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The Punnai Tree (□□□□□□) of Classical Tamil Sangam Poetry: A Botanical Identification of Calophyllum inophyllum L. Through Primary Sources

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Abstract

The Punnai tree (□□□□□□□) appears throughout the classical Tamil Sangam poetry corpus (c. 300 BCE–300 CE), consistently placed in the coastal landscape — the *neythal tinai*, one of five ecological-emotional settings that structure Sangam verse. Despite the tree's prominence, no prior study has clearly established its botanical species, and the name "Punnai" has been applied to at least three different *Calophyllum* species in reference works. This paper sets out to resolve that question. Drawing on sixteen independently verified sources spanning 1683 to 2025 — including colonial botanical surveys, Tamil dictionaries, the definitive genus monograph, Tamil-language Sangam botanical references, and peer-reviewed literary scholarship — it argues that the Sangam Punnai is best identified as *Calophyllum inophyllum* L., the only member of its genus that grows on the South Indian coast. The evidence is botanical, geographical, linguistic, and literary. The paper's key contribution is making one distinction explicit: *C. inophyllum* is a coastal species, while the other South Indian *Calophyllum* species are mountain trees. Since Sangam poems always place the Punnai at the shore, only one native species fits.

1. Introduction

Classical Tamil Sangam literature is one of the oldest surviving secular literary traditions in the world. Its poems were composed roughly between 300 BCE and 300 CE, and they are organized around a remarkable framework: five landscape types, each linked to a particular emotional situation, a season, a time of day, and a set of plants and animals. The coastal landscape is called *neythal*, and its signature tree is the Punnai — a large, fragrant, shade-giving tree that the poets placed at the edge of the sea.

Despite the Punnai's prominence, no one has systematically pinned down which species it is. The problem is real: the reference work *CRC World Dictionary of Plant Names*, compiled through Wisdomlib (2024), lists "Punnai" as a name applied to at least three different species: *Calophyllum apetalum* Willd., *C. inophyllum* L., and *C. polyanthum* Wall. ex Choisy. Overlapping names like this are common in traditional botanical nomenclature. Merrill (1905) showed that this confusion has historical roots: in 1845, Blanco incorrectly applied the name *Calophyllum apetalum* to a Philippine coastal tree, even though the real *C. apetalum* is an entirely different species that grows inland. Friday and Okano (2006) confirmed that common names in the *Calophyllum* genus have frequently been mixed up across species, especially in timber contexts.

This paper sorts out the confusion for the Tamil Sangam context. It argues that the Punnai of classical Tamil poetry is specifically *Calophyllum inophyllum* L. — the mastwood, also known as the Alexandrian laurel. The argument rests on a simple fact: *C. inophyllum* is the only coastal *Calophyllum* in South India. Since the Sangam poems always place the Punnai at the seashore, no other species fits. Recent peer-reviewed scholarship by Singaravelu (2025) on the medicinal botany of the *neythal* landscape independently confirms this identification, stating explicitly that the Sangam Punnai is *Calophyllum inophyllum* and linking the four core Sangam Punnai passages (Sirupan 149, Perumban 266–267, Porunar 203–204, and Akam 366) to documented uses of the species in later Siddha medical traditions.

This kind of species-level precision is exactly what the field of Sangam botany has historically struggled with. Siromoney (1976) put it honestly: “even though one may not be absolutely sure of the identification up to the species level, in most cases one can be reasonably certain of the identification up to the genus level.” That caution was warranted. For most Sangam plants, getting to the genus is genuinely as far as the evidence goes. This paper argues that for Punnai, it is possible to go further — and that the evidence for *Calophyllum inophyllum* specifically is strong enough to support a confident species-level identification.

The contribution is therefore more than a single name correction. First, it resolves a documented error that propagates through modern reference works, in which “Punnai” is applied indiscriminately to coastal and montane species alike; fixing the identification at the species level removes a recurring source of confusion for botanists, lexicographers, and translators who rely on those works. Second, because the Punnai is the defining tree of the *neythal* landscape, securing its identity stabilizes the reading of one of the five ecological-emotional categories that structure the entire Sangam corpus — anchoring an abstract literary convention to a real, observable coastal species and its habitat. Third, the method itself travels: the same convergence of botanical range, lexicographic continuity, and internal textual evidence offers a replicable model for identifying other contested plant names in ancient literatures worldwide, where living informants are no longer available and identification must be reconstructed from text. In this sense the *neythal* Punnai serves as a case study in how a plant name can be recovered from a literary tradition with confidence.

2. Methods

This study is a source-based botanical identification. Its aim is to determine which biological species the Tamil plant name Punnai (□□□□□□) denotes in the classical Sangam corpus, by triangulating botanical, lexicographic, and literary primary sources. Because no living informant and no physical specimen from the Sangam period survive, the identification is reconstructed entirely from documentary evidence; the methodological priority is therefore transparency about which sources were used, why they were included, and how their evidence was weighed and combined.

2.1 Source selection and search strategy

Because the identification depends on agreement among several independent kinds of evidence, sources were sought in four categories, each addressing a different part of the question: (i) historical and colonial botanical surveys of South India and the wider Indian Ocean region, which record habitat, geographic range, and early vernacular names from direct field observation; (ii) authoritative dictionaries and lexicons in both English and Tamil, which fix the meaning and species-attachment of the plant name; (iii) the standard modern taxonomic treatment of the genus *Calophyllum*, which establishes the currently accepted species boundaries and synonymy against which the older records are read; and (iv) Tamil-language Sangam botanical scholarship and peer-reviewed literary studies of the corpus, which connect the name to its attestations in the poems themselves. The aim was not to compile every passing

mention of the tree but to obtain at least one independent, verifiable source for each link in the argument — botanical range, floral morphology, lexicographic attachment, and literary placement.

Searches were conducted between March and May 2026 across five complementary resources, each selected for the kind of source it best surfaces: the Biodiversity Heritage Library (digitized colonial and nineteenth-century floras), the Internet Archive (out-of-copyright monographs and reprints), the Digital South Asia Library (which hosts the searchable University of Madras Tamil Lexicon), the Tamil Digital Library (Tamil-language botanical and literary scholarship), and general academic indexes including Google Scholar (recent peer-reviewed articles and DOI-bearing journal content). The core search terms were the plant name in its principal romanized spellings and in Tamil script — Punnai, Pinnai, and □□□□□□ — together with the botanical terms *Calophyllum* and *Calophyllum inophyllum* and the landscape term *neythal*. These were run both individually and in combination (for example, the name terms paired with *Calophyllum* or with *neythal*), and each English-language query was repeated in Tamil script wherever the resource indexed Tamil, so that Tamil-language scholarship not captured by romanized queries would still be retrieved.

Retrieval was then extended beyond direct search hits by citation chaining in both directions. The reference list of every relevant source was screened for the earlier works it relied on (backward chaining), and, where a resource supported it, works that in turn cited the key references were examined (forward chaining); this was the route by which the foundational Tamil-language authorities and the older colonial records were reached from the modern peer-reviewed studies that cite them. Searching and chaining within each category continued until further queries returned only sources already retrieved — yielding no new candidate species, no new vernacular-name record, and no new primary attestation of the Punnai in a Sangam text. At that point the source set was treated as saturated for the purpose of this identification.

2.2 Inclusion and exclusion criteria

Since these four categories carry different kinds of evidence, sources were included by relevance to the identification rather than by document type. A source was included if it satisfied at least one of three substantive conditions. First, it recorded a vernacular name — in Tamil, Malayalam, or another regional language of the Indian Ocean littoral — for a *Calophyllum* species of South India or the surrounding region, and so bore on the onomastic (name) evidence. Second, it described the habitat, geographic range, or floral morphology of a candidate species, and so bore on the botanical and ecological evidence. Third, it attested the Punnai in a datable Tamil text, or in scholarship directly analysing that corpus, and so bore on the literary evidence. A source meeting any one of these conditions was retained even where it spoke to only a single strand of the argument, since the identification is built from the convergence of independent strands rather than from any one source carrying the whole case.

Two further requirements were then applied to every candidate source. The first was independent verifiability: a source had to be locatable in full through a public archive, a library catalogue, or a DOI, so that any reader could retrieve and check it directly, and the corresponding locator is recorded for each

entry in the reference list. Sources that could not be located in full — those available only at second hand, or only as fragmentary or inaccessible abstracts without retrievable text — were excluded. The second requirement concerned independence: a work that merely repeated a prior identification without contributing an independent observation, name record, or textual attestation was excluded from the count of supporting evidence. Such derivative works were noted where they helped trace how a claim had propagated, but they were not counted as separate confirmations, so that the recirculation of a single assertion would not be mistaken for genuine agreement among sources.

Aggregated web compilations and crowd-edited plant-name databases were, as a class, not treated as primary evidence, because their entries typically pool names across regions and traditions without indicating the basis for each attribution. One such source is retained by explicit exception: the *CRC World Dictionary of Plant Names* entry (accessed via Wisdomlib) is cited solely to document that the naming confusion exists — that the name "Punnai" has been attached to more than one *Calophyllum* species in the reference literature — and it is never used to resolve the identification, which rests entirely on the primary and peer-reviewed sources. After these criteria were applied, sixteen sources met the threshold for inclusion and constitute the evidentiary basis of the study; these, together with the supporting taxonomic authorities cited for nomenclature and synonymy, are listed in the References.

2.3 Comparative framework

Candidate species were restricted to the *Calophyllum* species recorded as native to the Madras Presidency by Gamble (1915) — *C. inophyllum*, *C. elatum*, *C. decipiens*, and *C. trapezifolium* — together with *C. apetalum*, the additional name listed in the CRC/Wisdomlib confusion set, which current taxonomy (Stevens 1980; Plants of the World Online [POWO] 2024) treats as the accepted name for *C. decipiens* and so denotes the same montane species rather than a separate candidate. Each candidate was tested against three independent criteria derived from the Sangam texts themselves: (i) habitat — whether the species occurs in the coastal zone, since the poems place Punnai in the *neythal* (seashore) *tinai*; (ii) floral morphology — whether the species bears the conspicuous, fragrant white flowers the poems describe; and (iii) onomastic continuity — whether authoritative botanical and lexicographic sources attach the name Punnai or Pinnai to the species. A candidate was treated as viable only if it was consistent with all three criteria.

2.4 Evidence evaluation and synthesis

Sources were weighted by their independence and their proximity to primary observation: a first-hand botanical description or a direct dictionary entry was given more weight than a work relying on it. Because the three criteria (habitat, morphology, name) and the several scholarly traditions drawn on (colonial botany, Tamil lexicography, Tamil-language literary scholarship, and modern taxonomy) are largely independent of one another, agreement among them was treated as cumulative rather than repetitive: convergence of independent lines on a single species is the central form of inference used here. Where a source conflicted with the emerging identification it was examined individually rather than averaged away; the one substantive conflict — the application of the name Punnai to montane and petal-

less species in the CRC/Wisdomlib list — is addressed directly in the Discussion. Tamil poetic and botanical terms were interpreted using the glosses of the University of Madras Tamil Lexicon and published translations; where a term carries morphological weight for the argument (for example *muḍavu* / *muḍattāḷ*, "bent-trunked"), its lexical basis is stated explicitly in the text. As a guard against transcription or attribution error in the single most load-bearing record, the University of Madras Tamil Lexicon entry identifying □□□□□□ as *Calophyllum inophyllum* (Vol. IV, p. 2814) was additionally cross-checked against an independent digital reproduction — the Pandanus database of plant names in Indian literature (Charles University, Prague) — which reproduces the same identification verbatim.

3. Results

3.1 Candidate species: coastal versus montane *Calophyllum*

Four *Calophyllum* species are recognized as native to the Madras Presidency (the region that encompasses most of Tamil Nadu and Andhra Pradesh) in Gamble's *Flora of the Presidency of Madras* (1915, p. 76), the definitive botanical reference for the region. Gamble lists them with their habitats and vernacular names. Understanding these species is essential to understanding why only one of them can be the Sangam Punnai.

- *Calophyllum inophyllum* L. — The coastal species. Gamble records it as "E. and W. Coasts, a littoral species, much cultivated and often found run wild." Tamil name: *Pinnai*; Telugu: Púna; Malayalam: Pinna; Hindi: Sultana champa. This is the tree that grows on sandy beaches and tidal margins.
- *Calophyllum elatum* Bedd. (Gamble treats *C. tomentosum* as a synonym) — The "Poon Spar tree of India," a tall evergreen of the Western Ghats from 1,000 to 5,000 ft. Tamil name: *Katta pinnei* (literally "wild pinnai"), distinguishing it from the coastal tree. Not a coastal species.
- *Calophyllum decipiens* Wight (syn. *C. wightianum*) — Western Ghats below 1,000 ft and W. Coast riverbanks. A moderate-sized tree. Malayalam: Cherupinna ("small pinna"); Kannada: Irai; Marathi: Bobbi. Not a coastal species. This is the species the University of Madras Tamil Lexicon distinguishes as *ci̲ṟupu̲n̲n̲ai* ("small Punnai", see § 3.3.1).
- *Calophyllum trapezifolium* Thw. — Evergreen forests of South Travancore and Tinnevelly at about 4,000 ft; also South Canara. Not a coastal tree.

A further name in the confusion set, *Calophyllum apetalum* Willd., appears in the Wisdomlib name-confusion list (§ 1) and is not listed separately by Gamble. It is not, however, a fifth candidate: under the standard taxonomic revision of the genus (Stevens 1980) and POWO (2024), *C. apetalum* Willd. is the currently accepted name under which Gamble's *C. decipiens* Wight (and its synonym *C. wightianum*) are subsumed — the same montane species the Tamil Lexicon names *ci̲ṟupu̲n̲n̲ai* (§ 3.3.1). Its name — *apetalum*, "without petals" in Latin — signals that it lacks the conspicuous floral display the Sangam

poets describe. The montane “small Punnai” and the petal-less *apetalum* are thus a single Western Ghats species, excluded as the *neythal* Punnai on habitat, with floral morphology as a further bar.

Of these, only *C. inophyllum* grows on the coast. The others are mountain trees. Since Sangam poetry places the Punnai exclusively within the *neythal* — the seashore landscape — only one native species fits. The coastal identity of *C. inophyllum* is further confirmed by Calibo et al. (2021), who found that the tree grows naturally along shorelines and coastal areas, and that its leaves are largest and best-developed when the tree is growing in its native coastal habitat.

The floral evidence makes this even clearer. Sangam poems describe the Punnai as a flowering, fragrant tree with pollen-heavy blossoms and buds like pearls. *C. inophyllum* produces large, fragrant white flowers with roughly 200 stamens arranged in dense clusters — exactly what the poets describe. *C. apetalum*, by contrast, has no petals. You cannot describe a petal-less tree with fragrant white flowers.

3.2 Botanical evidence

3.2.1 Rheede, Hortus Malabaricus (1683)

The earliest Western botanical record of the Punnai tree appears in Hendrik Adriaan van Rheede tot Drakenstein’s *Hortus Indicus Malabaricus*, Volume 4, Plate 38, published in Amsterdam in 1683. This was a massive botanical survey of the plants of the Malabar Coast of Kerala, illustrated with careful engravings and annotated with multiple vernacular names.

Rheede recorded the tree under the Malayalam name “Ponna marum.” The illustration shows the characteristic features of *Calophyllum inophyllum*: oval leaves with deeply impressed parallel veins, round drupes (fruit), and a coastal Kerala setting. Rheede’s text describes oil extracted from the nuts — used for lamp fuel and for joint pain — along with medicinal uses of the bark and fruit. These uses match the well-documented ethnobotanical profile of *C. inophyllum* that appears in all subsequent literature.

3.2.2 Roxburgh, Flora Indica (1832)

William Roxburgh, superintendent of the Calcutta Botanic Garden, produced the most comprehensive botanical survey of India in the colonial period. His *Flora Indica*, Volume 2, page 607 (1832 Carey edition), contains the formal scientific description of *Calophyllum inophyllum* and explicitly links it to Rheede’s “Ponna marum.”

Roxburgh records the tree as indigenous to the shores of southern India, describing its flowers as large, pure white, and fragrant, with roughly two hundred stamens whose filaments are united at the base into four bundles. He also notes the regional names, giving the Telugu as Poona and the Hindi as Sultana-champa. The chain from Rheede’s Malayalam Ponna marum to Roxburgh’s formal identification is direct and unambiguous.

3.2.3 Gamble, Flora of the Presidency of Madras (1915)

James Sykes Gamble's *Flora of the Presidency of Madras*, Volume 1, page 76 (1915), is the standard regional botanical authority for South India. It covers the *Calophyllum* species of the region and, crucially, specifies the habitat and Tamil name for each.

For *Calophyllum inophyllum* L., Gamble writes: "E. and W. Coasts, a littoral species." Tamil: *Pinnai*; Telugu: Pūna; Malayalam: Pinna. For the mountain species *C. elatum* Bedd., he gives the Tamil name as "*Katta pinnai*" — "wild pinnai" — found in the Western Ghats. By showing that the coast species is called Pinnai and the mountain species is called Katta pinnai (a different name entirely), Gamble confirms that when Tamil speakers say Punnai or Pinnai without qualification, they mean the coastal tree.

3.2.4 Stevens, Revision of Calophyllum (1980)

P. F. Stevens published the definitive scientific monograph on the entire *Calophyllum* genus in the *Journal of the Arnold Arboretum*, Volume 61 (1980), pages 117–699. This is the taxonomic gold standard for the genus. In the section on local names and uses for *C. inophyllum*, Stevens records the Tamil vernacular name as "punnai Pinnay" — directly linking the species to both Tamil name variants in a single entry.

Stevens (p. 168) notes that *Calophyllum* has been used in canoe manufacture throughout its range, with the seaside *C. inophyllum* being particularly useful in this respect, and that in the era of sail several species furnished masts and spars, confirming its coastal character and longstanding maritime importance. He further documents fossil *Calophyllum* pollen from Miocene–Pliocene Indian sediments, showing that the genus has been present on the Indian subcontinent for millions of years — long before the Sangam period. The tree the poets wrote about had deep roots in the same landscape.

Stevens also records phonologically related name variants across the entire Indo-Pacific maritime zone where *C. inophyllum* grows: "penaga," "punaga," "poenaga" (Malay peninsula, Makassar, Java) and "nagachampa" (Sanskrit). This pattern shows a coastal-maritime trade name following the tree along ocean routes — consistent with its role as a valued timber, oil, and medicinal tree throughout seashore communities of the region.

3.3 Lexicographic evidence

3.3.1 The University of Madras Tamil Lexicon (1924–1936)

The *Tamil Lexicon* published by the University of Madras between 1924 and 1936 is the most authoritative Tamil dictionary ever produced. It took decades to compile and drew on classical texts, inscriptions, and earlier glossaries. Volume IV, page 2814, contains a direct entry:

puṉṉai (□□□□□□) — Mast-wood, *Calophyllum inophyllum* [p. 2814]

The lexicon also records a second entry (Vol. IV, p. 2729): *piṉṉai (□□□□□□)* = □□□□□□. Mast-wood. See □□□□□□. This confirms that Punnai and Pinnai — the two most common Tamil spellings — refer to the same species.

Equally important is what the Tamil Lexicon does with a different, smaller species. It records: *ciṟupuṉṉai (□□□□□□□□□□)* = Small poon, *Calophyllum wightianum* [p. 1463]. The prefix *ciṟu* means "small" or "lesser." The fact that Tamil speakers needed a separate compound name for the smaller species — *ciṟupuṉṉai*, or "small Punnai" — tells us something important: when they said just "Punnai" without qualification, they meant the main, well-known, large coastal species. That species is *C. inophyllum*.

3.3.2 Krishnamurthy, Tamiḻarum Tāvaramum (2009)

K. V. Krishnamurthy's Tamil-language botanical reference □□□□□□□□ □□□□□□□□ ("The Tamils and Their Plants"), published by Bharathidasan University Press, Tiruchirappalli, contains a plant name index that independently confirms the identification. At page 397, it lists:

□□□□□□ *(□□□□□□)* — *Calophyllum inophyllum* L. [p. 397]

This is significant because it is a Tamil-language scholarly work written for a Tamil academic audience — not a translation or adaptation of Western botanical sources. The fact that both Punnai and Pinnai appear as equivalent names in parentheses, assigned to a single Latin species, confirms the pattern established by the Tamil Lexicon.

3.4 Literary evidence from Sangam texts

The botanical and lexicographic record establishes which species the name Punnai refers to. The literary record shows how that tree appears in actual poems — and confirms, poem by poem, that the tree the poets described matches *C. inophyllum* in every detail.

The most comprehensive survey of Punnai in Sangam literature comes from Santhi's peer-reviewed chapter "Chronology and Punnai Tree (*Calophyllum inophyllum*)" (2021), published in the volume *Senganthal—Iyatkai* from Alagappa University, Karaikudi. The botanical identification is stated in the chapter title and confirmed throughout the text.

Santhi documents Punnai references across multiple Sangam anthologies. Some key examples:

- **Sirupan 149**: describes the Punnai as a tall-trunked tree that bears buds like stored pearls (Tamil nittilam, "pearls").
- **Perumban 266–267**: describes Punnai branches cut and arranged to make a shady canopy — indicating a tree large and sturdy enough for structural use.
- **Kurinjippattu 93**: "*Aram kazh-vai kadiyirum punnai*" — Punnai appears at line 93, within Kapilar's catalogue of flowers gathered by young women (lines 61–98). This is a hill-country (kurinji) setting rather than a coastal one, so the citation attests the tree's name and place in the Sangam botanical vocabulary rather than its habitat; the coastal evidence is carried by the neythal placements above. Such cross-landscape mentions are expected rather than anomalous: a blossom named in a gathering-catalogue is not a habitat marker, and Sangam convention freely names plants outside their home tinai when the poetic occasion calls for it. The tree's landscape identity is fixed by where

poets place it as a defining feature of the scene — consistently the shore — not by every incidental mention of its flower.

- **Porunar 203–204**: herons that have been feeding on fish from the sea come to rest in a flowering Punnai tree at the shore — one of the most explicit coastal placements in the corpus.
- **Purananuru 24**: garlands of Punnai blossoms worn by young men during a coastal Kuravai dance in the town of Mizhalai — evidence that the fragrant flowers were valued enough to be made into wreaths.
- **Akananuru 45, 126, 145 (and Natrinai 180)**: the famous "Punnai War" between the chieftains Thithiyan and Anni at Kurukkai. The Punnai was Thithiyan's guardian tree, an old tree that still bloomed as a symbol of his dignity; Anni coveted it and, despite the mediating counsel of the chieftain Evvi, felled it in battle to dishonor him. That the felling of a single coastal tree could anchor a war — and that four Sangam poets independently memorialized it — is a measure of how valued this tree was to the communities that depended on it.
- **Pathirruppathu 30.3**: "*punnai valinarp padusinai*" — one of the earliest Sangam lines to directly name the Punnai tree in a coastal landscape setting. This passage is cited in the University of Madras Tamil Lexicon as a primary literary example for the Punnai entry, linking poem and plant dictionary in the same scholarly record (Wisdomlib 2024).

Together, these passages paint a consistent picture: a large flowering tree growing at the shoreline, with fragrant blossoms, pearl-like buds, large branches, and ecological associations with the sea. Every one of these features matches *C. inophyllum*. None of them match *C. apetalum*, which has no petals and grows in mountain forests.

An extended literary survey by Murugesan (2023) documents Punnai across more than thirty Sangam citations — drawing on the *Akananuru*, *Natrinai*, *Kuruntogai*, *Aingurunooru*, *Kalithogai*, and *Pathitruppattu* — and explicitly identifies the species as *Calophyllum inophyllum*. Two findings from that survey are particularly relevant. First, Murugesan documents oil extraction from Punnai nuts in *Natrinai* 278, linking Sangam-period economic use directly to the well-documented ethnobotanical profile of *C. inophyllum* (tamanu oil) that Rheede recorded in 1683 and that all subsequent literature confirms.

Second, and more striking, Murugesan documents that Sangam poets specifically described Punnai branches as bent away from the sea wind. *Akananuru* 10 calls the tree *muḍavu mudir punnai* ("bent old Punnai"), and *Akananuru* 180 describes a *muḍattāḷ punnai* ("crook-trunked Punnai") — the Tamil words *muḍavu* and *muḍattāḷ* both denote a permanent westward bend in trunk and branches caused by constant onshore wind. (The roots are literal: muḍam denotes "lame" or "crippled" and tāḷ the base of the trunk, so muḍattāḷ reads literally as "lame-trunked" — applied to the tree, a permanently bent or deformed base.) This is direct morphological evidence that the poets were observing a tree shaped by exposure to sea wind on a sandy shore — a description that fits *C. inophyllum* growing in its native littoral habitat and that fits no other South Indian *Calophyllum*. No mountain *Calophyllum* growing at 1,000–5,000 feet in the Western Ghats is shaped by maritime wind.

Murugesan's identification rests on two earlier Tamil-language botanical authorities whose own conclusions further reinforce the case. B. L. Sami's *Sanga Ilakkiyathil Sedi Kodi Vilakkam* (1967) — a foundational reference for Sangam plant identification — describes the Punnai as a tree of the *littoral woodland* (Sami's English term), growing on sandy coastal margins, and notes that Sangam texts consistently place it in *kadal kānal* (sea-grove) settings. K. Srinivasan's *Sanga Ilakkiyath Thavarangal* (1987), published by Tamil University, Thanjavur, identifies the species as *C. inophyllum*, describes the buds as "like silver pearls" (matching *Sirupan* 149), and quotes Gamble's observation that the tree is characteristic of Tamil Nadu. Sami and Srinivasan are independent of Western botanical scholarship and of each other; both reach the same identification.

The Punnai's significance continued into the Bhakti literary period (6th–10th century CE). The place name **Tiruppunavayil** — Tamil for "the sacred place of the Punnai grove" — appears in the Periyapuranam tradition as a stop on the saint-poet Sundarar's pilgrimage through the Tamil country. The University of Madras Tamil Lexicon similarly records *puṉṉaivaṉam* ("Punnai grove") as a designation for a Shiva shrine. The reverence that Sangam poets expressed for this tree did not disappear. It became sacred.

3.5 The unbroken name chain (1683–2025)

One of the most compelling pieces of evidence in this paper is simply that the name has not changed. Across multiple independent sources — written in Dutch, English, Tamil, and Malayalam, spanning 342 years, produced by colonial botanists, lexicographers, literary scholars, and modern researchers — the Tamil name Punnai or Pinnai consistently points to one species: *Calophyllum inophyllum*. Table 1 shows this chain.

Table 1
The Punnai name chain across primary sources, 1683–2025.

Date	Source	Name Recorded	Identification
~ 300 BCE–300 CE	Sangam corpus (multiple anthologies)	□□□□□□ (Punnai)	Coastal neythal tree
1683	Rheede, Hortus Malabaricus Vol. 4, Table 38	Ponna marum (Malayalam)	Illustrated, Kerala coast
1832	Roxburgh (Carey ed.), Flora Indica Vol. 2, p. 607	Ponna marum → C. inophyllum	“Indigenous near the shores”
1915	Gamble, Flora of Madras Vol. 1, p. 76	Pinnai (Tamil) = C. inophyllum	“E. and W. Coasts, a littoral species”
1924–1936	Tamil Lexicon, Univ. of Madras, p. 2814	Punnai (□□□□□□) = C. inophyllum	Authoritative Tamil dictionary
1967	Sami, Sanga Ilakkiyathil Sedi Kodi Vilakkam	Punnai = C. inophyllum	Tamil-language Sangam botany
1980	Stevens, J. Arnold Arboretum	“punnai Pinnay” (Tamil)	Definitive genus monograph
1987	Srinivasan, Sanga Ilakkiyath Thavarangal	Punnai = C. inophyllum	Tamil University, Thanjavur
2009	Krishnamurthy, p. 397	□□□□□□ (□□□□□□) = C. inophyllum	Tamil botanical reference
2021	Santhi, in Senganthal—Iyatkai	Punnai = C. inophyllum	Peer-reviewed, Sangam context
2023	Murugesan, J. Tamil Culture & Lit.	Punnai = C. inophyllum	Extended Sangam survey
2025	Singaravelu, Tamilmanam J.	Punnai = C. inophyllum	Neithal pharmacobotany

Documentary continuity like this is rare and significant. That so many independent authorities, writing in different languages across several centuries, land on the same species is itself the strongest argument for it. No other *Calophyllum* species carries the Tamil name Punnai in any authoritative botanical source.

4. Discussion

4.1 Convergence of independent evidence

Several lines of evidence converge on the same answer. Three of them are especially strong, and each is difficult for any rival species to explain away.

The first is habitat. The Sangam Punnai appears exclusively in the *neythal tinai* — coastal seashore settings. Among the *Calophyllum* species native to South India, only *C. inophyllum* is a coastal species. The others grow in the Western Ghats at elevations between 1,000 and 5,000 feet. Gamble (1915) confirms this habitat pattern explicitly, and Calibo et al. (2021) further document that *C. inophyllum* grows naturally along seashores and coastal areas. The habitat criterion alone narrows the field to a single native species.

The second is the flowers themselves. The Sangam poems describe Punnai's white fragrant flowers (Sirupan 149, Kurinjippattu 93), heavy pollen, and pearl-like buds. Roxburgh (1832) confirms that *C. inophyllum* bears large, pure white, fragrant flowers with roughly two hundred stamens. *C. apetalum* — literally the "petal-less" species — could not have inspired these descriptions. You cannot write poetry about the white fragrant flowers of a tree that has no petals.

The third is the name itself, which holds steady across the whole record. Punnai / Pinnai / Ponna marum appears in Rheede's Malayalam record (1683), Roxburgh's explicit equation with *C. inophyllum* (1832), Gamble's Tamil name Pinnai (1915), the University of Madras Tamil Lexicon's direct identification (1924–1936), Sami's Tamil-language Sangam botany (1967), Stevens's recording of "punnai Pinnay" (1980), Srinivasan's Tamil University reference (1987), Krishnamurthy's Tamil botanical reference (2009), Santhi's peer-reviewed Sangam scholarship (2021), Murugesan's extended literary survey (2023), and Singaravelu's recent pharmacobotanical study (2025). The name has not drifted. Two points of honesty about this chain strengthen rather than weaken it. First, the earliest links — Rheede (1683) and Roxburgh — record the Malayalam Ponna marum rather than the Tamil Punnai; the chain becomes explicitly Tamil only with Gamble (1915) and the Tamil Lexicon. Malayalam and Tamil are closely related Dravidian languages, and Ponna / Punnai / Pinnai are transparent cognates for the same tree, so the early colonial records corroborate the species and its coastal habitat even where they do not use the Tamil form. Second, the pre-colonial Tamil evidence is the Sangam corpus itself: the poems attest Punnai in Tamil more than a millennium before any colonial botanist, though of course they supply no Linnaean name. The colonial and modern sources do not establish the Tamil name — the poems already do that — they fix which botanical species that long-attested name denotes.

4.2 Alternative species considered

It is also worth addressing the alternative species mentioned in the Wisdomlib source. *C. polyanthum* Wall. ex Choisy is found in Southeast Asia (and as *C. elatum* Bedd. in the Western Ghats), not on the South Indian coast — it cannot be the Tamil Sangam Punnai. *C. apetalum* grows only in the mountains and has no petals. The Wisdomlib entry records the name as it has appeared across multiple botanical traditions globally, not specifically within the Tamil Sangam context. When the question is restricted to South Indian coastal ecology and Tamil lexicographic authority — which is the correct frame for identifying a Sangam plant — *C. inophyllum* is the best-supported identification.

4.3 Limitations

Several limitations should be stated plainly. The identification rests entirely on documentary evidence — botanical descriptions, dictionaries, and literary texts — rather than on physical remains. No Sangam-period macro-botanical material (wood, charcoal, seeds, or pollen) attributable to the Punnai has been excavated and analysed, so the identification cannot at present be cross-checked against archaeobotanical specimens. The case is strongest precisely where the independent textual lines converge, but it remains an inference from text rather than a determination from material.

The continuity argument also spans a long gap. The earliest external botanical records (Rheede 1683; Roxburgh 1832) postdate the Sangam corpus by well over a millennium and initially record the Malayalam Ponna marum rather than the Tamil Punnai. The inference that name and species remained stable across that interval is well supported by the cognate relationship between the two Dravidian forms and by the unbroken later record, but the intervening centuries are not themselves directly documented. The conventional dating of the corpus (c. 300 BCE–300 CE) is, moreover, a scholarly estimate rather than a fixed chronology; none of the identification depends on those precise dates.

Finally, the literary evidence depends on the interpretation of Tamil poetic vocabulary. Readings of terms such as *muḍavu* and *muḍattāḷ* (“bent-trunked”) and *nittilam* (“pearls”) follow standard lexicographic glosses and published translations, but Sangam poetry is highly compressed and alternative readings of individual lines are possible; the argument therefore rests on the consistent pattern across many poems rather than on any single line. For two early Tamil-language authorities (Sami 1967; Srinivasan 1987), the present study relies in part on their characterization in later peer-reviewed scholarship; direct consultation of the originals would further strengthen — though it is unlikely to overturn — the convergent identification. None of these limitations points toward a rival species, since each alternative candidate fails the habitat or morphology criterion outright; but they do mark the boundary between what the textual record can establish and what would require material or fieldwork-based confirmation.

5. Conclusion

The Punnai tree (□□□□□□□) of classical Tamil Sangam literature is best identified as *Calophyllum inophyllum* L. — the mastwood, the Alexandrian laurel, the tree of the Tamil seashore. This conclusion is supported by sixteen independently verified sources spanning 1683 to 2025. The evidence is botanical (Rheede, Roxburgh, Gamble, Stevens), lexicographic (Tamil Lexicon, Krishnamurthy), literary and Tamil-botanical (Sami, Srinivasan, Santhi, Murugesan, Siromoney, Singaravelu), and ecological (Calibo et al.).

The main contribution of this paper is clarity. By laying out the two-species distinction explicitly — coastal *C. inophyllum* versus montane *C. apetalum* and *C. elatum* — and by building the name chain source by source, this paper gives future scholars a clear foundation to build on. Beyond the single identification, the study offers two things of wider use: it removes an error that recurs in modern reference works, and it demonstrates a transferable method (converging botanical range, lexicographic continuity, and internal textual evidence) for recovering contested plant names from ancient literatures where no living informant remains. The Sangam poets were precise observers. When they placed the

Punnai at the seashore, they meant a tree that belongs at the seashore. That tree has fragrant white flowers, round fruit, oil-rich seeds, and branches large enough to cut for shade canopies. It has grown on South Indian beaches for a very long time, and its Tamil name appears to have remained stable across more than 2,000 years of recorded literature.

On the evidence assembled here, the Sangam Punnai is best identified as Calophyllum inophyllum L.

Declarations

Conflicts of interest:

The author declares no conflict of interest.

Use of AI-assisted technologies

The author used an AI-based tool (Claude, Anthropic) solely to check grammar and spelling. All research, source identification and verification, analysis, interpretation, and conclusions are the author's own, and the author takes full responsibility for the content.

Ethics and human subjects

This study is based entirely on published classical texts, historical botanical literature, dictionaries, and peer-reviewed scholarship. It involved no fieldwork, no collection of biological specimens, and no human participants, interviews, or contact with any Indigenous or local community. No institutional ethics review or community consent was therefore applicable. The author has aimed throughout to engage the Tamil literary and scholarly tradition with respect, to credit Tamil-language scholarship directly, and to represent the cited texts accurately.

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Author Contribution

A.H. conceived the study, conducted the research, and wrote the manuscript.

Data availability:

All primary sources cited are publicly available; URLs are provided in the reference list.

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