, Neem, Bilva	Tendu, Bilva, Greater Reed, Bilva, Krishna Shirish, Indian Coral Tree	Cluster Fig, Bilva, Indian Laburnum, Temple tree	Cluster Fig, Bilva, Bilva

Plant names shown in bold above indicate that, the plant simultaneously represents more than one kind of cultural significance, where it is located. Repeated entries indicate as many occurrences by that plant.

4.E.4 Species Choice for non-deity forms and attributes of Cultural Significance

It was found that certain trees were considered special by the virtue of their association with a cultural or historical personality. Noteworthy among such select trees were: the Banyan tree planted next to the tomb of Madakari Nayaka, the local chieftain from the dynasty of Chitradurga rulers, at Mayakonda village; a clump of Banyan tree supposed to have been planted by the same ruler at Medakerammana katte village; a huge Neem tree at Gogallu village, which is claimed to be the embodiment of poet Allama Prabhu of the medieval period; another Neem tree at Bhadrapur village, which is associated with the Maratha ruler Shivaji of the Mughal period.

Another reason for assigning a special cultural significance to a plant lies in its unique morphological features and botanical rarity, which lend a distinct identity. Such morphological variations are quite rare and would readily attract one's attention. Noteworthy among such plants with distinct identity are the Bilva tree at Gavimatha village, whose leaves are unifoliate unlike the regular trifoliate leaves.



Special decorative shield of betel leaves for affixing to the main entrance of the deity's seat.

5. PROBING FURTHER



A gigantic *Shami* tree, believed to be the seat of a local deity. Stone platform and a small shrine built around its base, facilitate puja performance. Veneration of Shami tree is quite a common sight in northern Karnataka. Sirivara, Rayachuru.

While the data analysis has brought to light many interesting findings related to CSPs, it has also opened up many interesting and complex questions with no answers readily available. These open ended questions eventually trigger further probing and contemplation in their attempt to find certain answers. Presented below are some such interesting pointers for reflection.

5.1 Six different species of the genus *Ficus*

One of the striking observations is the reliance of local communities on multiple species of *Ficus*, as their choice of CSP among the 33 species of CSPs. The study brought to light different kinds of cultural significance attributed to 6 species of *Ficus*. They are: Banyan (*Ficus benghalensis* L.), Mysore Fig, (*Ficus mysorensis* Var. *pubescens*), Cluster Fig (*Ficus racemosa* L.), White Country Fig (*Ficus microcarpa* L.F.), Small leaved Fig (*Ficus infectoria* SENSU ROXB), and Peepal (*Ficus religiosa* L.)

While the common understanding readily points at Peepal (*Ficus religiosa* L.) as the predominant CS species, the present study however brings to light an altogether different picture.

Peepal is a majestic tree generally seen near the village shrines or at village entrance almost across southern Karnataka. Such trees swaying their young shoots with a murmur at the slightest breeze make a familiar sight in the rustic surroundings. Despite such common presence, it was surprising to find that no village deity was associated with this tree in the study sites. However the popular belief, which seems to have been influenced by the vaishnavite traditions, relates this tree to lord 'Ashwatthanarayana', which is not a deity rooted in local traditions. Although this tree was found in the southern parts of the project area (SD and ED), it was found to be treated more as a community platform or a landmark tree, than as a dwelling place of a local deity. We did not come across Peepal being the seat of any major local deity anywhere in the study region nor was it associated with any community specific ritual or an annual fair.

On the contrary, many village deities were predominantly associated with Banyan tree (*Ficus benghalensis* L.). The deity "Pataladamma" for instance, is closely associated with it whose name originates from the word *Aala*, the Kannada name for Banyan. The name "Pataaladamma" literally means 'fierciful deity dwelling in a Banyan Tree'. Likewise, Banyan was found associated with 12 different local deities. It was also found to be the source of many irreplaceable ritual ingredients.

Likewise, another local deity called "Gonimaradamma" is named after *Gonimara*, the Kannada name of Mysore Fig (*Ficus mysorensis* Var. *pubescens*). The name *Gonimaradamma* literally means, "Mother goddess seated in *Gonimara*". Similarly, it

was found that other species of *Ficus* were either considered as the seats of local deities, or focal points of community observances. In certain cases the cultural significance ascribed to a *Ficus* tree was due to the fact that it was the cardinal source of irreplaceable ingredient for a ritual performance.

Special mention should be made about Cluster Fig (*Ficus racemosa* L.), which is considered a CSP by the local communities in many villages of Tumakuru district. Fresh twigs of this tree are preferred as an irreplaceable ingredient for performing puberty related rituals particularly among the *Tigala* community. When a girl in this community attains puberty, the leafy shoots of Cluster Fig are invariably brought to erect a temporary hut or a thatched cabin in which the girl is expected to stay for three days as a part of the puberty rituals observed among this community. Since the ritual would remain incomplete in the absence of erecting this makeshift cabin using Cluster Fig branches, this community takes extra care to protect this tree in the village vicinity. Such irreplaceable role assigned to it, establishes its salient cultural significance, which in turn ensures its protection. Likewise, branches of this tree are brought by the bride's maternal uncle for the marriage rituals. This practice is also observed among other communities in the transition zone of Karnataka.

Similarly, White Country Fig (*Ficus infectoria* SENSU ROXB.) and Small leaved Fig (*Ficus microcarpa* L.F.) trees were considered the seats of local deities while in some cases were also regarded as wish fulfilling trees with magical powers. Likewise different *Ficus* trees were found to be regarded as focal points of different local festival, fairs and rituals in many sites. Thus it seems that the common practice of circumambulation around a Peepal tree is more of a blindly copied practice, than an observance rooted in an indigenous tradition. It was also found that while several community specific rituals were centered on all other species of *Ficus*, surprisingly, no single example of community originated ritual was associated with Peepal tree.

5.2 Banyan v/s Peepal

The popularity index of the CSPs, (based on the number of attributes of Cultural Significance a tree is associated with), throws open a completely different picture of CSPs. As against the common understanding, which readily recognizes Peepal as the popular CSP, the local communities in the project sites have a different choice altogether, the findings indicate. Among the 33 species of CSPs, 11 were found to anchor more than 3 attributes of cultural significance, and Banyan occupies the top position in this Popularity index, while Peepal occupies the last position. Banyan appears to be the most preferred choice as it was found to anchor 10 out of 12 attributes of the cultural significance. It was surprising to note that only 3 attributes of cultural significance were associated with Peepal.

Similar to Banyan, Neem also anchors 10 attributes of cultural significance. It was followed by White Country Fig in 2nd place with 6 attributes, while Tamarind and Bilva take the 3rd place with 5 attributes each. Shami, Ficus Complex, Indian Tulip tree and Krishna Shirish, occupy the 4th place with 4 attributes each.

5.3 *Bilva & Shami: Regional counterpart species of CSPs?*

Another interesting element was associated with Shami trees. Two distinctly different tree species were found to be considered as Banni in the project area, the study indicated. One is *Acacia ferrugenia* DC. in the southern parts of Karnataka while *Prosopis cineraria* (L.) DRUCE is the other species in the northern parts of Karnataka. Both species belonging to two distinctly different genera were being identified with a single 'cultural name'.

A still more interesting trend appears to exist with these two trees, the findings suggest. *Shami* is a frequently seen species in NED and ND zones. However its predominance gradually declines from NED downwards with 3, 1 and 2 sightings in ND, CD and SD respectively. On the contrary, predominance of *Bilva* gradually increases, from NED downwards with 0, 2, 2, 2, 3 sightings in NED, ND, CD, SD and ED respectively. This is almost the opposite of the sightings recorded by *Shami*. This interesting finding makes us to ask: *Are Shami and Bilva two counterpart species of Culturally Significant Plants?*

While *Shami* dominates northern Karnataka region, *Bilva* takes its place in southern Karnataka. However, it is to be verified whether these two species represent an identical set of cultural attributes, one in the north and the other in the south of Karnataka.



Shami: Villagers offer puja during Dusserah to this giant tree, which is believed to be the seat of a community deity. Alur, Mandya.

6. WHY ARE CSPs PROTECTED?



Platform built around Bilva trees in a natural population, on a pilgrim route, which are venerated by the pilgrims enroute. Pathrematti, Haveri.

..Á ^a A	^a ÁÁÁIÁPÉAQÁ	F ^a ÁgkzP ^e é zÉEUÓPAZP ^Á Á zÁ«ÁiÁÁ ^a Á ^a Á ^a ÁVZÁY ErÁ UÁÉ ^Á Á ^a ÁgEÁB gÉÉUÁ gÁFÉUÁZÁ PÁYÁQÁVÁVÁAS ÉÁ©PÉ EgÁ ^a Ázj ÁzÁ
D [®]	^a ÁÁÁIÁPÉAQÁ	F ^a ÁgkzP ^e é ^a ÁÁgP ^Á Á zÁ«ÁiÁÁ EFÁiÁÁVZÁVÁAS ÉÁ©PÉ-ÁAZÁ
..Á ^a A	PgÁEgÁ	PÁ©ZÁ ^a ÁMÉ ZÉqP ^Á Á zÁ«ÁiÁÁ F ^a ÁgkzP ^e é EFÁAvÁ vP ^Á Á ^a ÁÁZÁÁiÁ-zP ^Á ÁgEÁB gÉÉUÁgÁFÉUÁZÁ PÁYÁQÁVÁVÁAS ÉÁ©PÉ EgÁ ^a Ázj ÁzÁ
..Á ^a A	PgÁEgÁ	F ^a ÁgkzP ^e é SgP ^Á ÁYÁ zÁ ^a ÁgÁ EFÁiÁÁVZÁÁEÁZÁ ÉÁ©PÉ EzÉ F zÁ ^a ÁgÁ ErÁ H gEÁB gÉÉUÁ gÁFÉUÁZÁ PÁYÁQÁVÁVÁAS ÉÁ©PÉ-ÁgÁ ^a Ázj ÁzÁ
..Á ^a A	PgÁEgÁ	H j ÉÁ [°] ÁSÁMÁ ^e éÁÁQÁ ^a Á PÁ [®] Á EgP ^Á JAZÁ.
..Á ^a A	PgÁEgÁ	F ^a ÁgP ^Á Á UÁÉ ^Á Á zÁ ^a ÁMÉ H gP ^Á ÁÉÁ EFÁiÁÁVZÁVÁAZÁ ÉÁ©PÉ-ÁAZÁ
D [®]	PgÁEgÁ	©ÁgÁÉÁ ^a ÁgkzP ^e é EFÁiÁÁVZÁY UÁÉ ^Á ÁÉÁB PÁYÁQÁVÁVÁAS ÉÁ©PÉ
S ^{αβ}	PgÁEgÁ	CdÁiÁÉÁ ^a Áolzá S½ EzÁY, YÁEF ¹ PÉVÁÁwÁ ^a Ázj ÁzÁ
S ^{γj}	PgÁEgÁ	CdÁiÁÉÁ UÁr S½ EgÁ ^a Ázj ÁzÁ
D [®]	..ÁUÁ ^a Á¼Á	F ^a ÁgkzP ^e é ^a ÁÁÉÁ±ÁgÁ zÁ ^a ÁgÁ EFÁiÁÁVZÁVÁAS ÉÁ©PÉ EzÉÁB YÁEF ¹ Á ^a Ázj ÁzÁ ^a ÁPÁÁUÁVÁAS ÉÁ©PÉ F ^a ÁÁVÁP ÉÁ UÁÉ ^Á Á ^a ÁgÁ eÁÉÁ ^a ÁgÁUÁÉÁB PÁYÁQÁVÁVÁAS ÉÁ©PÉ EgÁ ^a Ázj ÁzÁ
CwÁ	©zÁgÉ	ErÁ H j ÚÉ MAZÁ CwÁ ^a ÁgÁ ÁiÁÁ ^a ÁzÁ ^a ÁÉÁiÁ [°] é ^a ÁÉÉgÁ ^a ÁzÁ ^a É ^a ÁSÁCÁ±Á, ÚMÁ YÁ©ÉÚÉ PÁÁÁiÁ ^a ÁV [°] ÁPÁZÁ ^a ÁYÁ±Á, zÁ PÉÉÁiÁÉÁB F ^a ÁgkzP ^e ÁzÁ ^a ÁYÁÁiÁÁVÁgÉ
Cg½	©zÁgÉ	F ^a ÁgP ^Á Á H gÁ PgÁiÁ S½ EzÁY, PgÁiÁ S½ UÁUP ^Á ÁÉÉÁB vÁg [®] Á [°] ÉÁZÁUÁ YÁEF ¹ PÉVÁÁ ^a Ázj ÁzÁ
Cg½	©zÁgÉ	UÁÉ ^Á Á ^a ÁgÁ ^a ÁÉUÁP ^Á é±ÁzÁ ^a ÁgÁ PÁUÁÉÁB NÁ ^a Á ^a ÁZÁ ^a ÁzP ^Á é CÁYÁP ^Á ÉÁB [°] ÉWÁ ^a Á ^a ÁÁÉÁ F ^a ÁÁgPÉ YÁÉÉ [°] Á ^a Á PÁÁ ^a ÁZÉÉÁ ÉÁVÁgÁ CÁYÁP ^Á ÉÁB F ^a ÁÁgkzP ^e ÁiÁ [°] é VÁCj ^a Á ^a ÁÁrPÉ-ÁzÉ
YÁj eÁVÁ	©zÁgÉ	EzÁ eÉgÁ YÁ [°] ÉÁ WÁXÁPÁPÁgÁ zÉ ^a ÁVÁ DVgÁ ^a Ázj ÁzÁ
..Á ^a A	[°] ÁÁj PÉ	YÁVÉP ^Á Á F ^a ÁgkzP ^e é EFÁiÁÁVgÁ ^a Ázj ÁzÁ
F ZPÁ	[°] ÁÁj PÉ	H gÉÁVÁiÁ GvP ^Á ÁzP ^e é UÁÉ ^Á ÁzÁ ^a ÁVÁiÁÁ YÁÉÉÁj ÁiÁÉÁB ^a ÁzÁÁ©ZÁUÁ F ^a ÁÁgP ^Á ÉÁj P [®] Á [°] ÉVÁU «dÉÁ©Á ^a ÁVÁzÉ «zÁÁ DZÁUÁÉ «ÁÁ ^a ÁzÁ ^a ÁgÁ
UÉÁTÁ ^a ÁgÁ	CÁVÁ WÁMÁ	F ^a ÁgP ^Á Á UÁÉ ^Á ÁzÁ ^a ÁMÉ UÉÁTÁ ^a ÁgkzP ^e ÁÉÁ EFÁiÁÁVgÁ ^a Ázj ÁzÁ
©©é	ÁRgÁÁiÁ YÁ Át	PÁgÁ ^Á ÁÁzP ^e ÉÁ YÁVÁÉÁZÁ YÁÉÉUÁÉ, ^a ÁVÁU [°] ÁUÁ-ÁVÁ ^a ÁÁZÁÁiÁzP ^Á Á ^a ÁzÁ ^a É ^a ÁSÁ ÉÁVÁgÁ «±ÁÁ DZÁUÁiÁ ^a ÁZÁ ^a ÁzPÉ CvÁUÁP ^Á ÁV [°] ÁPÁZÁ ^a ÁYÁÉ ^a ÁVÁÁiÁÉÁB MZÁV ^a Á ^a ÁgÁ
[°] Át Á	ÁRgÁÁiÁ YÁ Át	F ^a ÁgkzP ^e é PÁ©ZÁ ^a ÁVÁiÁÁ EFÉ ^a ÁwÁgÁ ^a Ázj ÁzÁ
SÁUj ^a ÁgÁ	PgÁUÉÁqÁ	UÁÉ ^Á ÁzP ^e é SÁUj ^a ÁgÁ EzÁgÉ PÁ-Á ^a ÁUÁÁ SgÁ ^a ÁC©É UÉÁUÉ EzÁgÁ ^a ÁYÁÉÁB VÁ½zÁgÉ ÁiÁÁ ^a ÁzÁ gÉÉUÁ SgÁ ^a ÁC©É JAS ÉÁ©PÉ-ÁAZÁ
S ^{αβ}	PgÁUÉÁqÁ	H j ÉÁ [°] ÉÁV [°] ÉP ^Á é S ^{αβ} ÁgÁ EzÁgÉ H j ÉÁ K½UÉ JAS ÉÁ©PÉ-ÁAZÁ
^a ÁVÉÁgÁÁiÁTÁ	ÁÁzÁ ^a ÁÁÉPÁzÁ	[°] ÁdÉÁ ^a ÁÁZÁÁiÁzP ^Á Á ^a ÁzÁ ^a É ^a ÁVÁgÁ «±ÁÁ PÁÁiÁÁUÁÁ F ^a ÁÁgkzP ^e ÁiÁ [°] é ÉÁÁiÁÁVÁPÉ
vÁYÁgÉ	ÁÁzÁ ^a ÁÁÉPÁzÁ	UÁÉ ^Á ÁzÁ ^a ÁVÁiÁZÁ ^a ÁzP ^Á ÁÉÁ [°] ÁzP ^Á é YÁÁdÁ ^a ÁÁÁqÁ ^Á Á EzÁgÁ PÉÁ [°] ÁUÁÁ PÁÁÁiÁÁÁV [°] ÁPÁZÁ ^a ÁYÁVgÁ ^a Ázj ÁzÁ

~Á~É°Á@Áe	~í ðá áá ~ÁEP Mzi	UÁ@Á zÁá MÉ °ÁZP ÁEÁ UÁr ÁiÁ vÁgÁ ÁiÁ áÁÁ°Á°ÉCPUE PkÁÁÁiÁ ÁV ~ÁPÁZÁ , Áá ÁVÁ-ÁZÁ.
PPÉ	~í ðá áá ~ÁEP Mzi	Uk gÁUÁÁEÁ ¥ÁEUE PPÉ á ÁgÁ PkÁÁÁiÁ ÁV ~ÁPÁVgÁ ÁZj ÁZÁ
D®	zÉEqí ~Á°	UÁ@Á , ÁgÁ á ÁE UÁP é °É ÁU á ÁE ÉGÉÁUÁ á ÁVÁU á ÁZÁ á É , ÁZÁ ÁZÁ ZÁÁgÁ ±Á , PÉ PkÁÁÁiÁ ÁV ~ÁPÁZÁ PÉÁ ~ÁÁEÁB MZÁ , Áá á ÁgÁ zÁ.
ZÁdP	PÁSZÁ ° Mzi	UÁ@Á zÁá MÁiÁÁZÁ ¥Á ÁZP ÁEÁ °ÁZP é PÉÁQPE F á ÁgÁ , ÉZÁiÁÁ PkÁÁÁiÁ ÁV ~ÁPÁVgÁ ÁZj ÁZÁ
D®	~É ÁUgÁ ° Mzi	UÁ@Á zÁá MÁiÁÁZÁ ¥Á ÁZP ÁEÁ zÁ« ÁiÁÁ F á ÁgÁ P é á Á , PÁVZÁV ErÁ ¥ÁÁVZÁ KÁÁEÁB PÁ¥Ár PÉÁQÁ SgÁWÉÁVÁAS ÉÁ°PE-ÁAZÁ
S±ß	D®ÉgÁ	F á ÁgÁ P é ±DU zÁá MÁiÁÁZÁ S±ß á Á° ÁPÁ½ zÁ« ÁiÁÁ ÉÉ ÁiÁÁVZÁV J°gÉÁB PÁ¥ÁÁVÁVÁAS ÉÁ°PE-ÁAZÁ
» ¥Áí	D®ÉgÁ	°ÁgÁ P é UÉ , Áj zÁ » ¥ÁÁiÁ á ÁgÁ
D®	D®ÉgÁ	F á ÁgÁ P é °ÁgÁ ÁEÁ UÁr ÁiÁ JzÁj VZÁV , ErÁ ¥ÁÁVZÁ PÁgÁS dÉÁÁUzP ÁgÁ á ÁZÁ ÁiÁ « Cü DZÁUÁÁ ÉÁÁiÁÁ Á PkÁÁÁiÁ ÁZÁ á ÁCPÉ
©®é	á ÉZÁEÁXÁ ¥ÁgÁ	á ÉZÁEÁXÁ ÁgÁ UÁr ÁiÁ D°ÁgÁ zP zÁV , CÉFVZÁ ¥ÁEUE ~ÁPÁZÁ ¥ÁÁE , Áá ÁVÁiÁEÁB MZÁ , ÁVZÉ z°ÁEÁ á PPE ÁS ÉÁ°PE-ÁAZÁ
S , j	á ÉZÁEÁXÁ ¥ÁgÁ	F á ÁgÁ SÁQZÁ á ÁTÁU zÁá Á°ÁiÁÁZP é ¥ÁÁZP ÁV S¼PÁiÁÁUÁVZÉ
EÁgÁÉ	S , P ÉÁ ¥ÁgÁ	á ÁZÁ ÁiÁ , ÁZÁ ÁZP é F á ÁgÁ PÁUÉ zÁGÉ JgÁiÁÁ ÁZj ÁZÁ
©®é	Uk á Áol (zÉUKEgÁ)	KPZÁÁ ©®ÁÁEÁ MZÁ « ±ÁUÁ zÁUÁ°ZÁ ¥ÁÁVÉZÁ ¥ÁEUE ~ÁPÁZÁ ¥ÁÁE Áá ÁVÁiÁEÁB MZÁ , Áá á ÁgÁ
° ÁUgÁ VqÁ	UKE®gÁ PÉ¥ÁÁ	° ÁUgÁ wá ÁÁEÁ UÁr ÁiÁ S½-ÁZÁV DqÁ , PÁj UÁÁ PÁ°Á° Áj vÁ EvÁÁc eÁEÁ° ÁgÁ gÉÁUÁÁ aOVUE PkÁÁÁiÁ ÁV ~ÁPÁZÁ , Áá ÁVÁ
D®	H UEA ° Mzi	D®ZÁ á ÁgÁ ¥PZP é PÁgÁ ÁVÉ ° ÁUÁ ÁEÁ UÁr ÉgÁ ÁZj ÁZÁ
D®	©Oá zÁá ÁgÁ ° Mzi	E° -ÁAZÁ PÁÁV PÉÁQÁ j UE F á ÁgÁ P ÁiÁ° é aOVÉ °ÁQÁ ÁZj ÁZÁ
~Áá Á	©Oá zÁá ÁgÁ ° Mzi	UÁ@Á zÁá MÁiÁÁ F á ÁgÁ P é ÉÉ ÁiÁÁVgÁ ÁVÁS ÉÁ°PE-ÁgÁ ÁZj ÁZÁ
CwÁ	©Oá zÁá ÁgÁ ° Mzi	F á ÁgÁ P ÁZP ÁEÁ UÁr ÁiÁ D°ÁgÁ zP ÁgÁ ÁZj ÁZÁ
¥Áj á ÁVÁ	« Á ~ É	UÁ@Á ÁZÉÁ zÁ GvP P ÁEwöÁiÁ PÁEUE ~ÁPÁZÁ PÉÁgÁEÁB MZÁ , Áá á ÁgÁ
PPÉ	ÁVÉ C Sá	ÁVÁ á ÁVÁ P ÉP é PÁgÁ ° ÁÁZÁiÁEÁB vÁUÁÁ vP ÁEÁB á ÁVÁU vP ÁÁ , ÁEÁB PÁ¥ÁQÁ á zÁ« ÁiÁÁ F á ÁgÁ P é ÉÉ ÁiÁÁVZÁVÁAS ÉÁ°PE-ÁgÁ ÁZj ÁZÁ
D®	PgÉ á ÁÁUÁÁ PÉ¥ÁÁ	F á ÁgÁ P é á ÁÁEÁ±ÁgÁ zÁá ÁgÁ ÉÉ ÁiÁÁVZÁV vP ÁÁ °É°UzÁUÁÁ ¥ÁÁ°EÁB , gÁ ÁUÁÁEÁB , vP ÁEÁB PÁ¥ÁQÁVÁEÁAS ÉÁ°PE-ÁgÁ ÁZj ÁZÁ
ZÁdP	PÁÁVÉ PÁZÉÉrÁ	F á ÁgÁ P é F gÁ PÁÁ F gÁU zÁá ÁgÁ ÉÉ ÁiÁÁVZÁV , vP ÁÁ °É°UzÁUÁÁ ¥ÁÁ°EÁB PÁ¥ÁQÁVÁEÁAS ÉÁ°PE-ÁgÁ ÁZj ÁZÁ
SÁUj	á ÁÁ°Á PÉÁÁÉ	S°Á » ÁC±ÁZÁ F á ÁgÁ PÁUÉ ~ÁPÁ zÁÁr ÁiÁEÁB vÁÁiÁÁÁ gÉrÁ-ÁZÉ
á ÁVÁ á ÁgÁ	á ÁVÁ vÁÁ±ÁgÁ	F á ÁgÁ P é á ÁVÁVÁÁ±ÁgÁ zÁá ÁgÁ ÉÉ ÁiÁÁVZÁV , E° é ¥ÁEÉ , P é Áá Á ~ÁPÁ zP ÁÁ gÉÁUÁÁEÁB °Áj , ÁVÁEÁAS ÉÁ°PE-ÁgÁ ÁZj ÁZÁ
gPÁ ~ÁEÁVÁÉ	PÁZP ÁEÁ UÁQÁ	F á ÁgÁ P ÁUÁ@Á zÁá MUE , Áj zÁ á ÁgÁ

7. PROFILES OF PLANTS WITH CULTURAL SIGNIFICANCE



A Banyan tree considered as the dwelling place of a local spirit, and being venerated. Sirsi, Uttara Kannada.

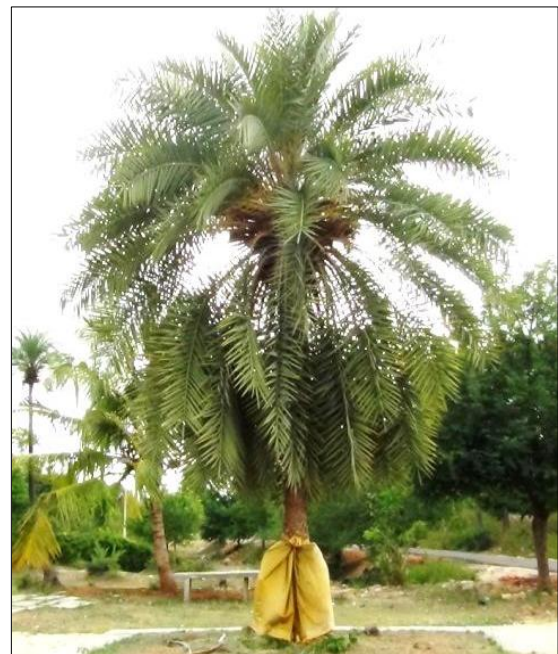
7.1 Seat of Village Deity/ Consort-Accomplice of main Deity

Neem-Country Date Palm and Pleginamma:

ಬೇವು-ಈಚಲುಮರ ಜೋಡಿ ಮತ್ತು ಪ್ಲೇಗಮ್ಮ

The tree is found in Halkurike village in Tiptur taluk of Tumakuru district. It is considered the seat of a local deity called *Pleginamma*, obviously named after the epidemic Plague which used to cause havoc during 1930s. It was the belief among the community during the yester years, which equated such epidemic to be the furious consequence of the village deity's discontent on the erring villagers (in this case, the village deity *Kempamma*, who is otherwise very benevolent, transforms into *Pleginamma*, her furious form and shows her ire). Having seen the havoc, and mass death in the village, the elders decided to perform special puja to propitiate the deity, residing in the Neem tree, the local people recollect. Accordingly, the community elders performed puja, offered its obeisance, made special offerings to the deity residing in the tree and prayed to forgive their mistakes. Soon, as if to answer their pleas, the epidemic subsided.

That particular Neem tree, believed to be the furious deity's dwelling place, continues to command reverence. It is interesting to note that, the ritual, special puja and the deity's name as *Pleginamma* have survived till today, despite the recurrence of Plague. Today, a pucca shrine is built around the Neem tree, with small idols of the deity kept at its base, to which villagers perform puja and make offerings. People carry back leafy shoots and twigs of this tree as *prasadam* for use as medicine, only if the deity permits them to do so.



Neem tree in which the deity 'Plegmma' resides, and Country date palm tree, the seat of its consort.

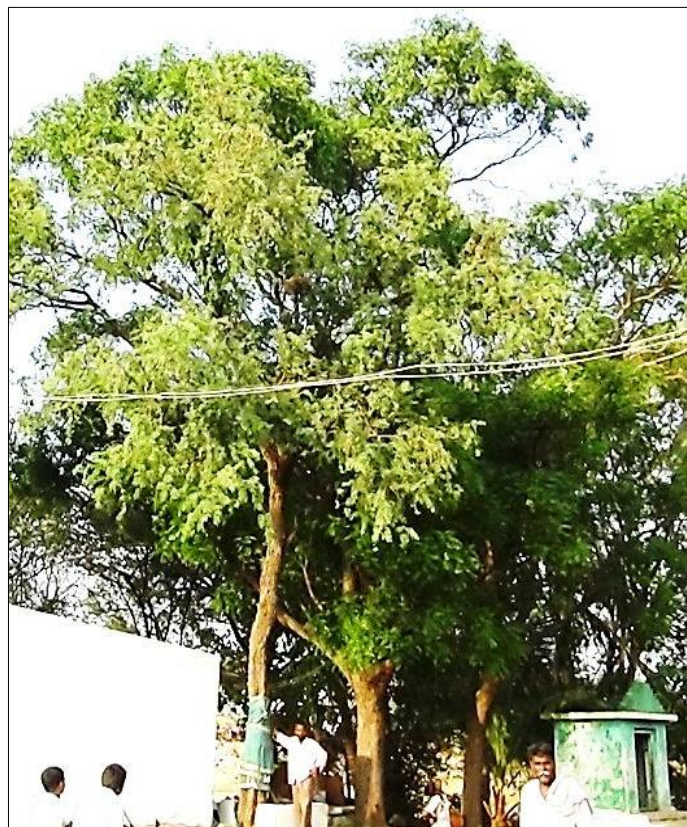
Beginning from first Friday after Ugaadi festival, the village celebrates a 5-day fair in the deity's name, which is quite popular in the region. The deity's idol is taken in a procession, and when the drum beats and sound of the bells reached a peak, the pujaari carrying the idol, who remains in a state of trance, climbs a tree of Country Date Palm which is located in front of the shrine, and continues to dance.

Eventually, this tree is also revered and receives puja by the villagers. Today the Neem tree is well maintained is quite gigantic and records a GBH of 360 cms and ~10m height.

Banni (*Prosopis cineraria*) and Yellamma: ಬನ್ನಿ ಮರ ಮತ್ತು ಯಲ್ಲಮ್ಮ

This tree is located at Anthoor Benthoor village in Gadag taluk of Gadag district. It is seen growing with a Neem tree.

Banni tree's cultural significance is generally recognized with its tender shoot tips which constitute necessary ritual ingredient for exchanging on special occasions. However, this tree as an exception stands out, by being the seat of a deity, called Yellamma. Eventually, this tree is offered puja by the local villagers. A platform is built around the base of the tree. The practice of performing puja to the tree is quite an age old practice, the villagers assert. Additionally it is a practice during Navarathri, to exchange tender leaves and shoot tips of this tree amongst community members.



Neem-Banni complex and the shrine of the village deity, Yellamma

This tree also commands yet another special attention in this region: Whenever a tree of Banni is found growing with a Neem tree as its companion, villagers consider it a good omen and build platform around such tree pair and protect it. It is quite common to find several young trees of Banni coming up on the croplands in the region. Whenever such trees are found, the villagers see to it that, a bund or a grid line is erected so as to separate it from other cultivated portion of the land, as a result of which the trees get the required protection. The tree records a GBH of 150 cm and height of ~12m.

Neem and Dandina Durgamma ಬೇವು ಮತ್ತು ದಂಡಿನದುರ್ಗಮ್ಮ

The tree is found in Nagasamudra village in Gadag taluk of Gadag district.

The tree is considered as the seat of a local deity called *Dandina Durgamma* and is particularly revered by *Harini Shikari* community, in this region. The community members consider it as their deity, believe that she resides in this tree, and assert that, this tree is their 'community asset', which was inherited from their ancestors at least from a time as far as their memory goes back. They perform puja to the tree regularly and make different offerings.

Despite being a community asset of *Harini Shikari* community, the tree and the deity *Dandina Durgamma* are also revered in the surrounding villages. People through this place almost every day, perform puja and propitiate the deity. A special meal is cooked, offered to the deity and consumed as *prasadam*. Part of the meal is distributed to other devotees, while the unused provisions are left with the shrine. People carry back home the leafy twigs of the tree as *prasadam* after the puja.

Today, a stone platform is built around the tree and a temporary shelter is erected. The Neem tree is well protected and is free from any deformities; it is maintained as a community asset.

The tree is well grown and quite conspicuous from a far off distance in the arid landscape.

It records a GBH of 640 cms and ~16m height.



Neem tree believed to be the seat of a deity *Dandina Durgamma*. A platform and temporary shrine are built around its base.

Multiple village Deities & Neem trees ಬೇವಿನ ಮರಗಳು ಮತ್ತು ಗ್ರಾಮದ ಬಹುದೈವಗಳು

This is an interesting case of a single tree species being considered as the seat of multiple deities by different communities in one village. This interesting case is seen with the Neem trees in Keroor village in Ranibennur taluk of Haveri district.

At least 7 illustrations of Neem being considered as the local deity's dwelling place, or a socio cultural venue, are found at 7 sites here. The deities believed to be residing in these trees by the villagers are: *Chowdamma, Baramappa, Ooramma, Ajjayya, Gaddadajja and Beerappa.*

These trees are considered important by villagers for meeting their socio-cultural needs. Instead of solely depending on one Neem tree, it looks like the communities residing here, have taken the initiative to recognize their own tree of cultural significance which is distinct and independent of the ones recognized and used by the fellow communities. As a result the entire village is dotted with multiple Neem trees.



Multiple Neem trees as the seats of multiple village deities.

Being the seats of deities, these trees are revered by different community sections in the village. These trees also serve as ideal places for child health care, as the twigs and leaves are used by the villagers to prepare and administer simple remedies.

All the trees are well maintained, look healthy and robust. They record GBH in the range of 150-250 cm and an average height of ~15-20 m.

Tamarind-Neem-Banni triad & Ittige Kariyamma: ಹುಣಿಸೆ-ಬೇವು-ಬನ್ನಿ ಮತ್ತು ಇಟ್ಟಿಗೆ

ಕರಿಯಮ್ಮ

The tree triad is found in Mayakonda village in Davanagere taluk of Davanagere district, and is considered the seat of a local deity called **Ittige Kariyamma**. Originally a village lady and wife of a soldier many decades ago; she jumped into the funeral pyre of her husband, who died in a local war. Subsequently recognizing her good virtues a 'Maasti stone' was erected in her honor in the village. People believe that her soul resides in this tree triad. In the course, **Ittige Kariyamma** has been elevated to the status of an accomplice of the village deity, which also receives ritualistic puja and offerings identical to the village deity.

An annual ritual called "Sidi" is performed on the 9th day of the traditional New Year (Ugaadi) and it is customary to store the long pole used for "Sidi" ritual, in this tree. Additionally the cart used to carry the Sidi poles is parked under the tree.

Interestingly another Neem tree and a Banni tree growing nearby are also considered as the seats of this accomplice, **Ittige Kariyamma**.

All the three trees command sufficient reverence in the region. The Tamarind tree is quite gigantic, old and is a prolific bearer of good quality fruits, which are quite popular among the local villagers, who often carry its seeds for raising seedlings.

The tree records a GBH of 680 cm and height of ~20m.



Tree Triad: Tamarind-Neem-Banni

7.2 Seat of Clan Deity

Vaatanaarayani and Clan deity ವಾತನಾರಾಯಣಿ ಮತ್ತು ಕುಲದೈವ

The tree is found in Bettada Mallenahalli village in Nagamangala taluk of Mandya district.

It is treated as an important cultural asset by *Maadiga* community in the village. The tree serves as an ideal venue for conducting different socio-cultural processes of this community, including marriage, birth and funeral rites, as well as other ceremonies and community festivals.

Additionally, the *Maadiga* community considers the tree to be the seat of its clan deity.

The tree is also the place where all the marriages in this community take place. As a part of the marriage ritual, the bride performs puja to the tree, and waters it. Eventually, the tree assumes prime significance in the community context and is managed with utmost care.

It is a solitary tree in the hamlet, obviously brought from elsewhere, planted and maintained by the community. This specific practice which is centred on this tree and its prominent status, is quite endemic to community's socio-cultural context, and appears to have been evolved by the community's ancestors.

The tree is quite well grown, but the trunk is not so straight. A stone platform is built around the tree. It records a GBH of 200 cm and height of ~8m.



Delonix elata, the clan tree, with the platform



7.3 Seat of Guardian Deity

Huliyappana mara: Banyan (Ficus benghalensis) ಆಲದ ಮರ ಮತ್ತು ಹುಲಿಯಪ್ಪ

This Banyan tree is located in Adavi Somapur village, in Shiggaon taluk of Haveri district. Being one of the age old trees in the region, this tree assumes a key position in the socio-cultural context of the village, as the local communities believe that this tree is the dwelling place of a local Guardian deity called 'Huliyappa'.



Banyan tree as the seat of guardian deity, and a temporary platform at the base for puja and making offerings.

The cultural significance of this tree is rooted in a community legend. Accordingly, many generations ago, when the village was surrounded by wilderness and dense forest, a tiger used to invade the village and prey on the livestock. The villagers' were ill equipped to contain the recurrent attack of the tiger. A benevolent spirit dwelling in this Banyan tree, would witness the 'tiger troubles' and depredation of livestock, and decided to come to the villagers' rescue. Accordingly, it confronted the wild beast on one day, and instructed him to spare the cattle and village. Having intimidated by the spirit, tiger withdrew and never returned to the village. The villagers acknowledged this lifesaving deed of the benevolent spirit and as a mark of their gratitude, started to venerate it in the name of 'Huliyappa'. From then on, the Banyan tree remained as a savior, guarding the village.

Hatti habba is an annual local ceremony observed on the new moon day of *Karthika* month around the tree. A ritual called "Kari" is performed on the second day, in which all the village cattle are huddled under this tree. Villagers perform puja to the deity. Likewise, during Navarathri, the *Marathi* community collects the leaves from the tree to prepare leaf plates for making ritual offerings to ancestral souls.

The tree at present is quite huge with a GBH of 1100 cms and height of ~20m. The tree is unusually devoid of any prop roots.

7.4 Tree with Mystical and Magical powers

Wish fulfilling tree of Basari (Small leaved Fig.) ಇಷ್ಟಾರ್ಥ ಪೂರೈಸುವ ಬಸರಿ ಮರ

The tree is found in Thadas village in Shiggaon taluk of Haveri district.

The local villagers, particularly the Kuruba community in the region, regard the tree as a wish fulfilling tree. It is also the focal point of an annual ceremony observed on the 5th day after Diwali festival.

The cultural significance associated with this tree is rooted in a historical legend, which goes back to many generations, the villagers assert. It so happened, once a farmer and sheep herder from the Kuruba community in this village was entangled in a dispute related to ownership rights of his herd of sheep and other property in the village. He had appealed to the elders and wise men in a neighboring village and sought their help to settle the dispute. Eventually, the elders of 'village court' had called for an open hearing on a day. On that day, when this farmer was on his way to the village court, was quite anxious tired, about the outcome of the hearing and was unsure whether the judgment would be unbiased. Unable to bear the scorching sun, he was disoriented for a while, felt immobile and fell down near this Basari tree (*Ficus infectoria SENSU ROXB.*), which was along the way. After a while he regained his consciousness, and took rest under its shade. While he was still engrossed in his dilemma and worry, he heard a strange soothing voice from an invisible source from behind the tree, which said to him that, there was no need for any worry, as the judgment would be in his favor.

The innocent farmer was quite surprised and felt that it was a benevolent spirit in the tree speaking with him. He felt relaxed, as the words of solace were quite soothing and reassuring, and all his anxiety vanished. Soon with a fresh bout of energy he continued his journey and reached the court. As was told by that strange voice, he heard the judgment in his favor from the court. Later, on his return, he stopped at the Basari tree with the magical powers and offered his obeisance.

Soon, this mystic incidence and the magical powers of Basari tree spread all over. The local Kuruba community recognized the tree to be the seat of a wish fulfilling deity, *Humchi Kumri Thaayavva*. Now it is a practice for the community members to visit this tree and make their wish. They perform puja and pray that their wish be fulfilled. All those who pass by stop for a while, offer prayers and pay their respects.

The Basari tree is quite old and a small shrine is built around it. However, the top main branches have been lopped. The tree records a GBH of 230 cm.

Tamarind Tree with Healing powers and *Gaalavva*: ಹುಣಿಸೆ ಮರ ಮತ್ತು ಗಾಳವ್ವ

This particular tree is found at Bhadrapur village in Navalagunda taluk of Dharwad district.

Contrary to the common belief which equates Tamarind tree as the haunting place of evil spirits, this particular tree is considered the dwelling place of a local deity called *Gaalavva*. It is of particular importance to *Chalavaadi* community in the village which takes care of this tree as community asset. Eventually, the tree commands reverence by the local communities. The villagers perform puja to the tree and make offerings on all Tuesdays and Fridays, and on all full moon days and new moon days.

The tree is also believed to be a guardian tree which protects the village from unwanted spirits entering the area. Local communities also believe that the tree is a faith healer, and whenever the children in the village suffer from sleeplessness, nightmares, and such frightening encounters during sleep, they are first brought to the tree for the treatment. The villagers strongly believe that such children regain their health when they are brought to the tree, a puja is performed and an offering is made to the deity in the tree.

The tree records a GBH of 266 cm and height of ~12m.



Tamarind tree with healing powers

7.5 Multiple Species of Ficus as Venerated trees

Ficus tree triad (Banyan-Peepal-Country Fig) ಅಲ-ಅರಳಿ-ಅತ್ತಿ ತ್ರಿಕೂಟ

This is another interesting case of multiple species of Ficus (Banyan-Peepal-Country Fig) considered as the seats of healing deities, and hence culturally significant in the village context. The tree triad is located at Lakshmidivarahalli village in Arsikere taluk of Hassan district.

This tree triad (Banyan, Peepal Country Fig) has earned its healing reputation since the days of Plague epidemic during the 1930s. It began with a nomadic sage who was passing through this village, during the days of plague, who saw the misery of villagers and advised them to leave their huts and take shelter under these trees on the village outskirts, until the epidemic subsided. The villagers obeyed his advice and shifted their base. The sage gave them some herbal powder, as a medication, while the villagers soon found cure. Having seen the miraculous powers of the trees, people from other villages too started bringing patients for treatment, who were bitten by field mice. They were made to crawl through a stone bench under the



Banyan tree complex with stone platform and benches around the base

trees, as a part of the treatment. The sage would administer them herbal powder, who eventually got cured. Having seen the cure under the trees, people believed that some healing deities, residing in the trees, were responsible for the magical cure, and ever since began venerating the tree triad. They further identified the Country Fig in the triad as the seat of the deity, *Chowdamma*, villagers assert.

Today, it has become a ritual to make the patients crawl under the stone bench and wriggle out as a part of the treatment, which is done at the dawn. Two small idols of field mice are installed at the base, which are offered puja. The trees are quite gigantic, in which the Banyan records GBH of 250 cm and height of ~20 m, while Country Fig, records GBH of 200cm and a height of ~14m.

7.6 Memorial Tree

Legendary tree duo of Neem-Banni from the days of Maratha ruler Shivaji ಬೆಲೆವು- ಬನ್ನಿ ಮರದ ಐತಿಹಾಸಿಕ ಸಮುಚ್ಚಯ

The tree is found at Bhadrapur village in Navalagunda taluk of Dharwad district.

The tree is considered as the village pride, as it is associated with the Maratha ruler Shivaji of 17th Century AD. The legend goes as below: Once the Maratha ruler Shivaji, who was perambulating in the countryside, lost his way and his escort, and reached this village. It was dark by then and there was no sign of any human habitation nearby. It was an open field with a solitary Banni tree. He decided to spend the night under the tree. He then tied his horse to it, lighted a small lamp and fell asleep. When he woke up next morning he saw to his astonishment that, the lamp he lighted last night was still burning, unaffected by the strong winds. He considered it a good omen and called the villagers from nearby and told them while pointing at the lamp that, the place around the Banni tree has some divine force which is why the lamp didn't go off despite the heavy breeze in the open field; he said the place would become a big village in future and went on his way.

The villagers recognize the solitary Banni tree growing next to a Neem tree as the tree under which the tired ruler rested and where his horse was tethered. The tree at present appears to be a replanted one in the same place where once stood a large tree of Banni. On the day of Vijayadashami, this tree becomes the centre of attraction for several villages in the region, while the people perform special puja to the tree. The tree records a GBH of 180 cm and height of ~12-15m.



7.7 Source of irreplaceable Ritual ingredient

Krishna Shirish (*Albizzia amara*) and Pataladamma ಚುಜ್ಜಲು ಮರ ಮತ್ತು ಪಟ್ಟಾಲದಮ್ಮ

This tree is found at Kambadahalli village in Nagamangala taluk of Mandya district, and is maintained in the temple grove dedicated to the village deity *Pataladamma*.

The trees of Krishna Shirish are the exclusive source of fuelwood for making the ritual fire during the annual fair held in the village shrine. A fire walking ceremony is observed during the *Phaalguna* month subsequent to Shivaratri. About 2 weeks prior to this ritual, the villagers lop select branches of these trees. The lopped branches are allowed to dry and are later stacked in the shrine complex.



Well grown trees of *Albizzia amara* in the temple grove in front of the village shrine of *Pataladamma*

Later a large burrow measuring 20 feet long and 5 feet wide would be dug in front of the shrine and the dried branches are stacked in it. On the day of the ritual the firewood in the burrow is lit and allowed to burn. When the wood is burnt and hot embers are ready, the pujaari of the shrine along with his associates walk on the burning bed of embers and perform the fire walking ritual. The waiting devotees soon follow them. The entire village takes part in the ritual.

It is interesting to note that, wood for making the embers is traditionally collected exclusively from the trees maintained in the grove. It is a belief that the ritual fire has to be made only by burning the wood of Krishna Shirish, these trees in the premises of village shrine, command great respect, and the villagers maintain them with utmost care, it was noted. Today, these trees in the grove are quite gigantic and record their GBH ranging from 350-600 cms with ~10 m height. The tree trunk is quite bulky with many protuberances and warty outgrowths. There are sufficient scars left on the trunks which indicate the recurrent removal of overgrown branches. This tree being a major element of the local vegetation, one can also find >about 300 trees of different age class, growing in the village vicinity.

7.8 Unique Village Groves of CSPs

The study also encountered many CSP species maintained in village groves at select sites. At least four groves are noteworthy from the point of view of their species diversity, acreage and the conservation significance. These are not the typical village groves found in the catchment area of a village tank or on the outskirts of a village, but are the groves with CSP species as below:

a) Grove of 1000 Bilva trees: This grove is located at Kalmaradimatha, Chikkamagaluru district, and attached to Kalmarudeshwara shrine complex in the village. As an exclusive grove of Bilva trees, it occupies an area of 4 ha, and houses about 1000 trees. The grove is maintained as a dedicated source of yearlong supply of tender leaves and shoottips which constitute an essential ingredient for the daily puja and other rituals in the adjacent shrine complex. A large portion of the present population of trees appears to have been sprung from the root suckers of age old mother trees many decades ago. All the trees as of now, are well grown, well maintained and are yielding fruits. However, some trees appear to be stunted, possibly due to the shallow topsoil and bedrock present in the area, it was observed. Majority of the trees are in 30-60 cm girth class.

The significance of this grove is due to 2 factors: Firstly, since the wild natural occurrence of Bilva in Karnataka, is quite scarce, this massive congregation of about 1000 trees at one place, become quite an important biodiversity element, and lends credence. Secondly, the grove appears to be a potential store house of unique germplasm of Bilva, as it house many morphovariants of this tree. At least 6 such



Portion of the temple grove with > 1000 Bilva trees

morpho-variants (expressed in fruit size and shape) were noticed during the study. Additionally, variables such as leaf size, shape and density, flowering load and such visible variations on the trees in the population, was suggestive of a high degree of



Another section of the temple grove; morpho-variants of Bilva fruits found in the grove

genetic diversity in them, which would be invaluable particularly in the light of the recent fact that, Bilva is the source of anti-diabetic drugs. This grove appears as an invaluable repository of germplasm, and in the light of these factors, it becomes a valuable biodiversity asset.

b) Multiple Tree species Grove: This grove is located at Kunduru, Tumakuru district. It is a grove on an expanse of about 5 acres, and houses more than 50 age old gigantic trees of 6 tree species (Peepal, Banyan, Jamun, Mahua, Bilva and Thaare), and seen at the foot hills of a small hillock. The trees are quite old with huge trunk and branches, many of them are broken due to wind storms and old age. A small shrine of the deity Malleshwara is seen inside the grove. An annual car festival is held, during summer. Small platforms are built around select trees of Thaare, Peepal and Bilva inside the grove, which are revered by the local community.



The grove appears important, from the point of view of its age and biodiversity elements it has captured. Unlike single species village groves (of Mango or Mahua, or Jamun or Banyan), this grove houses multiple species and hence merits to be considered as a wild gene pool wild trees. The trees are believed to be at least 100-150 years old. This is particularly so, with Bilva trees, which are quite gigantic, which are seldom seen anywhere. The fact that the grove is associated with age-old



village shrine, lends further credence. All these points contribute to the conservation and cultural significance of the grove and merit a status in the local heritage.

c) Mahua grove and Beerappa: While the groves of Mahua trees (*Madhuca longifolia* (KOEN.) MACLER) used to be a common element in a rural landscape from the yester years this Mahua grove stands out because of its massive stature and uniqueness. It is a vast grove maintained exclusively in the name Beerappa, which is the *Kuladaiva* (community deity) of the Kurubas, who consider the grove and the deity as their community asset. The grove is located at Aluru, Mandya district.

More than 80 gigantic trees of Mahua are found in this extensive grove. An old shrine complex of the deity Beerappa is in the midst, which makes the entire grove sacred. The grove was originally maintained around the shrine, the community elders assert, as a reliable source of oilseeds for extracting oil to be used for lighting



the lamps inside the shrine. At present the grove and the shrine are maintained and supervised by the local Kuruba community. Regular puja is offered to the deity and



an annual fair is held during Dusserah. The trees are quite gigantic, well grown, well maintained, and are free from lopping and such anthropogenic activities, although collection of seeds for oil extraction which used to be a regular activity in the yester years appears discontinued now.



Small ponds with stepping stones in a large grove of multiple tree species, attached to the shrine of lord Veerabhadra. Devarahosahalli, Bengaluru rural.

8. CONCLUSIONS



Peepal-Neem tree duo and platform around the tree pair is a familiar example of CSP in southern Karnataka. Madaburu, Chikkamagaluru

The study has brought to light many interesting findings in respect of the cultural heritage biodiversity resources along the 5 Agro- Climatic zones that fall under the eastern plains of Karnataka.

The study was carried out in 51 villages across 5-agro climatic zones of Karnataka. It brought to light 117 culturally significant plants belonging to 34 species, as recognised by different local communities in the local traditions. Of these, 31 are Tree species, 1 is a Shrub species while 1 is a species of reed. These 117 plants highlight different elements of cultural significance as associated with plants and as practiced by the local communities in the eastern plains of Karnataka.

The findings have enhanced the prevailing understanding in respect of the Cultural Significance associated with the plant world, by adding many new species to the list of plants of cultural significance, which are hitherto not-known. Some of the new species are otherwise popular as fruit trees, timber trees, flowering and ornamental trees, species of grave yard, and hence their cultural significance is a new element added to their canvas of significance.

‘Sacred tree’ or ‘venerated tree’, is not the sole form of cultural significance associated with plants-is another major finding from the present study, which has defied the prevailing popular belief. It was found out during the study that, many different forms of cultural significance take shape based on the local contexts, which extend much beyond the purview of ‘sacred’ or venerated plants.

The kinds of Cultural Significance as found out during the study were quite diverse, interesting and distinct, which could be grouped under 12 different categories. These include: Seat or dwelling places of different deities- Clan Deity, Village Deity, Guardian/ Healing / Wish fulfilling Deity, Accomplice or consort of a village Deity, Farming Deity, Profession specific Deity; Seat of Ancestors and ancestral spirits and community heroes and other personalities; Hub of village rituals & customary observances; Memorial tree & Landmark tree; Reliable source of ingredients for community Rituals

Plants being the seat of different deities (Clan, Village, Guardian, Accomplice, Profession related) was the predominant and frequently found form of Cultural Significance.

The study has also shed new light on the existing understanding about cultural significance associated with plants, which has helped to relook at such notions.

The study recognized Neem and Banyan as the two species highly preferred as the trees of cultural significance. This finding defies another popularly held notion

which identifies Peepal to be the most popular species of Cultural significance. However, **it was surprising to note that no local deity or village ritual or annual fair was associated with the Peepal tree anywhere in the study area.** Another interesting finding was the wide spread acceptance of 5 species of Ficus trees to be the seats of different deities. **The study identified Banyan, White Country Fig, Small Leaved Fig, Mysore Fig and Cluster Fig which were being considered as the trees of cultural significance** by the local Communities.

The study also brought out Shami and Bilva as the possible counterpart species in northern and southern Karnataka, fulfilling a set of seemingly similar cultural attributes assigned by the local communities. The study also pointed at some interesting elements in respect of species choice for assigning a specific kind of cultural significance. **Not all species were preferred as the ideal species for a given kind of cultural significance.** Plant species preferred as the seats of clan deities were not the same as the plants preferred as the seats of village deities. This finding defied the commonly held belief which says, '*selection of a plant to be culturally significant is more an arbitrary choice*'. However, it was not too clear as to, what makes a plant to be culturally significant in a community tradition?

The study also brought out another interesting element about the selective protected status bestowed to the CSPs. **It was found that the striking element of Cultural Significance identified in a CSP, is the decisive element that bestows it the protected status.**

All of these critical findings make us to identify at least the following two questions which deserve to be probed further. These are:

- *Why is that, a focal CSP species of a village is not the same as other focal species of a neighboring village/ neighboring community in a same village associated with an identical cultural attribute?*
- *Is it just the dwelling place of a deity/ spirit/ soul, exquisite healing properties, cultural memories attached to a species or fulfilling a cultural need that makes it culturally significant? –what are the other elements of such cultural affiliations a plant can be associated with?*

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Vrinda vana, the traditional planting enclosure of a Tulsi plant, inside a temple premise. It is a practice to offer sprouted whole coconuts to the main deity of the shrine while making a wish. Such coconuts offered are kept as prasadam, for the devotees to carry back for planting. Kateelu, Dakshina Kannada.

10. PUBLICATIONS & OUTREACH



An undifferentiated bunch of prop roots of a Banyan tree, believed to be the seat of a female deity with magical powers, draped in a saree, as a part of its veneration. Mayakonda, Davanagere

In order to reach out to different stakeholder groups about the project and its findings, we attempted different strategies such as publishing popular articles, developing Communication material and giving public lectures in addition to sharing the findings via informal discussions and meetings with the local communities. Following are the highlights.

1. Research Article: One semi technical-cum-popular article, providing an overview of the focal theme, including the findings was published in the monthly developmental magazine *Janapada*, of the Govt. of Karnataka.

ಸೋಮಶೇಖರ, ಬಿ ಎಸ್. 2012. ಪ್ರೀತಿಯ ಪ್ರಾಣಿಗಳ ಜೀವನ ಚರಿತ್ರೆ: ಮಾನವ ಸಂಸ್ಕೃತಿಯಲ್ಲಿ ಅವುಗಳ ಪಾತ್ರ. *ಜನಪದ* 55(3): 54-65. ಡಿಫೆಂಬ್ರಿ 2012.

2. Lecture: The project findings were shared during the Workshop on Forests & Local Communities, held at Forestry College, Sirsi, on 29th May 2012.

ಸೋಮಶೇಖರ, ಬಿ ಎಸ್. 2012. ಕೃಷಿ ಮತ್ತು ಜೀವವೈವಿಧ್ಯ: ಇವುಗಳ ಸಂಬಂಧ. *ಕೃಷಿ ಮತ್ತು ಜೀವವೈವಿಧ್ಯ* «ಜಿಎಸ್ ಆರ್‌ಜಿಎಸ್, 29 ಮೇ 2012. ಕೃಷಿ ಮತ್ತು ಜೀವವೈವಿಧ್ಯ ಸಂರಕ್ಷಣೆ ಮತ್ತು ಅಭಿವೃದ್ಧಿ ಕಾರ್ಯಕ್ರಮದ ಅಂಗವಾಗಿ.

3. Poster and Communication material: Two illustrated Posters were prepared on the following themes.

- a. Cultural Biodiversity includes more than mere Sacred Plants
- b. Cultural Connotations Contribute to Biodiversity Conservation.

Posters highlighting the significant dimensions of Cultural Biodiversity resources were prominently displayed at the KBB stall in the exhibition ground, CoP11 event at Hyderabad during October 2012.



CULTURAL BIODIVERSITY

Cultural Biodiversity manifests in the form of

- Sacred plants as seats of village deities
- Plants with miraculous healing powers
- Commemorative plants
- Plants of historical importance
- Plants for worship, pooja & offerings
- Plants for festivals, customs & rituals
- Village groves as socio-cultural space
- Socio-cultural benchmarks & identities



Cultural Biodiversity includes more than mere Sacred Plants

Specific Plants for Festivals & Celebrations

Certain festivals and region specific celebrations such as Bhoomihunnime, Pandavapuja, Thaavare yele Hariseve, Gidada habba, Banadahunnime as observed by the local communities in Karnataka employ specific plants for celebration, without which the festival remains incomplete.



Plants are revered & considered sacred owing to their unique religious significance & healing powers.



Specific Rituals

Local communities employ specific set of plants for performing rituals related to birth, puberty, marriage, nuptial and death. This choice of species is specific to a community and becomes its cultural identity.



Medicinal Plants in Rituals

Pandava pooja, a ritual performed during Diwali in Northern Karnataka employs about 10 medicinal plants which are known to be antidotes.



Specific Plants for Festivals & Celebrations

Certain festivals and region specific celebrations such as Bhoomihunnime, Pandavapuja, Thaavare yele Hariseve, Gidada habba, Banadahunnime as observed by the local communities in Karnataka employ specific plants for celebration, without which the festival remains incomplete.



Plants are revered & considered sacred owing to their unique religious significance & healing powers.





Festivals	Specific Plant used
Sankranti	Dashapushpa
Shivarathri	Belva
Ugadi	Neem
Ramanavami	Wood Apple
Rathasapthami	Arka
Ganesh Chaturthi	Doorva grass
Diwali	Bell vine

Institute for Indigenous Cultures & Studies, Tarikere



Karnataka Biodiversity Board, Bangalore

Contact: Sriniwasiah S.L.E. Email: culture@indicus.org, biodiversity@indicus.org, 18004545454. Ph: +91 83438 23200

CULTURAL BIODIVERSITY

Cultural connotations contribute to Biodiversity Conservation

Cultural connotations of Biodiversity transform into conservation connotations through protection, retention & its maintenance. Additional propagation interventions are context driven.



Morphovariants of Bilva, classified from Bilva vani, near Chikmagalur, Karnataka

Sacred Tree Clusters as Germplasm banks

Cultural Biodiversity in the form of 'Sacred tree clumps', 'Village groves', 'Temple gardens' and 'Kulavriksha' constitute the "Community level Conservation Reserves". Many of them house unique germplasm in the form of ecotypes. Bilva (Aegle mormelos), an endangered medicinal tree species, offers one such vivid example.

Bilva is considered a tree of reverence, whose tender leaves and flowers are offered to Lord Shiva. While the natural occurrence of Bilva in south India is quite rare, several Shiva temples across Karnataka maintain solitary trees of Bilva in their sanctum. Bilva trees are also maintained as Village groves and Temple gardens while an astounding range of morpho-variants is seen in the fruit size, shape, pulp-seed ratio, and overall fruit yield.



Morphovariants in sacred plants

Morphovariants are found among other sacred plants such as *Crataeva magna* and *Vitex negundo*. Village groves of Mahua, Jamun and Tamarind are equally rich repositories of plus genotypes and open up excellent opportunity for conservation research.



Group of people in the village grove, near Malavalli, Karnataka

Cultural significance offers a perpetual impetus for conservation

Cultural significance of biodiversity serves as a perpetual impetus for its conservation. As long as the cultural benefits are derived, conservation of resources is ensured.



A large tree in the village grove, near Malavalli, Karnataka

Cultural connotations contribute to Biodiversity Conservation



A large tree in the village grove, near Malavalli, Karnataka

Village groves are time tested conservation models and exsitu germplasm banks, resulting from human selection for specific traits. "What binds the local village communities to look after the sacred tree clusters very ardently, as if their very survival is linked to the survival of the biodiversity elements" is a simple question but with an answer with a profound impact.



A large tree in the village grove, near Malavalli, Karnataka

Cultural connotations contribute to Biodiversity Conservation

Institute for Indigenous Cultures & Studies, Tarikere



Karnataka Biodiversity Board, Bangalore

Contact: Sriniwasth Reddy, E-Correspondence: sriniwasthreddy@kbb.org, sriniwasthreddy@rediffmail.com, Tel: 082-264432030

ಮಾಹಿತಿ ದಾಖಲಾತಿ ನಮೂನೆ 1: ದೈವತರುಗಳು-ಸಾಂಸ್ಕೃತಿಕ ವ್ಯಕ್ತಿಗಳ ಪಟ್ಟಿ

ಗ್ರಾಮ: _____ ದಿನಾಂಕ: _____
 ತಾಲ್ಲೂಕು: _____ ಸಮೀಕ್ಷಕನ ಹೆಸರು: _____
 ಜಿಲ್ಲೆ: _____ ಮಾಹಿತಿದಾರರ ಹೆಸರು: _____

ದೈವತರು/ಸಾಂಸ್ಕೃತಿಕ ವ್ಯಕ್ತಿ ಪ್ರಕಾರ ¹	
1. ಗ್ರಾಮದಲ್ಲಿರುವ ಬಹಳ ಹಳೆಯದಾದ ಬೃಹದ್ ಗಾತ್ರದ ಮರಗಳು/ಹೆಮ್ಮರ:	EAXA ^a AgUWA UE ^a AAEPA AV UAA ^a AZR e ^a AA ^a ZA -APA ^a A ^a MkgAVLZE
2. ಗ್ರಾಮದೇವತೆ, ಕುಲದೈವ, ಇತರ ದೈವಗಳು ನೆಲೆ ನಿಂತಿವೆ ಎಂದು ಗುರುತಿಸಿದ ಮರಗಳು:	(GZA: UKEA tR AgLzR A) U ^a UE ^a 1 zA ^a A ^a AgLzR Aa PAsZA ^a AAgR Aa)
3. ಗ್ರಾಮದ ಪೂಜೆ, ಹಬ್ಬ, ಉತ್ಸವ, ದೇವರಸೇವೆ, ಊರಜಾತ್ರೆ ಮೊದಲಾದ ಸಾಂಪ್ರದಾಯಿಕ ಆಚರಣೆಗಳ ಕೇಂದ್ರಬಿಂದುವಾಗುವ ಮಹತ್ವದ ಮರಗಿಡಗಳು.	
4. ಸಮುದಾಯಗಳ ಕುಲವೃಕ್ಷ, ಪಿತೃವೃಕ್ಷ ಎಂದು ರೂಢಿಗತವಾಗಿ ಗುರುತಿಸಿಕೊಳ್ಳುವ ಮರಗಳು: (H gA AV ^a , zA ^a gUAr, PGPPEAr, KJ, U ^a RAA ^a P ^a R ^a E ^a AAIA ^a e ^a E ^a A PAtAVR ^a)	
5. ಸಮುದಾಯದ ಮೂಲಪುರುಷರು, ಪಿತೃಗಳು, ಮುನಿಗಳು, ಪಾಳೇಗಾರರು, ಸಮುದಾಯದ ಸಾಂಸ್ಕೃತಿಕ ವೀರಪುರುಷರ ಆತ್ಮಗಳು ನೆಲೆಗೊಂಡಿವೆ ಎಂದು ಗುರುತಿಸಲ್ಪಡುವ ಸ್ಮಾರಕವೃಕ್ಷಗಳು	
6. ಗ್ರಾಮದ ನಿರ್ದಿಷ್ಟ ಸಾಮಾಜಿಕ, ಸಾಂಸ್ಕೃತಿಕ ಚಟುವಟಿಕೆಗಳಿಗೆ ಮೀಸಲುತಾಣವಾಗುವ ಮರಗಳು	(GZA: UAA ^a U ^a EAIAIA wA ^a AAOEA ^a o ^a AV ^a PA ^a VAPPE ^a A ^a A ^a AAZA -AwPm ^a UAA ^a AZA ^a A ^a AIAIA GV ^a R ^a AEWOAIA «gA ^a APE ^a RUK ^a R ^a 1 zA ^a AgUWA vKEA ^a , U ^a V ^a R ^a A ^a EvA ^a)
7. ಗ್ರಾಮದ ಅರಳಿಕಟ್ಟೆ, ದೇಗುಲದ ಹೂತೋಟ, ಮಂಟಪ, ತೋಪು, ಗೋಮಾಳ, ಕಾವಲು ಮತ್ತು ಸಮಾಧಿ ಸ್ಥಳಗಳ ಹಳೆಯ ಮರಗಳು (ಆಯಾ ಸ್ಥಳದ ಹೆಸರಿನ ಜೊತೆ)	
8. ಗ್ರಾಮದ ಸಮುದಾಯಗಳ ಪ್ರಮುಖ ಕುಲಕಸುಬನ್ನು ಪೋಷಿಸಿರುವ ಮರಗಳು	(UKEA ^a E ^a VAIIAj P ^a UAr ZP ^a AgU ^a ZA ^a SAn ^a o ^a EtUE ^a EvA ^a)
9. ಗ್ರಾಮದ ಪೂಜೆ-ಪದ್ಧತಿ, ಆಚರಣೆ, ಹಬ್ಬ, ಉತ್ಸವ, ಜಾತ್ರೆಗಳಲ್ಲಿ ಕಡ್ಡಾಯವಾಗಿ ಬಳಕೆ ಮಾಡುವ ಹೂವು/ ಪತ್ರ/ ಸೊಪ್ಪು/ ಕಾಯಿ/ ಹಣ್ಣು/ ಚಪ್ಪರ/ ತೋರಣ ಪೂಜಾ ಸಾಮಗ್ರಿಯನ್ನು ನೀಡುವ ಮರಗಿಡಗಳು	
10. ಮೇಲೆ ಹೇಳಿಲ್ಲದ ಇನ್ನಾವುದೇ ಪ್ರಕಾರದ ಸಾಂಸ್ಕೃತಿಕ ಮಹತ್ವ ಪಡೆದಿರುವ ಮರಗಿಡಗಳು	

¹ EAXA^a AgUWA P^a P^a 3 v^a R^a Aj^a RAZA CxR^a A 50^a U^a U^a ZAZA G^a ZAPPEAqA SACZ^a U^a U^a AIAIA U^a R^a AZAAIUWA EAXA^a U^a A^a WPA^a » EB^a AIAEAB M^a PPEArg^a RPA EAXA^a » EB^a AIA^a AgUWAEB^a A^a AV^a A^a F^a kAAPAIAr UAgAw^a A^a RPA WAgA EwAZUE^a YKEA^a o^a VAIIAEAB YqEzA^a AgUWA DzV^a AIA^a Dz^a Cg^a R^a S^a VAIAXA^a Yj^a av^a AgUWAEB^a o^a AVz^a zAR^a U^a A^a.

ಸಸ್ಯದ ಸ್ಥಳೀಯ ಹೆಸರು	ಸಸ್ಯಶಾಸ್ತ್ರೀಯ ಹೆಸರು	ಸ್ವರೂಪ	ವಿಧ	ಆವಾಸ	ಅಂದಾಜು ಸಂಖ್ಯೆ



Village shrine built around a huge Neem tree, believed to be the dwelling place of the local deity, Pleginamma. Halkurike, Tumakuru.

ದಾಖಲಾತಿ ನಮೂನೆ 2: ದೇವರಮರ-ಸಾಂಸ್ಕೃತಿಕ ವ್ಯಕ್ತಿಗಳ ಪ್ರಭೇದವಾರು ವಿವರ

(UÅgÅzP è JµÅ0 ¥hë ÅzÅzÅ ª ÅgÅÅÅÅÅÅÅ “ದೇವರಮರಗಳು-ಸಾಂಸ್ಕೃತಿಕ ವ್ಯಕ್ತಿಗಳು” JÅzÅ UÅgÅw_Å ÅUÅªÅzÅÅÅ CAVPÅ MAZÅÅÅÅ ¥hë ÅzPÅÅ Å PÅÅÅÅ «ª ÅgÅÅÅÅÅÅ ÅPÅÅÅÅ¹)

ಅ. ಮರದ ಜೊತೆ ಬೆರೆತಿರುವ ಸಾಂಸ್ಕೃತಿಕ ಮಹತ್ವದ ವಿವರಗಳು	
ª ÅgÅzP è UÅgÅw_ÅgÅªÅ zPÅ; vÅ/PÅÅ/ª ÅÅÅªÅgÅµÅÅ ÅÅÅgÅÅ/ÅÅÅªÅÅzÅ?	
<ul style="list-style-type: none"> ▪ ª ÅgÅª ÅÅÅªÅ Å¥ÅzÅÅÅzÅ / DZgÅµÅÅÅ PÅÅzÅPÅzÅ?-«ª ÅgÅÅÅ ▪ ª ÅgÅª ÅÅÅªÅ ÅzÅ ÅzÅ ÅgÅµÅxÅ? ▪ ª ÅgÅzÅ ªÅÅµÅ GvÅPÅ ÅÅÅªÅzÅgÅÅ ¥ÅÅÅ¥ÅzÅw/DZgÅµÅÅÅ¥ÅÅªÅÅÅV S½PÅÅÅÅUÅVzÅÅÅ? CzÅgÅ «ª ÅgÅÅÅ 	
<p>ಮರವನ್ನು ಕೇಂದ್ರವಾಗಿಸಿ ನಡೆಯುವ ಪೂಜೆ/ ಪದ್ಧತಿ/ ಚಟುವಟಿಕೆಯ ವಿವರಗಳು:</p> <ul style="list-style-type: none"> ▪ ¥Å-ÅÅÅÅª Å dÅUÅÅ¥ÅÅ ÅÅÅªÅÅzÅ? ▪ DZgÅµÅÅÅ gÅÅÅÅ ÅZÅ » ÅÅ-ÅPÅÅ ▪ DZgÅµÅÅÅ ÅÅÅÅÅªÅ ÅªÅ J°Å ÅÅÅªÅÅ ▪ DZgÅµÅÅÅ «zÅÅÅPÅÅ: ▪ EÅxÅzÅ ¥ÅzÅw/DZgÅµÅÅÅ ÅVÅÅVÅ ¥ÅÅÅzÅzP è ª ÅgÅª è gÅÅÅÅÅÅÅzP 	
<p>ನೈವೇದ್ಯ, ಪ್ರಸಾದ, ಎಡೆ, ಹರಕೆ, ಬಲಿ ಇದೆಯೇ? CzÅgÅ «ª ÅgÅª «zÅÅÅÅÅ</p>	
<p>ಆಚರಣೆ/ಪದ್ಧತಿಯ ನಂತರ ಪ್ರಸಾದದ ರೂಪದಲ್ಲಿ ª ÅgÅÅzÅ KÅÅzÅgÅª ÅÅÅVÅÅÅÅÅ ÅUÅªÅªÅ ª ÅÅPÅ ÅzÅÅÅÅ? (ÅÅd, ÅÅÅÅ ZPÅ ÅÅÅÅ) «ª ÅgÅÅÅ</p>	
<p>ಮರದ ಜೊತೆ ಬೆರೆತಿರುವ ನಂಬಿಕೆ/ ನಿಷೇಧ/ ಕಟ್ಟುಪಾಡುಗಳು</p>	
<p>ಮರದಲ್ಲಿರುವ ದೈವದ ಸ್ವರೂಪ, ಅದಕ್ಕೆ ದೊರೆತ ಮರ್ಯಾದೆ: «UÅÅªª ÅÅÅwÅ, PÅÅ ÅÅÅ, ZÅÅgÅ M¥ÅgÅ Dª ÅgÅÅ, ÅzÅÅÅÅ? «ª ÅgÅÅÅ</p>	
ಆ. ಮರದ ಜೈವಿಕ-ಪಾರಿಸರಿಕ ಮಹತ್ವದ ವಿವರಗಳು	
<ul style="list-style-type: none"> ▪ ಮರವು ಕಂಡುಬರುವ ಸ್ವಾಭಾವಿಕ ನೆಲೆ JÅxÅzÅ? ▪ ª ÅgÅª vÅÅÅV ÅÅÅÅÅÅÅÅ ÅÅÅÅÅÅ? ▪ ª ÅgÅzÅ JzÅ ÅÅ ÅzÅ ÅVÅÅÅÅ (ÅªÅÅ) ▪ ª ÅgÅzÅ JvÅgÅ (CÅzÅdÅ Cr) 	

<ul style="list-style-type: none"> ▪ ಅಗಲಾಂಗಳಿಗೇಳಬೇಡಿ, ಒಂದು ಅವಿ 	
<p>ಮರದ ಪ್ರಸಕ್ತ ಅರೋಗ್ಯ ಪರಿಸ್ಥಿತಿ:</p> <ul style="list-style-type: none"> ▪ ಅಗಲಾಂಗಳಿಗೇಳಬೇಡಿ, ಒಂದು ಅವಿ ▪ ಗಂಟು/ವಕ್ರತೆ/ಡೊಂಕುಮೈ, ಎಚ್‌ಐವಿ? ▪ ಅಗಲಾಂಗಳಿಗೇಳಬೇಡಿ, ಒಂದು ಅವಿ ▪ ಪ್ರೇಮಾಂಗಳಿಗೇಳಬೇಡಿ, ಒಂದು ಅವಿ 	
<p>ಒಂದು ಅವಿ, ಒಂದು ಅವಿ «ಎಚ್‌ಐವಿ ಎಚ್‌ಐವಿ» ಅಗಲಾಂಗಳಿಗೇಳಬೇಡಿ, ಒಂದು ಅವಿ, ಒಂದು ಅವಿ, ಒಂದು ಅವಿ ಒಂದು ಅವಿ? : ಒಂದು ಅವಿ, ಒಂದು ಅವಿ, ಒಂದು ಅವಿ, ಒಂದು ಅವಿ ಒಂದು ಅವಿ, ಒಂದು ಅವಿ, ಒಂದು ಅವಿ, ಒಂದು ಅವಿ</p>	
<p>ಮರದ ಪುನರುತ್ಥಾನ ಸಾಮರ್ಥ್ಯ: ಒಂದು ಅವಿ, ಒಂದು ಅವಿ ಒಂದು ಅವಿ, ಒಂದು ಅವಿ, ಒಂದು ಅವಿ /ಒಂದು ಅವಿ ಒಂದು ಅವಿ, ಒಂದು ಅವಿ: ಒಂದು ಅವಿ, ಒಂದು ಅವಿ «ಒಂದು ಅವಿ»</p>	
<p>ಮರದಲ್ಲಿ ಕಂಡುಬರುವ ಪಕ್ಷಿ-ಪ್ರಾಣಿಗಳು ಯಾವುವು (ಒಂದು ಅವಿ, ©, ಒಂದು ಅವಿ, ಒಂದು ಅವಿ, ಒಂದು ಅವಿ, ಒಂದು ಅವಿ ಒಂದು ಅವಿ, ಒಂದು ಅವಿ, ಒಂದು ಅವಿ, ಒಂದು ಅವಿ)</p>	
<p>ಸುತ್ತಲ ಪರಿಸರದಲ್ಲಿ ಈ ಮರದ ಪರಿಸ್ಥಿತಿ:</p> <ul style="list-style-type: none"> ▪ ಒಂದು ಅವಿ, ಒಂದು ಅವಿ, ಒಂದು ಅವಿ ▪ ಒಂದು ಅವಿ, ಒಂದು ಅವಿ, ಒಂದು ಅವಿ, ಒಂದು ಅವಿ ▪ ಒಂದು ಅವಿ, ಒಂದು ಅವಿ, ಒಂದು ಅವಿ, ಒಂದು ಅವಿ ▪ ಒಂದು ಅವಿ, ಒಂದು ಅವಿ, ಒಂದು ಅವಿ, ಒಂದು ಅವಿ ▪ ಒಂದು ಅವಿ, ಒಂದು ಅವಿ, ಒಂದು ಅವಿ, ಒಂದು ಅವಿ 	
<p>ಮರವು ಯಾರೊಬ್ಬರ ವೈಯಕ್ತಿಕ ಸ್ವತ್ತು ಅಲ್ಲದಿದ್ದರೂ ಒಂದು ಅವಿ, ಒಂದು ಅವಿ, ಒಂದು ಅವಿ, ಒಂದು ಅವಿ ಒಂದು ಅವಿ, ಒಂದು ಅವಿ, ಒಂದು ಅವಿ, ಒಂದು ಅವಿ ಒಂದು ಅವಿ, ಒಂದು ಅವಿ, ಒಂದು ಅವಿ, ಒಂದು ಅವಿ ಒಂದು ಅವಿ, ಒಂದು ಅವಿ, ಒಂದು ಅವಿ, ಒಂದು ಅವಿ</p>	

List of Culturally Significant Plants sighted in the study sites

Village	Taluk-District	Culturally Significant plant		Key element of Cultural Significance	Associated deity if any	Remarks
		Kannada Name	Botanical name			
ಗ್ರಾಮ	ತಾಲ್ಲೂಕು	ಸಸ್ಯದ ಕನ್ನಡ ಹೆಸರು	ಸಸ್ಯದ ಶಾಸ್ತ್ರೀಯ ಹೆಸರು	ಸಸ್ಯಕ್ಕಿರುವ ಸಾಂಸ್ಕೃತಿಕ ಮಹತ್ವ	ಸಂಬಂಧಿಸಿದ ದೈವ/ದೇವತೆ	ಸಂಬಂಧಿಸಿದ ಆಚರಣೆ/ವಿಧಿ
wAwTl	AgMAGfAtIAZVJ	D®	<i>Ficus benghalensis</i> L.	ಏರ್ಪಟ್ಟು ಏರ್ಪಟ್ಟು ದಿವ್ಯ ಲೀಲೆ	ಏರ್ಪಟ್ಟು	ಎವೆ < ಏರ್ಪಟ್ಟು ದಿವ್ಯ
wAwTl	AgMAGfAtIAZVJ	ಸ್ವ	<i>Ficus infectoria</i> SENSU ROXB.	ಏರ್ಪಟ್ಟು ಏರ್ಪಟ್ಟು ದಿವ್ಯ ಲೀಲೆ	ಏರ್ಪಟ್ಟು	ಎವೆ < ಏರ್ಪಟ್ಟು ದಿವ್ಯ
ಏರ್ಪಟ್ಟು	ಏರ್ಪಟ್ಟು-ಏರ್ಪಟ್ಟು	ಸ್ವ	<i>Ficus infectoria</i> SENSU ROXB.	ಏರ್ಪಟ್ಟು ಲೀಲೆ	ಏರ್ಪಟ್ಟು	ಏರ್ಪಟ್ಟು ಲೀಲೆ
ಏರ್ಪಟ್ಟು	ಏರ್ಪಟ್ಟು-ಏರ್ಪಟ್ಟು	ಏರ್ಪಟ್ಟು	<i>Azadirachta indica</i> A. JUSS.	ಏರ್ಪಟ್ಟು ಏರ್ಪಟ್ಟು ಸುಪ್ರ ಸುಪ್ರ	ಏರ್ಪಟ್ಟು	
ಏರ್ಪಟ್ಟು	ಏರ್ಪಟ್ಟು-ಏರ್ಪಟ್ಟು	ಸ್ವ	<i>Ficus infectoria</i> SENSU ROXB.	ಏರ್ಪಟ್ಟು ಲೀಲೆ ಏರ್ಪಟ್ಟು ಲೀಲೆ ಏರ್ಪಟ್ಟು ಲೀಲೆ	ಏರ್ಪಟ್ಟು	ಏರ್ಪಟ್ಟು ಲೀಲೆ
ಏರ್ಪಟ್ಟು	ಏರ್ಪಟ್ಟು-ಏರ್ಪಟ್ಟು	ಸ್ವ	<i>Ficus infectoria</i> SENSU ROXB.	ಏರ್ಪಟ್ಟು ಲೀಲೆ ಏರ್ಪಟ್ಟು ಲೀಲೆ ಏರ್ಪಟ್ಟು ಲೀಲೆ	ಏರ್ಪಟ್ಟು	ಏರ್ಪಟ್ಟು ಲೀಲೆ
ಏರ್ಪಟ್ಟು	ಏರ್ಪಟ್ಟು-ಏರ್ಪಟ್ಟು	ಏರ್ಪಟ್ಟು	<i>Azadirachta indica</i> A. JUSS.	ಏರ್ಪಟ್ಟು ಲೀಲೆ ಏರ್ಪಟ್ಟು ಲೀಲೆ ಏರ್ಪಟ್ಟು ಲೀಲೆ	ಏರ್ಪಟ್ಟು	ಏರ್ಪಟ್ಟು ಲೀಲೆ
ಏರ್ಪಟ್ಟು	ಏರ್ಪಟ್ಟು-ಏರ್ಪಟ್ಟು	ಏರ್ಪಟ್ಟು	<i>Azadirachta indica</i> A. JUSS.	ಏರ್ಪಟ್ಟು ಲೀಲೆ ಏರ್ಪಟ್ಟು ಲೀಲೆ ಏರ್ಪಟ್ಟು ಲೀಲೆ	ಏರ್ಪಟ್ಟು	ಏರ್ಪಟ್ಟು ಲೀಲೆ
ಏರ್ಪಟ್ಟು	ಏರ್ಪಟ್ಟು-ಏರ್ಪಟ್ಟು	ಏರ್ಪಟ್ಟು	<i>Tamarindus indica</i> L.	ಏರ್ಪಟ್ಟು ಲೀಲೆ ಏರ್ಪಟ್ಟು ಲೀಲೆ ಏರ್ಪಟ್ಟು ಲೀಲೆ	ಏರ್ಪಟ್ಟು	ಏರ್ಪಟ್ಟು ಲೀಲೆ
ಏರ್ಪಟ್ಟು	ಏರ್ಪಟ್ಟು-ಏರ್ಪಟ್ಟು	ಏರ್ಪಟ್ಟು	<i>Cordia obliqua</i> WILLD.	ಏರ್ಪಟ್ಟು ಲೀಲೆ ಏರ್ಪಟ್ಟು ಲೀಲೆ ಏರ್ಪಟ್ಟು ಲೀಲೆ	ಏರ್ಪಟ್ಟು	ಏರ್ಪಟ್ಟು ಲೀಲೆ
n. Pgr Uqdl	ZRgZAUd-gAAtAZREGA	ಏರ್ಪಟ್ಟು	<i>Tamarindus indica</i> L.	ಏರ್ಪಟ್ಟು ಲೀಲೆ ಏರ್ಪಟ್ಟು ಲೀಲೆ ಏರ್ಪಟ್ಟು ಲೀಲೆ	ಏರ್ಪಟ್ಟು	ಏರ್ಪಟ್ಟು ಲೀಲೆ ಏರ್ಪಟ್ಟು ಲೀಲೆ ಏರ್ಪಟ್ಟು ಲೀಲೆ
PAV Pgr ZRgU	ZRgZAUd-gAAtAZREGA	ZRgU	<i>Albizia amara</i> (ROXB.) BOIVIN	ಏರ್ಪಟ್ಟು ಲೀಲೆ ಏರ್ಪಟ್ಟು ಲೀಲೆ ಏರ್ಪಟ್ಟು ಲೀಲೆ	ಏರ್ಪಟ್ಟು	ಏರ್ಪಟ್ಟು ಲೀಲೆ (ಏರ್ಪಟ್ಟು) ಏರ್ಪಟ್ಟು
UqdlUqdl	gAAtAZREGA	ಏರ್ಪಟ್ಟು	<i>Azadirachta indica</i> A. JUSS.	ಏರ್ಪಟ್ಟು ಲೀಲೆ ಏರ್ಪಟ್ಟು ಲೀಲೆ ಏರ್ಪಟ್ಟು ಲೀಲೆ	ಏರ್ಪಟ್ಟು	ಏರ್ಪಟ್ಟು ಲೀಲೆ ಏರ್ಪಟ್ಟು ಲೀಲೆ ಏರ್ಪಟ್ಟು ಲೀಲೆ
UqdlUqdl	gAAtAZREGA	ಏರ್ಪಟ್ಟು	<i>Azadirachta indica</i> A. JUSS.	ಏರ್ಪಟ್ಟು ಲೀಲೆ ಏರ್ಪಟ್ಟು ಲೀಲೆ ಏರ್ಪಟ್ಟು ಲೀಲೆ	ಏರ್ಪಟ್ಟು	ಏರ್ಪಟ್ಟು ಲೀಲೆ ಏರ್ಪಟ್ಟು ಲೀಲೆ ಏರ್ಪಟ್ಟು ಲೀಲೆ
Cqk UqdlUqdl	2UAtA-ZRgUqdl	D®	<i>Ficus benghalensis</i> L.	ಏರ್ಪಟ್ಟು ಲೀಲೆ ಏರ್ಪಟ್ಟು ಲೀಲೆ ಏರ್ಪಟ್ಟು ಲೀಲೆ	ಏರ್ಪಟ್ಟು	ಏರ್ಪಟ್ಟು ಲೀಲೆ ಏರ್ಪಟ್ಟು ಲೀಲೆ ಏರ್ಪಟ್ಟು ಲೀಲೆ

viqA	2UAA-ZAgf AqA	S J	<i>Ficus infectoria</i> SENSU ROXB.	o gPEZi e E pU fAgE t a a z i z i e e t	KVA a APVA VAATA a a	a APVAUZE P J AZI fAgE t
viqA	2UAA-ZAgf AqA	D	<i>Ficus benghalensis</i> L.	DATAPHIEA a AgA PAgA Sga z a AgA EqA a VA t	a e t AgA o AUATA a	fAgE z a gAWATA o e fAgE t
viqA	2UAA-ZAgf AqA	o t e	<i>Tamarindus indica</i> L.	DATAPHIEA a AgA PAgA Sga z a AgA EqA a VA t	UAUF a a	fAgE z a gAWATA o e fAgE t
PAVAUAQI	UEZUA	Vqf A e o PE		O p i c u l u m a u b u l u f e a a e n f a g e t	PAVAUA a a AATA a P AgAA i	fAgE z a e t z a e PAVUA a AATAIEA eAVI
EZA fAgE gA	E f P UAAZi ZAgf AqA	o t e	<i>Tamarindus indica</i> L.	PA o z e t a e e t aVA a AgA	UAVA IEA a AgA	aAZP OPI fAgE t
EZA fAgE gA	E f P UAAZi ZAgf AqA	A a - S a b	<i>Azadirachta indica</i> A. JUSS. <i>Prosopis cineraria</i> (L.) DRUCE	gAdEA gUA x D fAgE t P z e a P a a AgA	z a A f	« z a P i a a z i D U M f e fAgE t
EZA fAgE gA	E f P UAAZi ZAgf AqA	A a	<i>Azadirachta indica</i> A. JUSS.	UA z a gA D g eAU fA o P i z e t a e e t	S g f a f a	aAZP OPI fAgE t
EZA fAgE gA	E f P UAAZi ZAgf AqA	S a b	<i>Prosopis cineraria</i> (L.) DRUCE	UA z a z a VAIA G V f z a a z i D z a e fAgE t	---	fAgE t o z e g a a a a
EZA fAgE gA	E f P UAAZi ZAgf AqA	S a b	<i>Prosopis cineraria</i> (L.) DRUCE	H J E A C U E t a v o e f e e t z a P a a P i	a z a e t z a n	H J U e S a z a o z eAU a P gA E k a a a g e f u
VAVI P z e a n	> gA P g e g A - ZAgf AqA	CAP z e a t	<i>Alangium salvifolium</i> (L.F.) WANG.	P i n z i z i e e t e v i e u e z e z a a a g p e f a g e t	SVA z a a a a g a	fAgE C a t a a a i a v a z a gAWATAAZA fAgE t
VAVI P z e a n	> gA P g e g A - ZAgf AqA	CAP z e a t	<i>Alangium salvifolium</i> (L.F.) WANG.	P i n z i z i e e t e v i e u e z e z a a a g p e f a g e t	o z e P i n z e q f a a	fAgE C a t a a a a t a a z a fAgE t
fAgE A r o	o z eAU a t	o e	<i>Aegle mormelos</i> (L.) CORREA EX. SCHULTZ	w a x D A T A V A e a t a u D z P g a a f a g e d a A T A a P i A P a o	fAgE D w - fAgE A a z a	GVA k PAVI P e P a o f u A T A o e w a x D A T A V A e o z eAU a a P i J A z a a g p e f a g e t
CAV fAgE gA - fAV fAgE gA	UEZUA	A a	<i>Azadirachta indica</i> A. JUSS.	UA z a z i D A T A P H I E A z a n fAgE t P z e a P a a AgA	A T A o P a a	fAgE C E A fAgE t P z e a V A z e t
CAV fAgE gA - fAV fAgE gA	UEZUA	I E A o	<i>Ficus microcarpa</i> L.F.	UA z a z i D A T A P H I E A z a n fAgE t P z e a P a a AgA		E f t a z a a g j A z i fAgE t
CAV fAgE gA - fAV fAgE gA	UEZUA	S J	<i>Ficus infectoria</i> SENSU ROXB.	UA z a z i z e t a e e t aVA a AgA	o z e a aVA z a a g a	S g a f o z eAU a a a a v a t a j A z i e f a e a
E A U A f A Z z e	UEZUA	A a	<i>Azadirachta indica</i> A. JUSS.	z a u z a a e e t aVA a AgA	Z A r e A z A U D a a o	fAgE C a t a a a i e a v a t a a z a D z a fAgE t
P g fAgE gA	g A U t e fAgE g A - ZAgf AqA	A a	<i>Azadirachta indica</i> A. JUSS.	PA o z e t a e e t O p i c u l e a g i z a J U M a SVA P E	C U l g A z e q f a a	a APVA D g eAU fA o E U A V a g p e fAgE t
P g fAgE gA	g A U t e fAgE g A - ZAgf AqA	A a	<i>Azadirachta indica</i> A. JUSS.	UA z a z i z e t a e e t O p i c u l e a g i z a J U M a SVA P E	S g f a f a	a APVA D g eAU fA o E U A V a g p e fAgE t

PQREGA	gAUf' EREGA-ZAgf' AqA	"AQA	<i>Azadirachta indica</i> A. JUSS.	UAZAZI DATAPHIEF' gAQA ±AQA AgA	eAAQAQA AgA	AAZPQPA YEEf
PQREGA	gAUf' EREGA-ZAgf' AqA	"AQA	<i>Azadirachta indica</i> A. JUSS.	UAZA ZEPZA EEE	H gPQA	YBCFEZA YEEf
PQREGA	gAUf' EREGA-ZAgf' AqA	D®	<i>Ficus benghalensis</i> L.	PA® ZEPZA EEE	H gAZI AgQA	YBCFEZA YEEf
PQREGA	gAUf' EREGA-ZAgf' AqA	SQB	<i>Prosopis cineraria</i> (L.) DRUCE	YAti YAGALIEA EEE QAVI AgA	UqEZA CdATAA	ZAgAWATAAZA YEEf
PQREGA	gAUf' EREGA-ZAgf' AqA	SJ	<i>Ficus infectoria</i> SENSU ROXB.	YAti YAGALIEA EEE QAVI AgA	UqEZA CdATAA	ZAgAWATAAZA YEEf
VITEUF PPAE	°E ZAUQ-avZAUQ	VAUQ	<i>Albizia amara</i> (ROXB.) BOIVIN	PA® ZEPZA EEE °AEF °EUF EI FNUAV SQAPE	PAPAQA±J	AAZPQPA YEEf
AAATAPQEAQA	ZAQAE UQE	D®	<i>Ficus benghalensis</i> L.	PA® ZEPZA EEE	AAZPJ EAATAPA	AAZPQPA YEEf
AAATAPQEAQA	ZAQAE UQE	°AtE	<i>Tamarindus indica</i> L.	UAZAZEPZA ZEPZQA PPA YEEA YJ PQUA EEE	EnUE PJ AIAQA	AAZPQPA YEEf
AAATAPQEAQA	ZAQAE UQE	SQB	<i>Prosopis cineraria</i> (L.) DRUCE	PA® ZEPZA EEE	PAQAQA	YBC CAAQAATAAZA YEEf
AAATAPQEAQA	ZAQAE UQE	"AQA	<i>Azadirachta indica</i> A. JUSS.	UAZA ZEPZA EEE	EnUE PJ AIAQA	EnUE PJ AIAQA EEA °ISA
AAATAPQEAQA	ZAQAE UQE	"AQA	<i>Azadirachta indica</i> A. JUSS.	UAZA ZEPZA EEE	ZHEUB PAZQAQA	ZHEUB PAZQAQA EEA °ISA
AAATAPQEAQA	ZAQAE UQE	D®	<i>Ficus benghalensis</i> L.	UAZA ZEPZA EEE	AAQAQA	CFU °ISA
AUAQAQA	wYI ZEGA-VAQAAPQEGA	D®	<i>Ficus benghalensis</i> L.	°GPEZQA EPU YEEGQAQA ZEPZA EEE	AAEA±QA	APQZEPZQA PQAQA YEEf eAVI
AQAQJ PE	wYI ZEGA-VAQAAPQEGA	"AQA	<i>Azadirachta indica</i> A. JUSS.	YAUQAQA PAQAQA ZEPZA EEE	YAVEQAQA	APQZEPZQA YAVEQAQA eAVI
AQAQJ PE	wYI ZEGA-VAQAAPQEGA	F ZQA	<i>Phoenix sylvestris</i> ROXB.	UAZAZAZAQAQA PZQAQA	PAZQAQA	eAVATA GVPEZA ZEPZA DQAQAATAAZA YEEAJ EKEQAQA ±AQA DZQAQA AVAU « Ci
AQAQJ PE	wYI ZEGA-VAQAAPQEGA	CgE	<i>Ficus religiosa</i> L.	UAZAZAQAQA EAFQAQA DATAPHIEA PPA	C±MEAGAAITA	EAT GEAB QAQAQAQAQA
AQAQJ PE	wYI ZEGA-VAQAAPQEGA	"AQA	<i>Azadirachta indica</i> A. JUSS.	UAZAZAQAQA APAZA YEEAQAQA AVATA DPGA	----	----
CAVQA WmU	PQREGA-APPQUMQEGA	UQAQAQA	<i>Ficus mysorensis</i> Var. <i>pubescens</i>	PA® ZEPZA H gEZA H GEAB UQAQA ZQAQAQA PAQAQA ZEPZA EEE	CAVQAWIQAQA	APQZEPZQAQA SIQAQA eAVI
RGAATA YI U	PQREGA-APPQUMQEGA	°QI	<i>Aegle mormelos</i> (L.) CORREA EX. SCHULTZ	YEEAQAQA AVATA DPGAQAQA	PQQAQAQA	AAZPQPA YEEf
RGAATA YI U	PQREGA-APPQUMQEGA	°AtE	<i>Tamarindus indica</i> L.	PA® ZEPZA EEE	PQQAQAQA	APQZEPZQAQAQA ±AQA YEEf

„AVI CŠā	vj APGf-aPpAUMKREGA	PPE	<i>Cassia fistula</i> L.	PA ^a EA Z ^a EZ ^a EE E	ZEq ^a Aa	“LIDPVEP ^a Aa eAVe
“At „MVA U	vj APGf-aPpAUMKREGA	D [®]	<i>Ficus benghalensis</i> L.	UA ^a ZA G ^a YEZ ^a ZA EE E YEd ^a AAIA “IPA	“AZPAG ^a Aa	„AAZ ^a OPA Y ^a EE
“At „MVA U UAcq	vj APGf-aPpAUMKREGA	“®	<i>Aegle mormelos</i> (L.) CORREA EX. SCHULTZ	UA ^a ZA G ^a YEZ ^a ZA EE E YEd ^a AAIA “IPA	----	„AAZ ^a OPA Y ^a EE
PAZA ^a AGa	vj APGf-aPpAUMKREGA	dUMUJAn	<i>Diospyros montana</i> ROXB.	UA ^a ZE ^a ZA EE E	H g ^a Aa	„AAZ ^a OPA Y ^a EE
“A ^a EP ^a Mzi	vj APGf-aPpAUMKREGA	gP ^a “ ^a EVAVe	<i>Sterculia foetida</i> L.	gPPEZ ^a ZA GV ^a Y ^a EA ^a AEW ^a ATAEM ^a PMPA “APAZ ^a P ^a U ^a A ^a VAIA “AE [®] DPg ^a	----	„AAZ ^a OPA Y ^a EE
PgA P ^a EA ^a “Mzi	Cg ^a APGf-“A ^a EA	Cg ^a z	<i>Ficus religiosa</i> L.	UA ^a ZA “AZ ^a UA E ^a ATA ^a “UA	C±MEAGAATA ^a E	EP ^a “EA “g ^a AZ ^a Y ^a EE
PgA P ^a EA ^a “Mzi	Cg ^a APGf-“A ^a EA	“A ^a A	<i>Azadirachta indica</i> A. JUSS.	UA ^a ZA “AZ ^a UA E ^a ATA ^a “UA	“Oe ZA ^a «	EP ^a “EA “g ^a AZ ^a Y ^a EE
“O ^a ZA ^a G ^a “Mzi	Cg ^a APGf-“A ^a EA	D [®]	<i>Ficus benghalensis</i> L.	E ^o P ^a VA E ^a MP ^a P ^a “; AQU ^a ZA H g ^a EM ^a PA ^a QA ^a “gPPEZ ^a ZA EE E	E ^o P ^a VA	„AZ ^a EA ^a AV ^a AV ^a Y ^a EE
“O ^a ZA ^a G ^a “Mzi	Cg ^a APGf-“A ^a EA	“A ^a A	<i>Azadirachta indica</i> A. JUSS.	UA ^a ZA ^a ME EE ^a AVG ^a “A “Ag ^a	H g ^a Aa	“LIDPVEP ^a Aa “Sā
“O ^a ZA ^a G ^a “Mzi	Cg ^a APGf-“A ^a EA	Cw ^a	<i>Ficus racemosa</i> L.	“AP ^a UAZE ^a G ^a E ^a MA ^a Y ^a g ^a “A ^a Z ^a EZ ^a EE E	PAZ ^a Aa	“AP ^a UAZE ^a “AU ^a J AZ ^a “Ag ^a Y ^a EE
PgU ^a EAq ^a	“AAq ^a -“AAq ^a	SAUJ 7G ^a “a	<i>Thespesia populnea</i> (L.) SOL.EX. CORREA	H J EA DE ^a EM ^a PA ^a GAZ ^a AX ^a „AAPA ^a APA g ^a EAU ^a ZA PA ^a Ar ZA gPPEZ ^a ZA EE E	SAUJ VAV ^a Aa	“LIDPVEP ^a Aa “Sā
PgU ^a EAq ^a	“AAq ^a -“AAq ^a	S ^a “B	<i>Acacia ferrugenia</i> DC.	±OU ZA ^a ME EE E “AVI “Ag ^a	PA ^a Aa	Y ^a CEA Y ^a EE
“I ZA ^a “A ^a EA ^a “Mzi	EAU ^a MAU ^a “-“AAq ^a	“AVIAGAATA ^a EA	<i>Delonix elata</i> (L.) GAMBLE	PA ^a Z ^a ZA EE E “AZ ^a EA ^a ZA DZ ^a GUATA EE E	“AZ ^a Aa	EP ^a “EA “g ^a AZ ^a Y ^a EE
“I ZA ^a “A ^a EA ^a “Mzi	EAU ^a MAU ^a “-“AAq ^a	v ^a Y ^a g ^a	<i>Diospyros melanoxylon</i> ROXB.	ZA ^a G ^a PAATA ^a “APAZ ^a Y ^a AF ^a EPI ^a ATA “AE [®]	“AZ ^a Aa	H g ^a SIZ ^a e «±A ^a Y ^a EE
“I ZA ^a “A ^a EA ^a “Mzi	EAU ^a MAU ^a “-“AAq ^a	“A ^a E ^a “A ^a E	<i>Arundo donax</i> L.	ZA ^a GUATA ^a “A ^a EA “AAUATA “A ^a V ^a E	“AZ ^a Aa	5 “LIDU ^a ZE ^a “EA E ^a ATA ^a “SIZ ^a e Y ^a EE
“I ZA ^a “A ^a EA ^a “Mzi	EAU ^a MAU ^a “-“AAq ^a	PPE	<i>Cassia fistula</i> L.	P ^a Y ^a Z ^a ZA EE E	“E [®] “EAg ^a A	UA ^a ZA J ^a “A ^a “AUM ^a P ^a JA “AOZAU VtAP ^a A ^a EM ^a EE ^a ZA “A ^a Ar Y ^a EE
Z ^a Eq ^a “A ^a ®	EAU ^a MAU ^a “-“AAq ^a	D [®]	<i>Ficus benghalensis</i> L.	UA ^a ZA ^a VAIA EE E	Y ^a “Z ^a Aa	“LIDPVEP ^a Aa H g ^a “Sā „AAZ ^a OPA Y ^a EE
PAŠ ZA ^a “Mzi	EAU ^a MAU ^a “-“AAq ^a	ZACU ^a	<i>Albizia amara</i> (ROXB.) BOIVIN	H g ^a SIZ ^a e P ^a EAQ ^a ZA ^a “A ^a DE ^a “APAZ ^a „EZE	Y ^a “Z ^a Aa	“LIDPVEP ^a Aa H g ^a “Sā „AAZ ^a OPA Y ^a EE

ᱚᱯᱟᱨᱚ	ᱠᱚᱠᱚᱠᱚᱠᱚ	Dᱤ	<i>Ficus benghalensis</i> L.	ᱚᱯᱟᱨᱚ ᱠᱚᱠᱚᱠᱚᱠᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ
Dᱤᱠᱚᱠᱚ	ᱠᱚᱠᱚᱠᱚᱠᱚ	Sᱚᱱ	<i>Acacia ferrugenia</i> DC.	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ
Dᱤᱠᱚᱠᱚ	ᱠᱚᱠᱚᱠᱚᱠᱚ	» ᱚᱱ	<i>Madhuca longifolia</i> (KOEN.) MACLER	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ
ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱠᱚᱠᱚᱠᱚᱠᱚ	ᱚᱯᱟᱨᱚ	<i>Aegle mormelos</i> (L.) CORREA EX. SCHULTZ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ
ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱠᱚᱠᱚᱠᱚᱠᱚ	S, J	<i>Ficus infectoria</i> SENSU ROXB.	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ
S, ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱠᱚᱠᱚᱠᱚᱠᱚ	ᱚᱯᱟᱨᱚ	<i>Syzygium cuminii</i> (L.) SKEELS	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	S, ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ
S, ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱠᱚᱠᱚᱠᱚᱠᱚ	» ᱚᱱ	<i>Madhuca longifolia</i> (KOEN.) MACLER	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	S, ᱚᱯᱟᱨᱚ	
ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱠᱚᱠᱚᱠᱚᱠᱚ	ᱚᱯᱟᱨᱚ	<i>Aegle mormelos</i> (L.) CORREA EX. SCHULTZ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ
ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ	<i>Dodonea viscosa</i> (L.) JACQ.	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ
ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	Dᱤ	<i>Ficus benghalensis</i> L.	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ
ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ	<i>Erythrina variegata</i> L.	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ
ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	Dᱤ	<i>Ficus benghalensis</i> L.	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ
ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	S, ᱚᱯᱟᱨᱚ	<i>Thespesia populnea</i> (L.) SOLEX. CORREA	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ
ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ	<i>Terminalia arjuna</i> (ROXB.) WIGHT & ARN	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ	ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ ᱚᱯᱟᱨᱚ

PAAZREGA	VA ^a APREGA	E ⁺ Y ⁱ © ^o V ⁺ E ⁺ A ⁺ Y ⁺ A	<i>Madhuca longifolia</i> (KOEN.) MACLER- <i>Aegle mormelos</i> (L.) CORREA EX. SCHULTZ	ZAU ^o ZI « « ZI DZGULUMI VAT, Y ⁺ E ⁺ E ⁺ A A ⁺ AVATA DPBIA	A ^o PADAOLEI	AAZP ^o PI Y ⁺ E ⁺ el
©zbt	UA ^o i-VA ^a APREGA	CwI	<i>Ficus racemosa</i> L.	A ⁺ NEIGMA ⁺ A ⁺ AZ ⁺ A ⁺ E ⁺ ±A ⁺ IZA ⁺ A ⁺ AVATA DPBIA	±FZA ⁺ GA	AAZP ^o PI Y ⁺ E ⁺ el
©zbt	UA ^o i-VA ^a APREGA	Cgk/2	<i>Ficus religiosa</i> L.	Y ⁺ G ⁺ U ⁺ ZE ⁺ P ⁺ e ⁺ M ⁺ P ⁺ GA ±P ⁺ A ⁺ A ⁺ Agzi VAT; U ⁺ F ⁺ IP ⁺ A	----	AAZP ^o PI Y ⁺ E ⁺ el
©zbt	UA ^o i-VA ^a APREGA	Cgk/2	<i>Ficus religiosa</i> L.	DATAPHIEA eAUZP ⁺ GA ⁺ A ⁺ IP ⁺ A	----	AAZP ^o PI Y ⁺ E ⁺ el
©zbt	UA ^o i-VA ^a APREGA	Cgk/2	<i>Ficus religiosa</i> L.	±FZA ⁺ GA PKA ⁺ AZIEZI « CDZGULIATA VAT	----	PKA ⁺ AZIEZI C ⁺ A ⁺ A ⁺ CAYEZA ⁺ A ⁺ E
©zbt	UA ^o i-VA ^a APREGA	Z ⁺ A ⁺ A ⁺ P ⁺ H ⁺ V ⁺ E ⁺	<i>Plumaria rubra</i> L.	Z ⁺ A ⁺ A ⁺ AIEPE ⁺ A ⁺ PAZA ⁺ Y ⁺ M ⁺ E ⁺ Y ⁺ A ⁺ L ⁺ A ⁺ AVATA DPBIA	Y ⁺ AVEP ⁺ A ⁺	AAZP ^o PI Y ⁺ E ⁺ el
©zbt	UA ^o i-VA ^a APREGA	A ⁺ A ⁺ A ⁺	<i>Azadirachta indica</i> A. JUSS.	A ⁺ AP ⁺ IA Dg ⁺ E ⁺ AU ⁺ Y ⁺ A ⁺ PI Z ⁺ E ⁺ IZA ⁺ E ⁺ E ⁺	Y ⁺ AVEP ⁺ A ⁺	A ⁺ U ⁺ OP ⁺ E ⁺ P ⁺ A ⁺ O ⁺ IS ⁺ A
©zbt	UA ^o i-VA ^a APREGA	Y ⁺ A ⁺ J eAVA	<i>Nyctanthes arbor-tristis</i> L.	e ⁺ E ⁺ A ⁺ A ⁺ AG ⁺ E ⁺ ZI Y ⁺ E ⁺ E ⁺ A ⁺ A ⁺ AVATA DPBIA	wAxDPBIA	AAZP ^o PI Y ⁺ E ⁺ el
Z ⁺ E ⁺ q ⁺ U ⁺ P ⁺ AU ⁺ P ⁺	Z ⁺ E ⁺ q ⁺ S ⁺ /A ⁺ Y ⁺ Ag ⁺ A ⁺ U ⁺ M ⁺ E ⁺ G ⁺ A U ⁺ A ⁺ I ⁺ AA ⁺ v ⁺ g ⁺ A	© ^o i	<i>Aegle mormelos</i> (L.) CORREA EX. SCHULTZ	PA ^o Z ⁺ E ⁺ IZA ⁺ V ⁺ E ⁺ A ⁺ Y ⁺ A	E ⁺ AdAAq ⁺ A	AAZP ^o PI Y ⁺ E ⁺ el DZGULI
PAqA ⁺ Y ⁺ Ag ⁺ A	Z ⁺ E ⁺ q ⁺ S ⁺ /A ⁺ Y ⁺ Ag ⁺ A ⁺ U ⁺ M ⁺ E ⁺ G ⁺ A U ⁺ A ⁺ I ⁺ AA ⁺ v ⁺ g ⁺ A	© ^o i	<i>Aegle mormelos</i> (L.) CORREA EX. SCHULTZ	PA ^o Z ⁺ E ⁺ IZA ⁺ V ⁺ E ⁺ A ⁺ Y ⁺ A	V ⁺ E ⁺ A ⁺ Y ⁺ A ⁺ IA	AAZP ^o PI Y ⁺ E ⁺ el
A ⁺ A ⁺ AEP ⁺ I ⁺ zi	Z ⁺ E ⁺ q ⁺ S ⁺ /A ⁺ Y ⁺ Ag ⁺ A ⁺ U ⁺ M ⁺ E ⁺ G ⁺ A U ⁺ A ⁺ I ⁺ AA ⁺ v ⁺ g ⁺ A	Z ⁺ A ⁺ IZAJ	<i>Erythroxylum monogynum</i> ROXB.	PA ^o Z ⁺ E ⁺ IZA ⁺ E ⁺ E ⁺	S ⁺ P ⁺ HEU	AAZP ^o PI Y ⁺ E ⁺ el
D ^o Z ⁺ P ⁺ I ⁺ zi	Z ⁺ E ⁺ q ⁺ S ⁺ /A ⁺ Y ⁺ Ag ⁺ A ⁺ U ⁺ M ⁺ E ⁺ G ⁺ A U ⁺ A ⁺ I ⁺ AA ⁺ v ⁺ g ⁺ A	H r	<i>Lanea coromandelica</i> (HOUTT.) MERRILL	PA ^o Z ⁺ E ⁺ IZA ⁺ E ⁺ E ⁺	P ⁺ E ⁺ A ⁺ q ⁺ E ⁺ P ⁺ A ⁺	AAZP ^o PI Y ⁺ E ⁺ el
A ⁺ A ⁺ ZU ⁺ E ⁺ Aq ⁺ E ⁺ P ⁺ I ⁺ zi	Z ⁺ E ⁺ q ⁺ S ⁺ /A ⁺ Y ⁺ Ag ⁺ A ⁺ U ⁺ M ⁺ E ⁺ G ⁺ A U ⁺ A ⁺ I ⁺ AA ⁺ v ⁺ g ⁺ A	I ⁺ EA ^o	<i>Ficus microcarpa</i> L.F.	PA ^o Z ⁺ E ⁺ IZA ⁺ E ⁺ E ⁺	w ⁺ A ⁺ Y ⁺ A	AAZP ^o PI Y ⁺ E ⁺ el

ಹೆಚ್ಚುವರಿ ಕಾರ್ಯಕ್ಷೇತ್ರಗಳು

Village	Taluk	Culturally Significant plant		Key Cultural Significance	Associated deity if any	Remarks
		Kannada Name	Botanical name			
ಗ್ರಾಮ	ತಾಲ್ಲೂಕು	ಸಸ್ಯದ ಕನ್ನಡ ಹೆಸರು	ಸಸ್ಯದ ಶಾಸ್ತ್ರೀಯ ಹೆಸರು	ಸಸ್ಯಕ್ಕಿರುವ ಸಾಂಸ್ಕೃತಿಕ ಮಹತ್ವ	ಸಂಬಂಧಿಸಿದ ದೈವ/ದೇವತೆ	ಸಂಬಂಧಿಸಿದ ಆಚರಣೆ/ವಿಧಿ
ಫಿಕ್ಯಾ ಆಗ್ರಾ ಹಿ	ಅನೇಕೋಗಾ	ಕುಲಿ	<i>Ficus racemosa</i> L.	ಪಾಠ್ಯಶಿಕ್ಷಣಕ್ಕೆ ಉಪಯುಕ್ತವಾದ ಒಂದು ಪ್ರಮುಖವಾದ ಸಸ್ಯವಾಗಿದೆ. ಇದು ಸಾಮಾನ್ಯವಾಗಿ ಗಿಡದಂತೆ ಬೆಳೆಯುತ್ತದೆ.	ನಾನಾಭಾವಿ	ಪ್ರಾಚೀನ ಕಾಲದಿಂದಲೂ ಇಲ್ಲಿಯವರೆಗೆ ಇರುವುದು.
ಅನೇಕೋಗಾ	2ಗಾ	ಮಾಂಸಾಹಾರಿ	<i>Mangifera indica</i> Linn.	ಮಾಂಸಾಹಾರಿ ಸಸ್ಯವಾಗಿದೆ.	ಮೇಲೇಶ್ವರಿ	ಮೇಲೇಶ್ವರಿ ದೇವತೆಗೆ ಅರ್ಪಿಸಿ ಪೂಜಿಸಲಾಗುತ್ತದೆ.
ಮೇಲೇಶ್ವರಿ	2ಗಾ	ಮಾಂಸಾಹಾರಿ	<i>Mangifera indica</i> Linn.	ಮಾಂಸಾಹಾರಿ ಸಸ್ಯವಾಗಿದೆ.	ಮೇಲೇಶ್ವರಿ	ಮೇಲೇಶ್ವರಿ ದೇವತೆಗೆ ಅರ್ಪಿಸಿ ಪೂಜಿಸಲಾಗುತ್ತದೆ.
2ಗಾ	2ಗಾ	ದಢಿ	<i>Ficus benghalensis</i> L.	ಮೇಲೇಶ್ವರಿ ದೇವತೆಗೆ ಅರ್ಪಿಸಿ ಪೂಜಿಸಲಾಗುತ್ತದೆ.	ಮೇಲೇಶ್ವರಿ	ಮೇಲೇಶ್ವರಿ ದೇವತೆಗೆ ಅರ್ಪಿಸಿ ಪೂಜಿಸಲಾಗುತ್ತದೆ.
ದಾಸೋಗಾ	2ಗಾ	ದಢಿ	<i>Ficus benghalensis</i> L.	ಮೇಲೇಶ್ವರಿ ದೇವತೆಗೆ ಅರ್ಪಿಸಿ ಪೂಜಿಸಲಾಗುತ್ತದೆ.	ಮೇಲೇಶ್ವರಿ	ಮೇಲೇಶ್ವರಿ ದೇವತೆಗೆ ಅರ್ಪಿಸಿ ಪೂಜಿಸಲಾಗುತ್ತದೆ.
ವಾಸೋಗಾ	2ಗಾ	ವಾಸೋಗಾ	<i>Holoptelia integrifolia</i> Planch.	ಪಾಠ್ಯಶಿಕ್ಷಣಕ್ಕೆ ಉಪಯುಕ್ತವಾದ ಒಂದು ಪ್ರಮುಖವಾದ ಸಸ್ಯವಾಗಿದೆ.	ಪ್ರೇಮಲತಾ	ಪ್ರೇಮಲತಾ ದೇವತೆಗೆ ಅರ್ಪಿಸಿ ಪೂಜಿಸಲಾಗುತ್ತದೆ.
ವಾಸೋಗಾ	ಪ್ರೇಮಲತಾ	ಮೇಲೇಶ್ವರಿ	<i>Aegle mormelos</i> (L.) CORREA EX. SCHULTZ	ಪ್ರೇಮಲತಾ ದೇವತೆಗೆ ಅರ್ಪಿಸಿ ಪೂಜಿಸಲಾಗುತ್ತದೆ. ಇದು ಸಾಮಾನ್ಯವಾಗಿ ಗಿಡದಂತೆ ಬೆಳೆಯುತ್ತದೆ.	----	ಮೇಲೇಶ್ವರಿ ದೇವತೆಗೆ ಅರ್ಪಿಸಿ ಪೂಜಿಸಲಾಗುತ್ತದೆ.
ವಾಸೋಗಾ	ವಾಸೋಗಾ	ಮೇಲೇಶ್ವರಿ	<i>Aegle mormelos</i> (L.) CORREA EX. SCHULTZ	ಪ್ರೇಮಲತಾ ದೇವತೆಗೆ ಅರ್ಪಿಸಿ ಪೂಜಿಸಲಾಗುತ್ತದೆ. ಇದು ಸಾಮಾನ್ಯವಾಗಿ ಗಿಡದಂತೆ ಬೆಳೆಯುತ್ತದೆ.	----	ಪ್ರಾಚೀನ ಕಾಲದಿಂದಲೂ ಇಲ್ಲಿಯವರೆಗೆ ಇರುವುದು.

