

Tree Diversity of Haveri District, Karnataka, India

The Haveri district is known as the gateway of the Northern districts of Karnataka and situated in the central part of Karnataka state. The survey resulted in an account of 193 tree species belonging to 47 families and 145 genera. Out of 193 species; 76 are cultivated and 117 are wild of which seven are endemic species. The dominant families are Fabaceae (44), Moraceae (14), Bignoniaceae (10), Malvaceae and Rubiaceae represented by 9 species each. Threat status was assessed by referring IUCN Red Data List, indicating that, 3 species are data deficient (DD), 3 are near threatened (NT), 7 vulnerable (VU) and 93 are of least concern (LC). Analysis of utilization noticed that they are medicinal (55), timber (50), ornamental (37), edible fruits (36), sacred (11), fencing (6), dye yielding (5), green manure (5), fodder (4) and fuel (2). The present work is compiled on primary information gathered from stakeholders of the district. It will serve as baseline data and helpful to the forest department, and future floristic studies in sustainable utilization of biodiversity.

Key words: Haveri district, IUCN status, Karnataka, Trees, Utilization

Introduction

Trees provide basic requirements of human beings. The tree populations are disappearing at an alarming rate due to deforestation, urbanization (Kishor *et al.*, 2011), and other various human needs (Ihenyen *et al.*, 2009). The total area of Haveri district is 4848 Km² out of this forest cover is 474.5 Km² (9.78%). The forest area is divided into 3 sub-divisions, namely Haveri, Hangal, and Ranebennur, and it consists of seven ranges, namely, Byadgi, Dhunshi, Hangal, Haveri, Hirekerur, Ranebennur and Ranebennur (wildlife) ranges. There are two wildlife sanctuaries namely, Bankapura Peacock Conservation Reserve and Ranebennur Blackbuck Sanctuary. As per the classification of Indian Forests by Champion and Seth (1968), the forests of Haveri Division fit into the following types of forests, Southern dry mixed deciduous (5A/C3), Southern Thorn Forests (6A/C1) and Secondary Dry Deciduous Forest (5/DS1).

Previous studies in the Haveri district have shown documentation of 36 tree species from community-protected forest of Kusnur village, Hangal, which includes (Kotresha *et al.*, 2018). Forty one (41) medicinal plant (including 7 tree) species belong to 38 genera and 23 families were recorded from the Ranebennur Blackbuck Sanctuary (Makanur and Kotresha, 2022a). Inventory on Bankapura Peacock Conservation Reserve shows 36 trees (Makanur and Kotresha, 2022b). The total phytodiversity of the Haveri district was incompletely explored and remained for many years. The present study was undertaken to produce an up-to-date account of the trees of Haveri district which can better enable documentation and conservation of these tree taxa.

Material and Methods

Study area

Haveri district is exactly in the center of Karnataka with equal

The present work compiled primary information about tree components of the Haveri district, it will serve as on-set data for future floristic studies of the district and proper utilization of local resources.

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distance from Bidar in the far north to Kollegal in the far south. It is also known as the gateway district to the northern districts of Karnataka. The Haveri district is located between north latitudes 14°17'02" to 15°15'01" and east longitudes 75°00'35" to 75°49'23" falling in the survey of India. Which surrounded by Dharwad district in the north, by Gadag district in the northeast, by Bellary district in the east, by Davangere district in the south, by Shimoga district in the southwest and by Uttar Kannada in the west and northwest (Fig. 1).

Data collection

Frequent field visits were undertaken from November 2020 to August 2023 in different seasons and different habitats throughout the Haveri district. During field exploration, information on vegetation type, habitat, flowering and fruiting season, and utilization of the tree by local people were noted down. Collected specimens were deposited in the herbarium of Karnataka College, Dharwad (HKCD). Field identifications were confirmed with the help of available literature such as (Cooke, 1958; Gamble, 1935; Saldanha, 1984 and 1996; Bhat, 2014). Nomenclature of collected species were confirmed by using the online database, Plants of World Online (POWO, 2024). All the families in the present study have been arranged according to Chase *et al.* (2016). All species were enumerated with their correct botanical name, family, vernacular name, vegetation

type, IUCN conservation status, flowering and fruiting season, and utilization by the local people listed (Table 1).

Results

During the present work, 193 tree species covering 145 genera come under 47 families and have been recorded from Haveri District. The family Fabaceae was dominant over the other 46 families it represented with 44 species coming under 29 genera. it contributes 23% of the total tree flora. Followed by Moraceae with 14 species, Bignoniaceae with 10 species, Malvaceae and Rubiaceae with 9 species each. Apocynaceae, Arecaceae and Combretaceae with 7 species each. Anacardiaceae, Euphorbiaceae and Rutaceae are represented by 6 species each. These top ten families contribute 61% of total tree flora (Fig. 2). The genus *Ficus* was represented by 12 species with the highest number, followed by *Terminalia* (7), *Albizia* and *Senegalia* (4).

Based on the type of vegetation 121 species are wild and the remaining 72 species were cultivated. IUCN conservation status analysis shows that 7 species belong to the Vulnerable (VU) category. Three (3) species namely, *Pterocarpus marsupium* Roxb., and *Aegle marmelos* (L.) Correa comes under the Near Threatened (NT) category. Ninety three (93) tree taxa come under the Least Concern (LC) category, 3 taxa

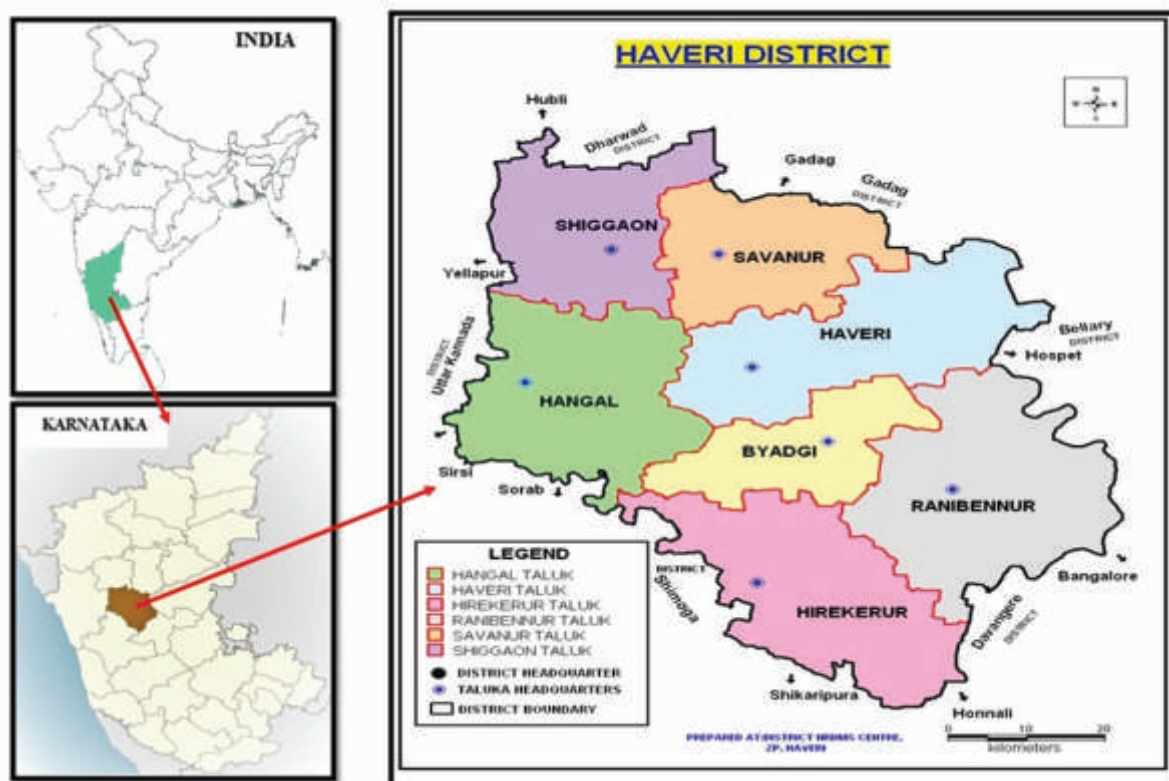


Fig. 1 : Map of the study area

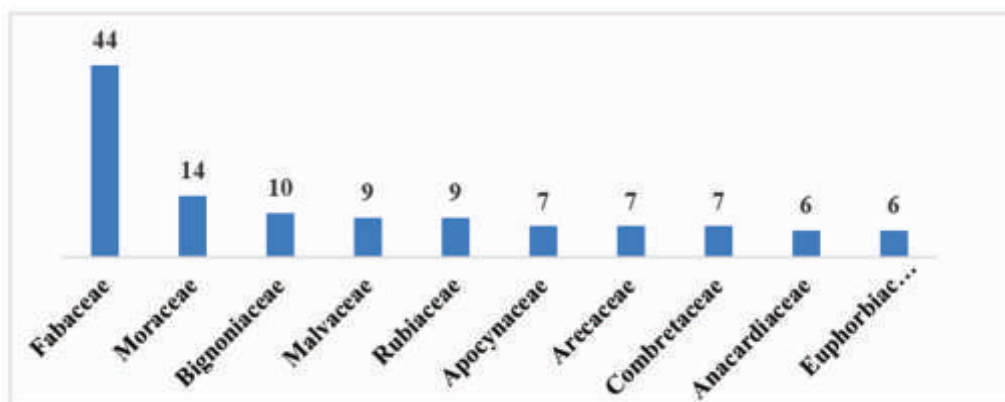


Fig. 2 : Top ten dominant tree families

Table 1: Checklist of tree species documented from Haveri District.

Scientific name	Vernacular name	VT	IUCN Status	Fl & Fr season	Uses
Anacardiaceae					
<i>Anacardium occidentale</i> L.	Geru	C	LC	Sep-Apr	EF
<i>Buchanania axillaris</i> (Desr.) Ramamoorthy	Maradi mara	W	LC	Mar-Dec	SP
<i>Lannea coromandelica</i> (Houtt.) Merr.	Gojjalu mara	W	LC	Jan-Jul	TY
<i>Mangifera indica</i> L.	Maavu	C	DD	Jan-Jul	EF
<i>Semecarpus anacardium</i> L.f.	Kari geru	W	LC	Jul-Apr	EF
<i>Spondias pinnata</i> (L.f.) Kurz	Amtékayi mara	C	NA	Jan-Jun	EF
Annonaceae					
<i>Annona muricata</i> L.	Lakshmana phala	C	LC	Apr-Oct	EF
<i>Annona reticulata</i> L.	Ramaphala	C	NA	May-Jan	EF
<i>Annona squamosa</i> L.	Sithaphala	W	LC	TTY	EF
<i>Monoon longifolium</i> (Sonn.) B.Xue & R.M.K.Saunders	False ashok tree	C	NA	Mar-Sep	OM
Apocynaceae					
<i>Alstonia scholaris</i> (L.) R.Br.	Haale mara	C	LC	Jun-Jan	MD
<i>Calotropis gigantea</i> (L.) R.Br.	Ekkadagida	C	NA	TTY	MD
<i>Cascabela thevetia</i> (L.) Lippold	Ghantehoogida	C	LC	TTY	OM
<i>Holarrhena pubescens</i> Wall. ex G. Don	Kodagasana	W	LC	Mar-Dec	MD
<i>Plumeria alba</i> L.	Bilidevakanagilu	C	LC	TTY	OM
<i>Tabernaemontana divaricata</i> (L.) R.Br. ex Roem. & Schult.	Nandibatlu	C	NA	TTY	OM
<i>Wrightia tinctoria</i> (Roxb.) R.Br.	Kare kodasiga	W	LC	TTY	MD
Arecaceae					
<i>Areca catechu</i> L.	Adike	C	NA	TTY	EF
<i>Borassus flabellifer</i> L.	Thale mara	C	NA	Feb-Aug	EF
<i>Caryota urens</i> L.	Baine-mara	C	LC	Dec-Aug	TY
<i>Cocos nucifera</i> L.	Thengina mara	C	NA	TTY	EF
<i>Livistona chinensis</i> R.Br.	Fan-Palm	C	NA	Jan-Feb	OM
<i>Phoenix sylvestris</i> (L.) Roxb.	Ichalu mara	W	NA	Jan-Oct	EF
<i>Roystonea regia</i> (Kunth) O.F.Cook	Royal Palm	C	NA	Oct-Jan	OM
Bignoniaceae					
<i>Dolichandrone atrovirens</i> (Roth) Sprague	Udi mara	W	NA	TTY	MD
<i>Dolichandrone falcata</i> (Wall. ex DC.) Seem.		W	NA	TTY	MD
<i>Jacaranda mimosifolia</i> D.Don		C	VU	Dec-Jul	OM
<i>Kigelia africana</i> (Lam.) Benth.	Aanetoradukayi	C	LC	Mar-Dec	OM
<i>Markhamia lutea</i> (Benth.) K.Schum.		C	LC	Dec-Apr	OM
<i>Millingtonia hortensis</i> L.f.	Akasha mallige	C	NA	May-Feb	OM

Scientific name	Vernacular name	VT	IUCN Status	Fl & Fr season	Uses
<i>Oroxylum indicum</i> L.	Thigade mara	C	NA	Jul-Mar	OM
<i>Radermachera xylocarpa</i> (Roxb.) K.Schum.	Konana kombu	W	NA	Feb-Apr	
<i>Spathodea campanulata</i> P.Beauv.		C	LC	Jul-Mar	OM, DY
<i>Tecoma stans</i> (L.) Kunth		C	LC	TTY	OM
Bixaceae					
<i>Cochlospermum religiosum</i> (L.) Alston	Bettadatavare	W	NA	Feb-Aug	SP
Boraginaceae					
<i>Cordia dichotoma</i> Frost.	Challekayi	W	LC	TTY	EF
<i>Cordia macleodii</i> (Griff.) Hook.f. & Thomson		W	NA	Feb-Aug	EF
<i>Cordia vestita</i> (A.DC.) Hook.f. & Thomson		W	NA	Feb-Sep	
<i>Ehretia aspera</i> Willd.		W	DD	Jul-Mar	MD
Cannabaceae					
<i>Trema orientale</i> (L.) Blume	Kiruhale	C	LC	Jan-Oct	TY
Capparaceae					
<i>Capparis divaricata</i> Lam.	Thottala mara	W	NA	Jan-Jun	MD
<i>Capparis grandis</i> L.f.		W	NA	TTY	MD
<i>Crateva magna</i> (Lour.) DC.	Nirvaala	W	NA	Mar-Aug	TY
Caricaceae					
<i>Carica papaya</i> L.	Parangigida	C	DD	TY	EF
Casuarinaceae					
<i>Casuarina equisetifolia</i> L.	Gaali mara	C	LC	Dec-Jul	OM; TY
Celastraceae					
<i>Elaeodendron glaucum</i> (Rottb.) Pers.		W	NA	Mar-Dec	TY
Clusiaceae					
<i>Garcinia indica</i> (Dupetit-Thouars) Choisy	Punerpuli	C	VU	Nov-Aug	EF; MD
Combretaceae					
<i>Terminalia anogeissiana</i> Gere & Boatwr.	Dindiga mara	W	NA	Mar-Dec	TY
<i>Terminalia arjuna</i> (Roxb. ex DC.) Wight & Arn.	Hole matti	W	NA	May-Feb	TY
<i>Terminalia bellirica</i> (Gaertn.) Roxb.	Taree mara	W	LC	Mar-Dec	MD
<i>Terminalia catappa</i> L.	Kaadubadam	C	LC	TTY	OM
<i>Terminalia chebula</i> Retz.	Alalekaayi mara	W	LC	Feb-Oct	MD
<i>Terminalia elliptica</i> Willd.	Kari matti	W	NA	Apr-Dec	TY
<i>Terminalia paniculata</i> Roth		W	NA	Aug-Jan	TY
Cornaceae					
<i>Alangium salviifolium</i> (L.f.) Wangerin	Ankale mara	W	LC	Feb-Jun	EF
Dilleniaceae					
<i>Dillenia pentagyna</i> Roxb.	Kaltega	C	NA	Feb-Jun	OM
Ebenaceae					
<i>Diospyros melanoxylon</i> Roxb.	Beedi mara	W	NA	Jan-Jun	EF
<i>Diospyros montana</i> Roxb.	Jagalaganti	W	NA	Mar-Oct	TY
Euphorbiaceae					
<i>Euphorbia nivulia</i> Buchanan-Hamilton	Dundukalli	W	NA	Jan-Apr	FC
<i>Euphorbia tirucalli</i> L.	Korkalligida,	W	LC	Jun-Oct	FC; GY
<i>Givotia moluccana</i> (L.) Sreem.	Butti mara	W	NA	Mar-Jul	MD
<i>Jatropha curcas</i> L.		C	LC	Nov-Jul	FL; FC
<i>Mallotus nudiflorus</i> (L.) Kulju & Welzen	Kat-kumbala	W	LC	May-Mar	TY
<i>Mallotus philippensis</i> (Lam.) Müll.Arg.	Kunkuma mara	W	LC	Jun-Mar	DY
Fabaceae					
<i>Acacia auriculiformis</i> A.Cunn. ex Benth.	Acaia	C	LC	Dec-Aug	TY
<i>Adenanthura pavonina</i> L.	Doddagulanji	C	LC	Jan-Sep	OM
<i>Albizia amara</i> (Roxb.) Boivin	Tugli mara	W	LC	Sep-Jun	GM; MD
<i>Albizia chinensis</i> (Osbeck) Merr.		W	NA	Mar-Dec	OM
<i>Albizia lebbek</i> (L.) Benth.		W	LC	Mar-Nov	GM; MD
<i>Albizia odoratissima</i> (L.f.) Benth.	Kadu bage	W	LC	May-Feb	TY; MD
<i>Bauhinia purpurea</i> L.		C	LC	Feb-Dec	MD; OM
<i>Bauhinia racemosa</i> Lam.		W	NA	Apr-Jan	

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<i>Bauhinia variegata</i> L.	Basavana pada	C	LC	Sep-May	OM
<i>Butea monosperma</i> (Lam.) Taubert	Muthuga	W	LC	Jan-Jul	DY; TY
<i>Cassia fistula</i> L.	Kakke mara	W	LC	Aug-May	MD; DY
<i>Cassia javanica</i> L.		C	LC	Aug-May	OM
<i>Dalbergia lanceolaria</i> L.f.	Bili beete,	W	LC	Feb-Aug	TY
<i>Dalbergia latifolia</i> Roxb.	Beete mara	W	VU	Jul-Feb	TY
<i>Dalbergia sissoo</i> Roxb.	Biradi	C	LC	Feb-Oct	TY
<i>Delonix regia</i> (Hook.) Raf.	KempuTorai	C	LC	Apr-Jun	TY; OM
<i>Erythrina stricta</i> Roxb.	Keechige	W	NA	Jan-May	MD
<i>Erythrina suberosa</i> Roxb.	Corky Coral Tree	W	NA	Feb-Jun	
<i>Gliricidia sepium</i> (Jacq.) Walp.	Gobbradagida	W	LC	Feb-May	GM
<i>Hardwickia binata</i> Roxb.	Kammara	W	LC	Aug-Jan	MD; FD
<i>Leucaena leucocephala</i> (Lam.) de Wit	Subabul	C	NA	TTY	FD
<i>Libidibia coriaria</i> (Jacq.) Schltdl.	Seemealde mara	C	LC	May-Nov	OM
<i>Parkia biglandulosa</i> Wight & Arn.		C	NA	Oct-May	OM
<i>Parkinsonia aculeata</i> L.		C	LC	Jul-Dec	FC
<i>Peltophorum pterocarpum</i> (DC.) K.Heyne	Bettadahuli	C	NA	Feb-Dec	OM
<i>Piliostigma malabaricum</i> (Roxb.) Benth.	Basavanapada	W	LC	Aug-Dec	TY
<i>Pithecellobium dulce</i> (Roxb.) Benth.	Seemehunase	W	LC	Dec-Jul	EF
<i>Pongamia pinnata</i> (L.) Pierre	Hongemara	W	LC	Apr-Dec	FL; GM
<i>Prosopis cineraria</i> (L.) Druce	Banni mara	W	NA	Apr-May	SP; MD
<i>Neltuma juliflora</i> (Sw.) Raf.	Bellary jaali	W	NA	TTY	FC
<i>Pterocarpus marsupium</i> Roxb.	Honne mara	W	NT	Mar-Nov	TY
<i>Samanea saman</i> (Jacq.) Merr.	Male mara	W	LC	Mar-Sep	TY
<i>Saraca asoca</i> (Roxb.) W.J.de Wilde	Ashokada mara	C	VU	Mar-Oct	MD
<i>Senegalia catechu</i> (L.f.) P.J.H.Hurter & Mabb.	Kaachu	W	LC	Mar-Dec	GY
<i>Senegalia chundra</i> (Roxb. ex Rottler) Maslin	Kempujali	W	NA	May-Oct	TY
<i>Senegalia pennata</i> (L.) Maslin		W	NA	May-Nov	
<i>Senegalia rugata</i> (Lam.) Britton & Rose	Shigekayi	W	NA	Jan-Jun	MD
<i>Senna siamea</i> (Lam.) H.S.Irwin & Barneby	Thangadi mara	C	LC	Jul-Dec	TY
<i>Sesbania grandiflora</i> (L.) Poir.	Chogache	C	NA	Dec-Mar	FD, TY
<i>Tamarindus indica</i> L.	Hunase mara	W	LC	Apr-Dec	EF
<i>Vachellia farnesiana</i> (L.) Wight & Arn.	Kasturi Jali	W	LC	Sep-Feb	MD
<i>Vachellia horrida</i> (L.) Kyal. & Boatwr.	Anegobli	W	NA	Jan-Nov	FD, FC
<i>Vachellia nilotica</i> (L.) P.J.H.Hurter & Mabb.	Gobbalimara	W	LC	Jul-Oct	MD, TY, GY
<i>Xylia xylocarpa</i> (Roxb.) Taub.	Jambe	W	LC	TTY	TY
Lamiaceae					
<i>Gmelina arborea</i> Roxb.	Shivani	C	LC	Feb-Jun	OM
<i>Tectona grandis</i> L.f.	Saguvani, Thega	W	NA	Apr-Sep	TY
<i>Vitex altissima</i> L.f.	Naviladi	W	NA	Apr-May	TY
<i>Vitex leucoxylon</i> L. f.	Holelakki	W	LC	TTY	MD
Lauraceae					
<i>Cinnamomum verum</i> J.S. Presl	Dalchini	C	NA	Dec-Jul	EF
Lecythidaceae					
<i>Barringtonia acutangula</i> (L.) Gaertn.	Neerukanigalu	W	LC	Apr-Dec	MD
<i>Careya arborea</i> Roxb.	Kavalu mara	W	NA	Jan-Jun	MD
<i>Couropita guianensis</i> Aublet	Nagalingapushpa	C	LC	TTY	SP
Loganiaceae					
<i>Strychnos potatorum</i> L. f.	Chilu	W	NA	Apr-Dec	MD
Lythraceae					
<i>Lagerstroemia microcarpa</i> Wight		W	NA	Jun-Feb	TY
<i>Lagerstroemia parviflora</i> Roxb.	Chennangi mara	W	LC	Feb-May	TY
<i>Lagerstroemia speciosa</i> (L.) Pers.		C	NA	Mar-Jan	OM
<i>Punica granatum</i> L.	Dalimbehannu,	C	LC	Mar-Sep	EF
Magnoliaceae					
<i>Magnolia champaca</i> (L.) Baill. ex Pierre	Sampige mara	C	LC	Mar-Jul	OM

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Malvaceae					
<i>Adansonia digitata</i> L.	Doddahunase	C	NA	Apr-Sep	OM; SP
<i>Bombax ceiba</i> L.	Kempuburuga	W	LC	Feb-May	MD; DY
<i>Ceiba pentandra</i> (L.) Gaertn.	Bili buruga	W	LC	Jan-Jun	TY
<i>Firmiana colorata</i> (Roxb.) R.Br.	Bilisulige	W	NA	Mar-Oct	TY
<i>Grewia tiliifolia</i> Vahl		W	NA	Dec-Aug	MD
<i>Guazuma ulmifolia</i> Lamk.	Bhadarkshi	C	LC	Feb-Sep	OM; SP
<i>Kydia calycina</i> Roxb.		W	LC	Sep-Feb	TY
<i>Sterculia urens</i> Roxb.	Kempu dale	W	NA	Oct-May	TY; GY
<i>Thespesia populnea</i> (L.) Sol. ex Corrêa	Bugari mara	W	LC	Mar-Nov	OM
Meliaceae					
<i>Azadirachta indica</i> A.Juss.	Bevina mara	W	LC	Aug-Jan	SP; MD
<i>Melia azedarach</i> L.	HucchuBevu	C	LC	Jan-Oct	TY; MD
<i>Melia dubia</i> Cav.	Arabevu mara	C	NA	TTY	TY
<i>Soymida febrifuga</i> (Roxb.) A.Juss.	Swami mara	W	NA	Feb-Jul	MD
<i>Swietenia mahagoni</i> (L.) Jacq.	Mahogany	C	NT	Feb-Dec	TY
Moraceae					
<i>Artocarpus heterophyllus</i> Lam.	Halasu	W	NA	Oct-May	EF
<i>Ficus amplissima</i> J.E.Smith	Bilibasuri mara	W	NA	Sep-Mar	MD
<i>Ficus arnottiana</i> (Miq.) Miq.	Bettadaarali	W	NA	Jun-Sep	MD
<i>Ficus benghalensis</i> L.	Alada mara	W	NA	TTY	SP
<i>Ficus benjamina</i> L.		C	NA	TTY	OM
<i>Ficus drupacea</i> Thunb.	Gonikayi mara	W	LC	Dec-May	EF
<i>Ficus exasperata</i> Vahl	Garagatti mara	W	LC	Nov-May	MD
<i>Ficus hispida</i> L.f.	Kaaduathi	W	LC	Feb-Nov	MD
<i>Ficus microcarpa</i> L.f.	Pilale mara	W	LC	Mar-May	SP; MD
<i>Ficus mollis</i> Vahl	Kallatthi	W	NA	Jun-Jan	MD
<i>Ficus racemosa</i> L.	Atthimara	W	LC	TTY	EF
<i>Ficus religiosa</i> L.	Arali, Ashwatha	W	LC	TTY	SP
<i>Ficus virens</i> Aiton	Basarimara	C	LC	Mar-Dec	OM
<i>Streblus asper</i> Lour.	Mitle mara	W	LC	TTY	TY
Moringaceae					
<i>Moringa oleifera</i> Lam.	Nugge mara	C	LC	TTY	EF
Muntingiaceae					
<i>Muntingia calabura</i> L.	Gasagase mara	C	NA	TTY	OM
Myrtaceae					
<i>Eucalyptus globulus</i> Labill.	Nilgiri	C	LC	Sep-Dec	TY
<i>Eucalyptus leucoxylon</i> F.Muell.	Bili Nilgiri	C	VU	Sep-Dec	OM
<i>Melaleuca glauca</i> (DC.) Craven	Bottle brush	C	NA	TTY	OM
<i>Psidium guajava</i> L.	Perala hannu	C	LC	TTY	EF
<i>Syzygium cumini</i> (L.) Skeels	Neeralegida	W	LC	Dec-Jul	EF
Nyctanginaceae					
<i>Nyctanthes arbor-tristis</i> L.	Parijata	C	LC	Sep-Apr	SP
Phyllanthaceae					
<i>Bridelia retusa</i> (L.) A.Juss.	Mulluhonne	W	LC	Aug-Feb	MD
<i>Phyllanthus acidus</i> (L.) Skeels	Nellikayi	C	NA	TTY	EF
<i>Phyllanthus emblica</i> L.	Bettadanelli	W	LC	Jul-May	EF; MD
Poaceae					
<i>Bambusa bambos</i> (L.) Voss	Bidiru	W	NA	Jul-Feb	TY
Proteaceae					
<i>Grevillea robusta</i> A.Cunn. ex R.Br.	Silver oak	C	LC	Jun-Apr	TY
Putranjivaceae					
<i>Putranjiva roxburghii</i> Wall.	Putrajeeva	C	LC	Mar-May	OM; MD
Rhamnaceae					
<i>Ziziphus mauritiana</i> Lam.	Bare mara	W	LC	Dec-Apr	FC; EF

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Rubiaceae					
<i>Ceriscoides turgida</i> (Roxb.) Tirveng.	Bonagaare	W	NA	Nov-Jun	MD
<i>Gardenia gummifera</i> L.f.	Bukkigida	W	LC	Dec-Aug	GY
<i>Gardenia latifolia</i> Aiton	Adavi bike	W	NA	Aug-Mar	EF
<i>Adina cordifolia</i> (Roxb.) Hook.f. & Benth.	Anavu	W	NA	Oct-Jun	TY
<i>Ixora pavetta</i> Andrews	Goravi	W	NA	Jan-Oct	OM
<i>Mitragyna parvifolia</i> (Roxb.) Korth.		W	NA	Mar-Dec	TY
<i>Morinda coreia</i> Buch.-Ham.	Noni	W	NA	Mar-Dec	MD
<i>Tamilnadia uliginosa</i> (Retz.) Tirveng. & Sastre		W	NA	Apr-Jan	MD
<i>Wendlandia thyrsoides</i> (Roem. & Schult.) Steud.		W	NA	Dec-Sep	MD
Rutaceae					
<i>Aegle marmelos</i> (L.) Correa	Bilvapatre mara	W	NT	Mar-Dec	EF; SP
<i>Bergera koenigii</i> L.	Kari bevu	C	LC	TTY	EF
<i>Chloroxylon swietenia</i> DC.	Masivala mara	W	VU	Jan-Oct	TY
<i>Limonia acidissima</i> L.	Belavala mara	W	NA	Jan-May	EF
<i>Naringi crenulata</i> (Roxb.) Nicolson	Kadubilvapatre	W	NA	Mar-Dec	MD
<i>Zanthoxylum rhetsa</i> (Roxb.) DC.	Jummi mara	W	LC	Mar-Nov	EF
Salicaceae					
<i>Casearia tomentosa</i> Roxb.	Sillangi	W	NA	Feb-Aug	MD
<i>Salix tetrasperma</i> Roxb.	Bochi mara	W	LC	Jul-Mar	TY
Salvadoraceae					
<i>Salvadora persica</i> L.	Govina mara	W	LC	Nov-May	MD
Santalaceae					
<i>Santalum album</i> L.	Gandhada mara	W	VU	TTY	TY
Sapindaceae					
<i>Allophylus cobbe</i> (L.) Forsyth f.	Nagappanaballi	W	NA	Mar-Aug	MD
<i>Sapindus laurifolius</i> Vahl	Antuvalakayi	W	NA	Oct-Mar	MD
<i>Schleichera oleosa</i> (Lour.) Oken	Kendala	W	LC	Mar-Oct	TY
Sapotaceae					
<i>Madhuca longifolia</i> (J. Koenig ex L.) J.F. Macbr.	Ippe mara	W	NA	Mar-Jun	EF; GM
<i>Manilkara zapota</i> (L.) P. Royen	Sapota gida	C	LC	TTY	EF
Simaroubaceae					
<i>Ailanthus excelsa</i> Roxb.	Hebbevu	W	NA	Dec-Jul	OM
<i>Simarouba glauca</i> DC.	Lakshmitharu	C	LC	Jan-May	MD
Ulmaceae					
<i>Holoptelea integrifolia</i> (Roxb.) Planch.	Gubbi rotti mara	W	NA	Jan-Aug	MD, TY
Zygophyllaceae					
<i>Balanites roxburghii</i> Planch.	Ingula kayi	W	NA	Nov-Apr	MD

Abbreviations: VT- Vegetation type; W-Wild; C- Cultivated; NA- Not Applicable; NT- Near Threatened; VU- Vulnerable; LC- Least Concern; DD-Data Deficient; Fl & Fr- Flowering and Fruiting; TTY-Throughout the year; DY-Dye yielding; EF-Edible fruit; FC-Fencing; FD- Fodder; FL-Fuel; GM-Green manure; GY- Gum yielding; MD-Medicinal; OM-Ornamental; SP- Sacred; TY-Timber yielding.

belong to the Data Deficient (DD) category. The remaining 87 species come under the Not Applicable (NA) Category (Fig. 3). Based on the utilization of trees and their products by the local people of this region, they were classified into different categories, *Pongamia pinnata* (L.) Pierre and *Jatropha curcas* L. were used in the extraction of biodiesel (Fig. 4).

Mainly in Savanur town 3 largest Baobab (*Adansonia digitata* L.) trees locally known as *Dodda hunase mara*, are located at the center of the city they are known to be about 2000 years old, with a diameter of 15.70 m. and they provide shelter for numerous bats. In Veerapura village of Hirekerur taluka, *Ficus microcarpa*

L.f. large tree spreads over an area of 1-acre land, commonly known as *Pilali Marada Chowdamma* and worshiped in the name of a local deity. 9 species are endemic to the different regions of India, *Hardwickia binata* Roxb., *Dolichandrone falcata* (Wall. ex DC.) Seem. and *Terminalia bellirica* (Gaertn.) Roxb. are endemic to the Indian subcontinent. *Terminalia paniculata* Roth and *Radermachera xylocarpa* (Roxb.) K. Schum. are endemic to Southern India. *Dolichandrone atrovirens* (Roth) Sprague, *Gardenia gummifera* L.f., *Garcinia indica* (Dupetit-Thouars) Choisy and *Lagerstroemia microcarpa* Wight, are endemic to Western Ghats.

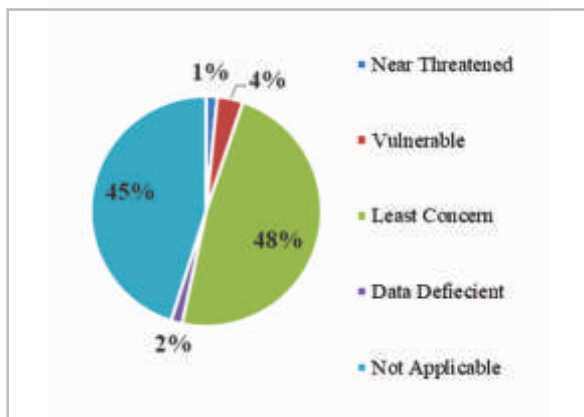


Fig. 3 : IUCN conservation status of tree species

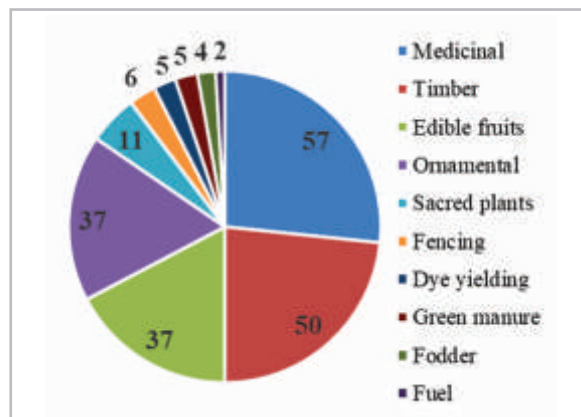


Fig. 4 : Utilization of tree species by the local people

Conclusion

The present work of a checklist of tree flora of the Haveri district provides detailed information about 193 tree taxa belonging to 145 genera and 47 families. This data generates baseline information for further research work and exploration of dry deciduous and scrubby forests, which hold many unique species, which will be helpful for botanists, research scholars and amateur workers. As the forests are a source of medicines, timber, ornamental, edible fruits, sacred plants, fencing, dye yielding, green manure, fodder, and fuel it will be useful in the socio-economic development of the region by sustainable utilization.

हावेरी जिले, कर्नाटक, भारत की वृक्ष विविधता

निंगराज एस. मकानूर और के. कोटेशा

सारांश

हावेरी जिला कर्नाटक के उत्तरी जिलों का प्रवेश द्वार माना जाता है और यह कर्नाटक राज्य के मध्य भाग में स्थित है। सर्वेक्षण के परिणामस्वरूप 47 कुलों और 145 वंशों से संबंधित 193 वृक्ष प्रजातियों का विवरण प्राप्त हुआ। 193 प्रजातियों में से 76 कृषि योग्य हैं और 117 जंगली हैं, जिनमें से सात स्थानिक प्रजातियाँ हैं। प्रमुख कुल हैं फैबेसी (44), मोरेसी (14), बिग्नोनियासी (10), मालवेसी और रूबिएसी, जिनमें से प्रत्येक में 9 प्रजातियाँ हैं। IUCN रेड डेटा सूची का संदर्भ लेकर संकट की स्थिति का आकलन किया गया, जिसमें दर्शाया गया कि 3 प्रजातियाँ डेटा की कमी (DD), 3 निकट संकटग्रस्त (NT), 7 संवेदनशील (VU) और 93 कम चिंताजनक (LC) हैं। उपयोग के विश्लेषण से पता चला कि ये औषधीय (55), इमारती लकड़ी (50), सजावटी (37), खाद्य फल (36), पवित्र (11), बाड़ लगाने के लिए (6), रंग देने वाले (5), हरी खाद (5), चारा (4) और ईंधन (2) हैं। वर्तमान कार्य जिले के हितधारकों से प्राप्त प्राथमिक जानकारी के आधार पर संकलित किया गया है। यह आधारभूत आँकड़ा वन विभाग और जैव विविधता के सतत उपयोग में भविष्य के पुष्प विज्ञान संबंधी अध्ययनों के लिए उपयोगी होगा।

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