

Botanical Tapestry: Bio-Diversity in Ramayana with Emphasis on flora

Author - Dr. Ahalya. S.

Co-Authors - Dr. K. E. Srivenkatanathan

Dr. Tejas Bharadwaj

Abstract:

The Ramayana's portrayal of plants and forests goes beyond mere scenery; it serves as a reflection of the cultural and ecological consciousness of ancient India. Through the epic's verses, readers are transported into the heart of tropical deciduous forests, introduced to economically valuable plants, and invited to witness the sanctity of sacred groves. The interweaving of botanical elements in the Ramayana not only adds depth to the narrative but also emphasizes the profound connection between humans and the natural world in the ancient Indian ethos.

Introduction:

Work of a poet (*Kavi*) is to write poetry (*Kavyas*). Generally in Sanskrit literature *kavyas* are classified into two : namely *Drishya Kavyas* and *Shravya Kavyas*. "*Drishya Kavya*" is a term in Sanskrit that can be translated to "visual poetry" or "visible poetry" in English. It refers to a form of poetry in which visual elements, such as shapes, patterns, and images, play a significant role in conveying meaning. *Drishya Kavya* combines both the visual and verbal aspects of artistic expression to create a holistic aesthetic experience. “

“*Shravya Kavya*" is a term in Sanskrit that translates to "audible poetry" or "oral poetry" in English. It refers to a form of poetry that is meant to be heard, rather than read. This type of poetry places emphasis on the oral presentation of the verses, utilising elements such as rhythm, meter, melody, and intonation to enhance the aesthetic experience.

Few poets have classified *Kavyas* as *Gadya* (prose), *Padya*(verse) and *Mishra* (mixture) *Kavyas*. *Padyakavyas* are further classified into

Mahakavya, Khandakavya and etc. *Gadyakavyas* are also of many types like story, *Akhyayikas* etc. *Champakavyas* come under the sub division of *Mishrakavyas*.

There is one more variety of *kavya* namely *Itihasakavya*. *ItihasaKavya* refers to epic poetry that narrates historical events. The term is derived from Sanskrit, where "*itihasa*" means history and "*kavya*" refers to poetry. In the context of classical Indian literature, *Itihasa Kavya* primarily encompasses two major Sanskrit epics: the Ramayana and the Mahabharata. Attributed to the sage Valmiki, the Ramayana is a foundational text in Sanskrit literature. It consists of nearly 24,000 verses divided into seven books or *Kandas*.

The Ramayana, one of the ancient epics of Indian literature, not only narrates the heroic exploits of Lord Rama but also paints vivid pictures of the diverse flora that graced the landscapes of ancient India. The epic's rich tapestry includes descriptions of tropical deciduous forests, economically valuable plants, and sacred groves that intertwine with the characters' journeys and experiences.

Amidst its intricate narrative, the epic contains numerous references to plants, each carrying symbolic, mythological, or practical significance. The inclusion of plants in the Ramayana reflects a deep connection between the natural world and the cultural ethos of ancient India.

Types of forests referred in the epic Ramayana are *Shanta* (calm), *Madhura* (sweet), *Raudra* (anger) and *Vibhats* (fearful). When we come across the epic Ramayana a list of forests like *Chitrakoota*, *Dhandakaranya*, *Panchavati*, Papa Lake (*Kishkinda*), *Lanka*, *Kailasha* (Himalayan alpine forest) etc. are mentioned by sage Valmiki while Rama went to Lanka.

Key aspects of Tropical Deciduous Forests:

The Ramayana is replete with lush imagery of tropical deciduous forests as portrayed in *Chitrakoota*, which is characterized by a wide variety of trees shedding their leaves during specific seasons. The forests through which Rama, Sita, and Lakshmana traverse during their exile are described as dense, teeming with life, and abuzz with the vibrant sounds of birds and

animals. The epic paints a captivating picture of these verdant landscapes, creating a vivid backdrop for the unfolding drama.

Following shlokas give the description of the tropical deciduous forests:

केचित् रजत-सङ्काशाः केचित्-क्षतज-संनिभाः।

पीत-माञ्जिष्ठ-वर्णाश्च केचित् मणिवरप्रभाः॥ अयोध्या. 94.05॥

पुष्य-अर्क-केतकाभाश्च केचित् ज्योतीरसप्रभाः ।

विराजन्ते अचलेन्द्रस्य देशा-धातु-विभूषिताः ॥ अयोध्या -94-06

आम्र-जम्बु-असनैर्लोद्घैः प्रियालैः पनसैः धवैः ।

अङ्कोलैः भव्यतिनिशैः बिल्व-तिन्दुक-वेणुभिः ॥ अयोध्या -94-08

काश्मरी-अरिष्ट-वर्णैः मधूकैः तिलकैः तथा ।

बदरी-आमलकैः नीपैः वेत्र-धन्वन-बीजकैः ॥ अयोध्या -94-09

पुष्पवद्धिः फलोपेतैः छायावद्धिः मनोरमैः ।

एवम् आदिभिः आकीर्णः श्रिय पुष्यति अयम् गिरिः ॥ अयोध्या -94-10

We come across to the references of the tropical deciduous forest in Dhandakaranya .

In the Ramayana, Dandakaranya is described as a dense and challenging forest region where significant events transpire during the exile of Lord Rama, Sita, and Lakshmana. Dandakaranya is located south of the kingdom of Kosala, and it becomes a crucial setting during the narrative of the epic.

Key Aspects of Dandakaranya in the Ramayana:

Dandakaranya is portrayed as a vast and wild forest characterized by dense vegetation, towering trees, and challenging terrain. The epic describes it as a region where sages and ascetics once resided, but its tranquility is disrupted by the demonic activities of Ravana and his followers.

Dandakaranya as a Home for diverse plants:

The diverse plants include flowering trees like lodhra (lodh tree), nipa (Burflower-tree), tilka (Rice or Redwood tree); hardwood trees like arista (Neem), asan (Bastard myrobalan) or bijaka (Indian kino tree), dhanvan (Berry fruit), madhuka (Indian butter tree), tinisa (Sandhan) and varana (Bamboo); grass types like venu (Bamboo) and vetra (Giant Thorny Bamboo) and five oshadis namely Svetakanthakari (Solanum xanthocarpum), Brahmi (Herpestis monniera), Katuka (Gentiana kuroo), Ativisha (Aconitum heterophyllum) and Hilmocika (Euhydra hinch) (2.54.29; 2.94.4-13; 2).

Panchavati:

Panchavati, an important location within Dandakaranya, is where Rama and his companions establish their hermitage during their exile. The name "Panchavati" refers to the five banyan trees in the area. This becomes a pivotal setting in the Ramayana as it is where Sita is abducted by Ravana. This event marks a turning point in the Ramayana and sets the stage for Rama's quest to rescue his beloved wife. The dense forest and the secluded nature of the region contribute to the challenge of tracking Ravana and rescuing Sita. The grove's serene surroundings transform into a site of conflict and tragedy.

Commonly found trees in Panchavati:

Panchavati, situated on the banks of the River Godavari. The commonly found tree species were sala (Sal tree), palmyra palm, tamala (West Indian Bay tree), date palms, jackfruit, punnaga (Alexandrian laurel), sweet mango, asoka, tilaka (sesame), ketaka (screw pine), champaka (champak), sandalwood, niipa (bur flower-tree), lakuch (monkey jack), dhava (axle wood), ashwakarna (gurjan balsam), khadira (acacia), shami (Indian mesquite), kimsuka (flame of the forest) and patala (Trumpet tree) (3.15.16-18)

सालैः तालैः तमालैः च खजूरैः पनसैः द्रुमैः |

नीवारैः तिनिशैः चैव पुन्नगैः च उपशोभिताः || अरण्य -15-16

चूतैः अशोकैः तिलकैः केतकैः अपि चंपकैः |

पुष्प-गुल्म-लता-उपेतैः तैः तैः तरुभिः आवृताः || अरण्य -15-17

स्यन्दनैः चंदनैः नीपैः पर्णसैः लिकुचैः अपि ।

ध्रुव अश्वकर्ण खदिरैः शमी किंशुक पाटलैः ॥ अरण्य -15-18

One more fascinating aspect in Ramayana is that the author gives references to the material used for building kuteer(hut) in Panchavati. The shlokas below denote the materials used:

शमी-शाखाभिः आस्तीर्य-धृढ-पाशावपाशितम् ।

कुश-काश-शरैः पर्णैः सुपरिच्छादिताम् तथा ॥ अरण्य -15-22

कर्णिकारान् अशोकान् च चूतांश्च मदिरेक्षणा ॥ अरण्य -42-31

कुसुमानि अपचिन्वन्ती चचार रुचिरानना । अरण्य -42-32

Dandakaranya, as described in the Ramayana, is not merely a backdrop but an integral part of the epic's narrative. It serves as a stage for the characters' spiritual and moral development, and the events that unfold in this forest contribute significantly to the overarching themes of duty, righteousness, and the eternal struggle between good and evil.

Economically Useful Plants:

The Ramayana provides glimpses into the economic importance of various plants, showcasing their utility in the daily lives of the characters. One such instance is the mention of the "Saraca indica" or Ashoka tree. Sita, held captive in Lanka, refuses to sit under Ravana's shadow, prompting him to order the Ashoka tree to provide her shade. This highlights the symbolic significance of plants while also emphasizing the practical uses they served.

The sacred "Tulsi" or Holy Basil is another plant that finds mention in the Ramayana. Sita, during her captivity in Lanka, is described as being under the protective care of the Tulsi plant. This underscores the cultural and religious significance of certain plants, extending beyond their material uses to embody spiritual and symbolic meanings.

Few references quoted in Ramayana:

The bamboo is mentioned as a common forest tree (6.12.56) found growing on the banks of the river Yamuna (2.55.8).

समासाद्य तु तम् वृक्षम् वसेद्वातिक्रमेत वा ।

क्रोशमात्रम् ततो गत्वा नीलम् द्रक्ष्यथ काननम् ॥ अयोध्या -55-8

पलाशबदरीमिश्रम् रम्यम् वंशैश्च यामुनैः ।

The sandal tree is used as a cosmetic anointment with aguru (Eagle wood, Aloe wood) (2.15.33). Its breeze is wafting and cleans with the intoxicating scent of sandal (2.71.28). It is a tree of Panchavati (3.15.18).

चन्दनागुरु-सम्पृक्तो धूपसम्मूर्च्छितोऽतुलः ॥ अयोध्या-71-28

प्रवाति पवनः श्रीमान् किं नु नाद्य यथापुरम् ॥ अयोध्या-71-29

Sacred Groves:

The Ramayana features sacred groves, which were revered as abodes of divine energy. One such grove is the Panchavati forest where Rama, Sita, and Lakshmana set up their hermitage during their exile. The Panchavati grove is home to the mythical Shabala, a celestial cow, and is portrayed as a serene and sacred space, underscoring the connection between nature and the divine.

The Banyan was the tree of Panchavati (3.13.21), a model of majesty to which Sita compared Rama himself (3.47.34). Rama often compared the campaka flowers to Sita's neck (3.60.32).

❖ एतत् आलक्ष्यते वीर-मधूकानां महत् वनम् । अरण्य-13-23

❖ उत्तरेणास्य गंतव्यं न्यग्रोधम् अपि गच्छता ॥ अरण्य13-24

❖ सर्व-लक्षण संपन्नं न्यग्रोध-परिमण्डलम् ।

सत्यसंधं महाभागम् अहं रामम् अनुव्रता ॥ अरण्य-47-34

Key aspects of Ashoka tree:

The Valmiki Ramayana mentions the ashoka in many places as the ashoka vatika, that is, the garden of ashoka trees. There are several references to the ashoka: it was a decorative tree of Kaikeyi's palace (the other is campaka); a tree of Pancavati (3.15.17; 3.42.31); Sita was kept in the ashoka vatika, the garden of ashoka trees (predominantly) (The term probably meant a private palace garden that would enable the visitors get

rid of their grief by its sheer beauty, there being an ashoka vanika in Rama's palace also); a remover of grief (3.60.17) and so on.

- ❖ अशोक-शोक-अपनुद-शोक-उपहत-चेतनम् |
त्वं नामानम् कुरु क्षिप्रम् प्रिया-संदर्शनेन माम् || अरण्य-60-17
- ❖ नील-अशोक-कदंबाः च करवीराः च पुष्पिताः || अरण्य -73-04
- ❖ अग्निमुख्या-अशोकाः च सुरक्ताः पारिभद्रकाः |
- ❖ तान् आरुह्य अथवा भूमौ पातयित्वा च तान् बलात् || अरण्य -73-05
- ❖ फलानि अमृत कल्पानि भक्षयित्वा गमिष्यथः | अरण्य -73-06

Bunches of ashoka flowers look like burning coals (4.1.29); flowers at spring (5.14.3);

- ❖ सालान् अशोकान् भव्यांश्च चम्पकांश्च सुपुष्पितान् |
उद्दालकान् नाग-वृक्षान् चूतान् कपि-मुखान् अपि || सुन्दर-14-03

Key aspects of Kishkinda in Ramayana:

Kishkindha is described as a kingdom situated in a mountainous region. The Ramayana specifies that it is located near the Pampa Lake and the Rishyamukha Mountain. The picturesque landscape is depicted as lush and teeming with natural beauty, offering a suitable dwelling for the monkey army led by Sugriva.

Further kishkinda is described as follows:

–This is hilly forest there lay another vana (woodland), which, in its beauty, resembled the celestial gardens of Indra and Kubera. The Pampa sarovar is situated beyond this place

–The fauna and the flora and water sources and their quality and purity are highlighted in the epic.

–The climate, especially in the month of Chaitra (March – April), was exceedingly pleasant.

The vegetation of this region is of the dry and moist deciduous type.

Few references quoted in Kishkinda kanda:

wind bore the fragrance of padma saugandhika (Lotus) (4.1.104) and the water reservoirs were charming with fully blown padma saugandhika (Lotus), kumuda (Indian water lily) and utpala (Indian blue lotus or water lily).

पद्म-सौगन्धिक वहम् शिवम् शोक विनाशनम् | किष्किन्धा-01-105

धन्या-लक्ष्मण-सेवन्ते पम्पोपवन-मरुतम् || किष्किन्धा-01-106

गिरि-प्रस्थास्तु सौमित्रे सर्वतः संप्रपुष्पितैः |

निष्पत्रैः सर्वतो रम्यैः प्रदीसा इव किंशुकैः || किष्किन्धा -01-75

Key Aspects of the Evergreen Forest of Lanka in the Ramayana:

Exotic Flora:

- The evergreen forest of Lanka is described as a tropical paradise adorned with exotic and vibrant flora. The narrative paints a picture of towering trees, fragrant flowers, and a variety of plants, creating an environment that contrasts sharply with the landscapes encountered by Rama and his companions during their exile.

The forests plants are also given an important place in the narrative of the Lankan dense-green wood. Some of the plants which may be mentioned are sarala (Chir Pine), karnikara (Bayur tree), karjura (Wild date palm), priyala (Chirauli-nut tree), muculinda, kutaja (Bitter oleander), ketaki (Screw pine), priyangu (Beauty berry), nipa (nipa palm), saptacchada (Indian devil tree), asana (Bastard myrobalan), kovidara (mountain ebony) and karavira (Oleander, Rose-laurel).

Natural Beauty and Tranquility:

- Despite being the stronghold of the demon king, the evergreen forest of Lanka is portrayed as a place of natural beauty and tranquility. The lush greenery, flowing rivers, and captivating landscapes form a stark contrast to the tumultuous events unfolding within the narrative, adding layers of complexity to the depiction of Lanka.

सरलान् कर्णिकारांश्च खर्जूरांश्च सुपुष्पितान् ।

प्रियालून्मुचुलिन्दांश्च कुटजान् केतकानपि ॥ (5.2.9)

प्रियाङ्गून् गन्धपूर्णांश्च नीपान् सप्तच्छदांस्तथा ।
आसनान् कोविदारांश्च करवीरांश्च पुष्पितान् ॥ (5.2.10)

Key aspects of Himalayan Alpine region

As suggested by physician Sushena, Hanuman rushed to the Dronagiri hills and fetched four plants: Mrita sanjeevani (capable of restoring the dead to life), Vishalyakarani (capable of extracting weapons and healing all wounds inflicted by weapons), Suvarnakarani (restoring the body to its original complexion) and Sandhani, the great herb (capable of joining severed limbs or fractured bone) (6.74.29-34). (Yuddhakanda, 74.31-33; 101.31-33).

सौम्य-शीघ्रमितो गत्वा शैलमोषधिपर्वतम् ॥ युद्ध-102-28

पूर्वं ते कथितो योसौ वीर-जाम्बवता शुभः ।

दक्षिणे शिखरे तस्य जातामोषधिमानय ॥ युद्ध-102-29

विशल्यकरणीं नाम सावर्ण्यकरणीं तथा ।

संजीवकरणीं वीर संधानीं च महौषधीम् ॥ युद्ध 101-32

संजीवनार्थं वीरस्य लक्ष्मणस्य महात्मनः । युद्ध 101-33

Conclusion

In conclusion, the plants in the Ramayana serve as more than just botanical elements; they are symbolic representations of emotions, morality, and the cosmic order. The inclusion of these plants in the epic highlights the intricate relationship between nature and culture, making the Ramayana a timeless and holistic exploration of the human experience.

We would like to acknowledge our indebtedness to Mr. M. Amirthalingam whose book on plant & Animal diversity in Valmiki's Ramayana published by C. P. Environmental Education Centre, Chennai which helped us immensely with regards to the topic.

Finally, my sincere thanks to Dr. Tejas Bharadwaj, P.G. Scholar, GAMC, Bengaluru and Dr.K. E. Srivenkatanathan, Assistant Professor, Karnataka Samskrit University, Bengaluru for their contributions.

Sanskrit Name *Botanical Name with family & reference to chapters & slokas*

1. Abja 7/1/Sloka 1 (R. M.): *Nelumbo nucifera* Gaertn. Syn. *Nelumbium speciosum* Willd. (NELUMBONACEAE)
2. Agarū 2/14/28 (R.M.): *Aquilaria agallocha* Roxb. (THYMELACEAE).
3. Agnimukh 3/73/52 (V.R.): *Semecarpus anacardium* Linn. (ANACARDIACEAE)
4. Aja 2/91/67 (V. R.): *Trachyspermum ammi* (Linn.) Sprague Syn. *Carum copticum* Benth. & Hook. f. (UMBELLIFERAE)
5. Aku 7/115k/1 (R. M.): *Calotropis gigantea* (Linn.) R. Br. ex Ait. (ASCLEPIADACEAE)
6. Amb 7/57/3 (R.M.) *Mangifera indica* Linn. (ANACARDIACEAE)
7. Ambuj 2/30/25 (V. R.): *Nelumbo nucifera* Gaertn. Syn. *Nelumbium speciosum* Willd. (NELUMBONACEAE)
8. Amburuh 7/8/9/ (V. R.): *Nelumbo nucifera* Gaertn. Syn. *Nelumbium speciosum* Willd. (NELUMBONACEAE)
9. Amlaki 2/91/51 (V. R.) *Embllica officinalis* Gaertn. Syn. *Phyllanthus emblica* Linn. (EUPHORBIACEAE)
10. Ankol 2/94/8 (V.R) *Alangium salvifolium* (Linn. f.) Wang. Syn. *A. lamarckii* Thwaites (ALANGIACEAE)
11. Arandu 2/42/2/ (R. M.) *Ricinus communis* Linn. (EUPHORBIACEAE)
12. Arbindu 7/1K/2 (R. M.) *Nelumbo nucifera* Gaertn. Syn. *Nelumbium speciosum* Willd. (NELUMBONACEAE)
13. Arist 2/94/9 (V. R.): *Azadirachta indica* A. Juss. Syn. *Melia azadirachta* Linn. (MELIACEAE)
14. Arjun 3/60/14 (V. R.) : *Terminalia arjuna* W. & A. (COMBRETACEAE)
15. Ark 4/15/2 (R.M.): *Calotropis gigantea* (Linn.) R. Br. ex Ait. (SCLEPIADACEAE)

16. Arni 2/30/23 (V. R.): *Clerodendrum phlomidis* Linn. f. Syn. *Clerodendron phlomidis* Linn. f. (VERBENACEAE)
17. Arvind 3/75/21 (V. R.): *Nelumbo nucifera* Gaertn. Syn. *Nelumbium speciosum* Willd. (NELUMBONACEAE).
18. Asan 2/94/8 (V. R.) : *Terminalia tomentosa* W. & A. (COMBRETACEAE)
19. Ashok 2/10/13 (V. R.): *Saraca asoca* (Roxb). De Wilde Syn. *S. indica* auct non Linn. (CAESALPINACEAE)
20. Ashwatha 2/91/49 (V. R.): *Ficus religiosa* Linn. (MORACEAE)
21. Asoka 5/12/5 (R. M.): *Saraca asoca* (Roxb) De Wilde Syn. *S. indica* auct non Linn. (CAESALPINIACEAE)
22. Atimuktaka 3/75/24 (V. R.): *Hiptage benghalensis* Kurz Syn. *H. madablota* Gaertn (MALPIGHIACEAE)
23. Baan 4/30/56 (V. R.): *Saccharum munja* Roxb. (GRAMINEAE)
24. Badar 2/125/4 (R.M.): *Zizyphus mauritiana* Lamk. Syn. *Z. jujuba* Lamk. (RHAMNACEAE)
25. Banaj 2/325/2 (R.M.): *Nelumbo nucifera* Gaertn. Syn. *Nelumbium speciosum* Willd. (NELUMBONACEAE)
26. Bandhujiv 4/30/62 (V. R.): *Pentapetes phoenicea* Linn. (SERCULIACEAE)
27. Barhi 2/87/20 (V.R.) : *Desmostachya bipinnata* Stapf (GRAMINEAE)
28. Bet 6/16/(Kh) (R.M.) : *Calamus rotang*. Linn (PALMAE)
29. Betas 2/325/2 (R.M.): *Calamus rotang*. Linn (PALMAE)
30. Bhallatak 2/56/7 (V. R.): *Semecarpus anacardium* Linn (ANACARDIACEAE)
31. Bhandir 3/75/24 (V. R): *Ficus benghalensis* Linn. (MORACEAE)
32. Bhavya 2/94/8 (V. R.): *Dillenia indica* Linn. (DILLENACEAE)
33. Bhurjpatra 2/94/24 (V. R). : *Betula utilis* D. Don Syn. *B. bhojpatra* Wall. (BETULACEAE)

34. Bhujtaru 7/121/8 (R. M.): *Betula utilis* D. Don Syn. *B. bhojpatra* Wall. (BETULACEAE)
35. Bibhitak 2/91/49 (V. R.): *Terminalis bellirica* (Gaertn). Roxb. (COMBRETACEAE)
36. Bijpur 2/91/30 (V. R.) : *Citrus medica* Linn (RUTACEAE)
37. Bimb 5/15/29 (V. R.) : *Coccinia grandis* (Linn) Voigt Syn. *C. indica* W. & A. (CUCURBITACEAE)
38. Chaitya 2/71/42 (V. R.): *Ficus religiosa* Linn. (MORACEAE)
39. Champak 2/10/13 (V. R.): *Michelia champaca* Linn. (MAGNOLIACEAE)
40. Chanak 7/91/20 (V. R.): *Cicer arietinum* Roxb. (PAPILIONACEAE)
41. Chirabilva 3/11/74 (V. R.): *Holoptelea : integrifolia* Planch. (ULMACEAE)
42. Chut 2/91/30 (V. R.): *Mangifera indica* Linn. (ANACARDIACEAE)
43. Dadim 3/60/21 (V. R.): *Punica granatum* Linn. (PUNICACEAE)
44. Darbha 4/26/5 (V. R.): *Desmostachya bipinnata* Linn. Stapf (GRAMINEAE)
45. Dhanwan 2/94/9 (V. R.) : *Grewia asiatica* Linn (TILIACEAE)
46. Durba 7/3K/3 (R.M.): *Cynodon dactylon* (Linn.) Pers. (GRAMINEAE)
47. Godhum 3/16/16 (V. R.): *Triticum aestivum* Linn. Syn. *T. sativum* Lamk. (GRAMINEAE)
48. Gulri 6/34/2 (R. M.): *Ficus racemosa* Linn. Syn. *F. glomerata*. Roxb. (MORACEAE)
49. Harichandran 2/65/8 (V. R.): A sort of Sandal tree.