

Research Article

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Medicinal plant diversity and their role in traditional healthcare systems of Thirumalai hillocks, Munchirai Panchayat union, Tamil Nadu

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Abstract

The present study documents the diversity and ethnomedicinal significance of plant species used in the conventional healthcare systems of the Thirumalai hillocks, the Munchirai Panchayat Union, Tamil Nadu, India. A total of 403 species of plants were found in systematic floristic and ethnobotanical surveys, 282 species of which (69.97%) were medicinal, which is why the predominance of therapeutically valuable flora was observed in this hillock ecosystem. Analysis based on family showed that *Fabaceae* was the most prevalent family with 46 species (17.8%), then *Euphorbiaceae* (34 species; 13.1%) and *Acanthaceae* (24 species; 9.3%). The distribution of the habitat by habit was dominated by herbs (118 species; 41.8%), then shrubs (67 species; 23.8%), climbers (30 species; 10.6%), trees (63 species; 22.3%), and epiphytes (aquatic herbs) (1 species; 1.5%). The most commonly used part of the plant was leaves (176 species; 62.4%), which means comparatively sustainable harvesting. In therapeutics, gastrointestinal disorders (47.5%), skin diseases (41.8%), respiratory ailments (34.0%), and fever and inflammatory conditions (31.6%) were the most prevalent therapeutic uses of medicinal plants, and 53.9% of the species were found to have multiple therapeutic applications. The results focus on the ecological and cultural significance of Thirumalai hillocks as a source of medicinal plant diversity and the necessity of conserving and safeguarding them.

Keywords

Medicinal plant diversity;
Ethnobotany;
Traditional healthcare systems;
Hillock ecosystems;
Biodiversity conservation.

1. Introduction

Medicinal plants have been the backbone of the traditional healthcare system since prehistoric times, especially in India. Traditional systems such as Ayurveda, Siddha, and folk medicine are highly dependent on plant-based medicines (Latif and Nawaz, 2025; Sharma *et al.*, Sharma *et al.*, 2021). In this system, locally grown plants are used to prevent and treat various afflictions, and human health and natural ecosystems have been interconnected since time immemorial. To this day, medicinal plants remain an important component of primary healthcare, particularly in rural and tribal areas where access to modern healthcare is limited (Negi and Abdul Azeez, 2022).

The continuous utilization of remedies derived from plants are widely used to treat digestive disorders, skin diseases, respiratory conditions, fevers, injuries, and inflammatory illnesses (Chaugule and Barve, 2024). Their therapeutic effects are largely attributed to bioactive constituents in leaves, roots, bark, seeds, and whole plants. The continued use of medicinal plants reflects their cultural acceptance, low cost, and perceived safety, and underscores the need to preserve plant diversity to maintain traditional healthcare knowledge and practices (Prakash *et al.*, 2024; Yi-ru-gui *et al.*, 2025).

Hill ecosystems, especially the foothills of the Western Ghats, are known for their rich diversity of medicinal plants. The rugged terrain, elevation gradients, and microhabitats of hillocks provide suitable ecological niches that support a wide range of herbs, shrubs, climbers, and trees, which form constituent parts of traditional healthcare systems (Vignesh, 2024).

Moderate temperatures, seasonal rainfall, and soil heterogeneity (are highly contributed) also contribute to the growth and survival of medicinal plant species in these areas (Feng *et al.*, 2023). The Western Ghats, a global biodiversity hotspot, is particularly renowned for ethnomedicinal richness and long-standing representation in

traditional healing practices (Sharma *et al.*, 2024). To sustain ethnobotanical knowledge and medicinal plant populations, it is therefore important to preserve the ecological stability of hillock systems (Sharma *et al.*, 2024).

Traditional medicinal plants, which were linked to traditional knowledge are despite known for its importance is currently threatened by sociocultural changes, urbanization, and reduced intergenerational transfer. This loss of knowledge is compounded by habitat degradation, land-use change, and unsustainable harvesting of medicinally important species (Ouma, 2022).

Hence, documenting medicinal plants in the study is essential to preserve existing ethnomedicinal knowledge before it is permanently lost (Kofi Agbeno, and Professor, 2025). Specimen databases and area-based inventories contribute useful information to botanical and ethnomedicinal literature, serve as baseline data for biodiversity conservation, and support sustainable resource management and community healthcare planning. This is especially true in ecologically sensitive hillock areas with high diversity of medicinal plants, which are often poorly documented (Ramachandra *et al.*, 2024). The Thirumalai hillocks of the Munchirai Panchayat Union, located near the Western Ghats, are an ecologically important but ethnobotanically understudied region. The preliminary floristic survey indicates a promising presence of plant-based assemblages of medicinal plant species used in traditional healthcare. Nevertheless, systematic documentation of their medical use remains scarce (Muthukrishnan and Ramachandran, 2025).

With increasing human activities and the gradual loss of traditional healing knowledge about medicinal plant it is essential to document the area. This research is necessary to explain the importance of hillock vegetation in the context of the traditional healthcare system and to emphasize the importance of medicinal flora in the local landscape as well (Pandey *et al.*, 2022).

The present study was undertaken to systematically document the medicinal plant species used in traditional healthcare in the Thirumalai hillocks of the Munchirai Panchayat Union. It examined the distribution of such plants in terms of botanical families, growth forms, and specific medicinal applications. The research also sought to assess the ecological and cultural importance of the hillock vegetation in the maintenance of traditional medicinal systems, with an emphasis on the relevance of the local flora to community health and ethnobotanical knowledge.

2. Materials and Methods

2.1. Study Area and Geographic Location

The current research was done in the Munchirai Panchayat Union in Kanyakumari district, Tamil Nadu, India, and in the Thirumalai hillocks in particular. Geographically, the study area lies at approximately $8^{\circ}16'48''$ N latitude (8.28° N) and $77^{\circ}13'48''$ E longitude (77.23° E) in Fig. 1. (b). The area occupies the southernmost landscape of the district and is on islands near the Western Ghats, which is a world-renowned biodiversity hotspot.

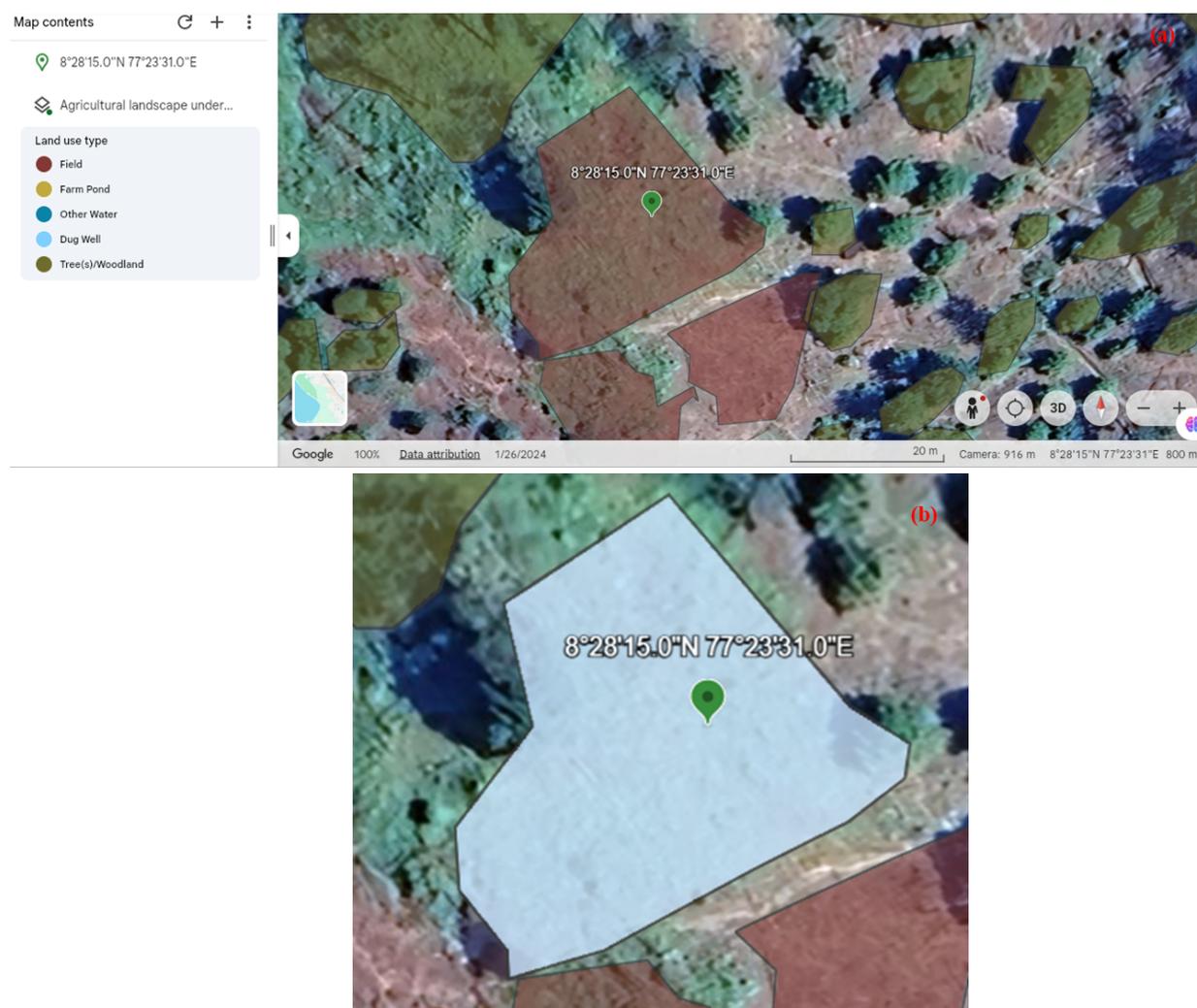


Figure 1.(a) Location of Thirumalai Hillocks in Kanyakumari District, Tamil Nadu, India; (b) Geographical Coordinates and Surrounding Landscape of the Thirumalai Hillocks ($8^{\circ}16'48''$ N, $77^{\circ}13'48''$ E)

The study area represents a transitional ecological zone, which is affected by the climatic conditions of hills and coastal areas. The area has a unique geographic location, is leading to high floristic diversity and the existence of diverse resources of medicinal plants in the area in fig. 1 (a).

The climate of the area is tropical, and it is characterized by humidity with moderate to high temperatures all year long. Rainfall that occurs between the southwest and northeast monsoons are average annual precipitation of between 1200 and 1500 mm, which gives adaptive conditions for the growth and survival of various plant species. Mean annual temperatures generally vary between 24°C and 32°C, providing favorable conditions for the growth and persistence of diverse plant species.

2.2. Topography and Vegetation

The Thirumalai hillocks are undulating to moderately high landforms with a topography of around 100 to 300 m above the mean sea level. It is a rocky landscape with shallow outcrops of soil cover, which is characteristic of tiny hill ecosystems in peninsular India (southern). The soils in the study site are mostly red loamy to lateritic and have varying depths and moderate free drainage. Such edaphic conditions favor a great range of herbaceous and woody vegetation.

Vegetation in the region is composed of a mixed assemblage of scrub vegetation, patches of secondary forest, and semiarid evergreen. Flora composition comprises herbs, shrubs, climbers, trees, and some epiphytes. The presence of wild and semi-cultivated species represents ecological heterogeneity and the different levels of human impact on the ecosystem of the hillock.

2.3. Field Survey and Plant Collection

A systematic survey was conducted in the study area to document medicinal plant species used in the traditional healthcare practices. The use of repeated surveys in various seasons was aimed at covering as much as possible, both perennial and seasonal medicinal flora. Field visits involved a variety of habitats, and these included areas such

as hill slopes, scrublands, exposed rocky surfaces, and mixed vegetation patches.

Plant specimens that are believed to have therapeutic value were always gathered during each survey with minimal interference to the natural habitat. Particular attention was drawn to the focus on the species that are typically used in folk medicine and local healthcare delivery. Field observations had data on the preference of habitat, growth habit, abundance, and related vegetation. Specimens gathered were subjected to the usual botanical procedures to further identify and record them.

2.4. Ethnomedicinal Data Collection

The data regarding medicinal applications of registered plant material species were recorded based on a mixture of local folk knowledge and a search of the existing medicinal sources. Substituted ethnomedicinal uses were observed on the basis of the traditional healthcare systems that were widely practiced in the area. The published ethnobotanical research and classical medicinal texts were also used to authenticate and support the information that was obtained.

The medicinal plant species were divided based on the nature of the ailment they cured, e.g., gastrointestinal disorders, respiratory ailments, skin disease, fever, wounds, and inflammatory diseases. The information on the parts of plants utilized, such as leaves, roots, bark, stems, seeds, latex, and entire plants, was also documented to determine the utilization patterns and therapeutic relevance.

2.5. Taxonomic Identification and Authentication

The collected plants were identified via standard regional and national floras to gain the taxonomic identification of the specimens. Morphological diagnostic characters were thoroughly studied and matched with the description in the authenticated reports to make an accurate identification. Scientific nomenclature was checked and revised to the accepted standards of botanical

nomenclature. Sample recognition was done by cross-verification with herbarium samples and botanical literature. Medicinally important plants were being prepared and preserved as voucher specimens to refer to in the future, making the records being documented reliably and reproducible.

2.6. Data Analysis

The recorded plants were evaluated for diversity and distribution in comparison to the traditional healthcare systems. The classification of species was carried out in regard to family and type of growth, such as herbs, shrubs, climbers, and trees. The analysis of therapeutic categories was done to determine the most commonly treated ailments. Quantitative analysis was conducted to test the prevalence of medicinal plants among the total flora of the study area. The ratio of the proportion of medicinal species to the non-medicinal species was also used to estimate the ecological and cultural value of the hillock vegetation in supporting conventional healthcare systems. Descriptive statistics were employed to summarize the analyzed data and provide them in tabular and graphical format, where the data were appropriate.

3. Results

3.1. Overall Medicinal Plant Diversity

According to the floristic survey carried out in Thirumalai hillocks, 403 species of flora were observed that belonged to different taxonomic groups and growth forms. Among the overall flora listed, 282 species (69.97%) were known as medicinal plants, and 121 species (30.03%) were regarded as non-medicinal ones. Fig. 2 shows the numerical distribution of total, medicinal, and non-medicinal plant species.

Medicinal plant species represented the most prevalent group of functional categories in the study area, with almost two-thirds of all flora in the study being of medicinal plant type (Ranasinghe *et al.*, 2023). The recorded medicinal species were conventionally utilized in the treatment of numerous therapeutic conditions such as gastrointestinal diseases, respiratory complications, skin diseases, febrile illnesses, wounds, and inflammatory diseases (Dadhwal *et al.*, 2025).

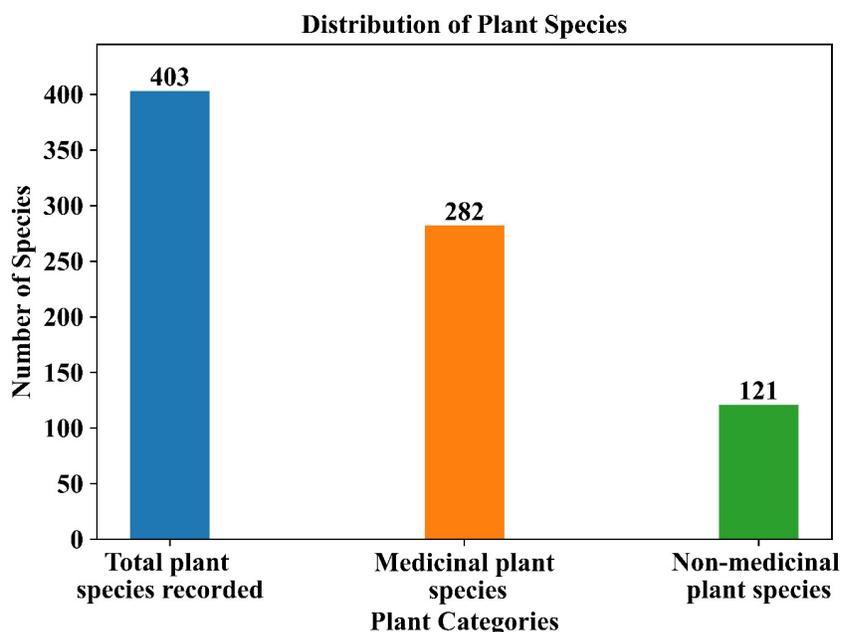


Figure. 2. Distribution of total plant species

The pattern of distribution (Fig. 2) shows clearly that the Thirumalai hillocks are dominated by medicinal plants as compared to the non-medicinal species. This richness is manifested by the dominance of therapeutically significant taxa that is facilitated by the heterogeneous habitats of the hillocks as scrub vegetation, open rocky slopes, and mixed plant communities. The findings in general suggest that the Thirumalai hillocks are a valuable source of medicinal plant diversity that can be of use to the local medical practices.

3.2. Family-wise Distribution of Medicinal Plants

The family-wise dispersion of medicinal plant species identified on the Thirumalai hillocks showed that there was an imbalanced distribution of the angiosperm families, with few families having a large proportion of the medicinal flora. Overall, the reported medicinal plant species were evenly spread across numerous families of plants; nevertheless, strong dominance was noticed in a couple of families (Angmo *et al.*, 2024) (Table 1).

Fabaceae became the most numerous family with 46 medicinal species (17.8%), and then *Euphorbiaceae* with 34 species (13.1%). The contribution of *Acanthaceae* was 24 species (9.3%), *Lamiaceae* 21 species (8.1%), and *Malvaceae* 19 species (7.4%). Others of interest were *Apocynaceae* (16 species; 6.2%) *Asteraceae* (15 species; 5.8%), *Convolvulaceae* (14 species; 5.4%), *Rubiaceae* (12 species; 4.6%), and *Solanaceae* (11 species; 4.2%).

The rest of the medicinal flora was 70 species (27.1%) in a few families represented by two or less species, and all together as other families. The distribution pattern of the family indicates the generality of a few angiosperm families in providing a source of medicinal plants in the Thirumalai hillocks. Table 1 reports the ethnomedicinal characteristics of the representative species such as botanical name, habitat, parts of the plant used, and use. All the medicinal plants are listed in Supplementary Table S1.

Table 1. Family-wise Distribution of Medicinal Plant Species Recorded from Thirumalai Hillocks

S. No.	Family	Number of Medicinal Species	*Percentage (%)
1	<i>Fabaceae</i>	46	17.8
2	<i>Euphorbiaceae</i>	34	13.1
3	<i>Acanthaceae</i>	24	9.3
4	<i>Lamiaceae</i>	21	8.1
5	<i>Malvaceae</i>	19	7.4
6	<i>Apocynaceae</i>	16	6.2
7	<i>Asteraceae</i>	15	5.8
8	<i>Convolvulaceae</i>	14	5.4
9	<i>Rubiaceae</i>	12	4.6
10	<i>Solanaceae</i>	11	4.2
11	Other families (≤ 2 species each)	70	27.1
	Total	282	100

**Percentages calculated with respect to total medicinal plant species (n = 282)*

3.3. Habit-wise Distribution of Medicinal Plants

Table 2 shows the distribution of Medicinal species of plants as a habit of the Thirumalai hillocks. Out of the recorded medicinal flora, the most prevalent form of life was herbaceous species, which comprised 118 out of the total number of 41.8% medicinal plants recorded.

The second most common type of life was the shrubs, which had 67 medicinal species (23.8%), and then the climbers, which had 30 species (10.6%). Trees were the least represented, with 63 medicinal species (22.3%). Epiphytes or Aquatic

herbs with 4 species (1.5%) (Table 2). The figure in Fig. 3 shows clearly that non-woody life forms are more dominant in comparison to the woody species in the medicinal plant assemblage of the study area (Gupta *et al.*, 2025).

The distribution of habitats resembles that of the shrubs, showing that herbaceous and shrub species cover over three-fourths of the medicinal flora of the Thirumalai hillocks (Zhang *et al.*, 2025; Haq *et al.*, 2024). This trend indicates the structure of the vegetation cover of the hillock and the proportional contribution of various forms of life to the medicinal plant cover of the area.

Table 2. Habit-wise Distribution of Medicinal Plants

S. No.	Habit	Number of Medicinal Species	*Percentage (%)
1	Herbs	118	41.8
2	Shrubs	67	23.8
3	Trees	63	22.3
4	Climbers	30	10.6
5	Epiphytes / Succulents / Aquatic herbs	4	1.5
	Total	282	100

**Percentages calculated with respect to total medicinal plant species (n = 282).*

3.4. Plant Parts Used in Traditional Healthcare

Fig. 3 shows the distribution of plant parts that have medicinal use in the documented species of the Thirumalai hillocks. The most common part of the plant that was used was leaves, where 176 species of medicinal plants (62.4%) were documented, showing their presence in most of the traditional healthcare practices. The second most frequently utilized category was roots and rhizomes (98 species, 34.8%). Whole plants were

used with 69 species (24.5%), fruits with 52 species (18.4%), bark with 41 species (14.5%), and seeds with 37 species (13.1%). The least common plant part was latex, found in 26 species (9.2%) (Fig. 3). The data show that it is common to harvest several parts of the plant of one medicinal species, and thus, the cumulative percentages are above 100% (Zahariev, 2022; Aryal *et al.*, 2022; Pramanik *et al.*, 2023). In Fig. 3

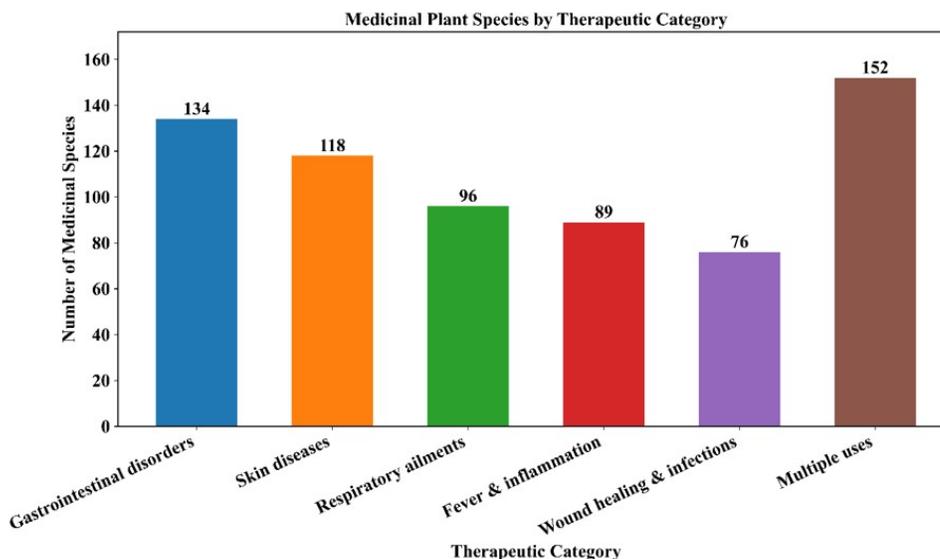


Figure. 3. Therapeutic Category of Medicinal Plants

4. Discussion

Current floristic and ethnomedicinal analysis of the Thirumalai hillocks shows that the proportion of medicinal plant species (69.97% of the total flora recorded) is very high, which implies that small hill ecosystems play a crucial role in providing healthcare services in the traditional systems in terms of ecology and culture. This richness in the proportion of medicinal taxa shows that hillock landscapes, although of small spatial scale, act as important repositories of bioactive plant diversity (Engel *et al.*, 2026). Other hill and foothill ecosystems bordering the Western Ghats have also reported similar trends, with the heterogeneous microhabitats supporting the existence of therapeutically important species.

The prevalence of non-medicinal species over medicinal species indicates the adaptive achievement of traditionally valued taxa in terms of local edaphic and climatic conditions (Zaman *et al.*, 2025). It has been observed that the undulating hillocks, shallow soils, and seasonal availability of moisture typical of the Thirumalai hillocks make available niche environments where a wide range of herbs, shrubs, climbers, and trees thrive. These results support the idea

that the hillock ecosystems are biodiversity zones that serve as a transitional zone between the plains and forested landscape, thus increasing the floristic and ethnomedicinal value (Senapati *et al.*, 2025).

The high medicinal plant records recorded in the current study can be compared to floristic records carried out in other regions of southern India, especially of semi-natural and disturbed hill habitats. This indicates that the secondary vegetation and scrub-infested hillocks still have high ethnobotanical potential in case anthropogenic forces are not too strong.

The distribution of *Fabaceae*, *Euphorbiaceae*, *Acanthaceae*, *Lamiaceae*, and *Malvaceae* as the main medicinal plants is similar to ethnobotanical reports on peninsular India. These families are well known throughout the world due to their high phytochemical compositions, such as alkaloids, flavonoids, terpenoids, and phenolic compounds, that give them a variety of therapeutic effects (Ogbuaguet *et al.*, 2022). The abundance of *Fabaceae* could be explained by its ecological adaptability and broad adaptive spectrum that allows its representatives to survive in nutrient-depleted and rocky soils found in ecosystems of hillocks.

Similarly, the dominance of the *Euphorbiaceae* and *Acanthaceae* families underscores the fact that these families are significantly important in folk medicine, especially in skin diseases, wounds, and inflammatory diseases (Maddhesiya *et al.*, 2024). The EMK array is not spread randomly, but concentrated on a set of families due to the long-term experience of the use of specific plants and the preferences of one or another culture.

The fact that the medicinal flora is mostly herbaceous (50.4%) is indicative of the structure of the hillock vegetation and the availability of the herbs in the traditional healthcare application (Maqbool Mir *et al.*, 2024). The herbs are usually plentiful, quickly growing, and regenerative seasonally, and therefore they are dependable sources of medicinal raw material. The heavy contribution of the shrubs and climbers also speaks of the fact that non-tree life forms have a crucial role to play in upholding ethnomedicinal practices in the hill ecosystems.

The relatively smaller concentration of trees might be associated with poor depth of the soil and rocky soils, which hinder the growth of large woody species. Also, conventional health care tends to prefer the herbs and shrubs because they are easy to gather, and more remedies are prepared quickly (Yadav *et al.*, 2024). This habitual trend is coextensive with the ethnobotanical findings throughout the tropics; whereby herbaceous vegetation predominates in medicinal plant lists.

The fact that the majority of the plant components utilized are the leaves (62.4%) is an indication of the sustainable approach to harvesting, which is entrenched in the traditional knowledge systems. The harvesting of leaf populations usually causes less harm to plant populations when compared to harvesting roots, bark, or entire plants (Sharma and Kala, 2022). The frequent practice of using roots and rhizomes, however, has brought conservation concern in that, when poorly handled, such practices are not beneficial to plant regeneration (Hua *et al.*, 2021).

This usage of various parts of a plant species implies the flexibility of herbs and the depth of knowledge of local people in plant treatment. These results highlight the importance of promoting sustainable harvesting activities and community-based conservation plans to maintain the supply of medicinal plant resources in the long term.

The prevalence of medicinal plants utilized in gastrointestinal disorders, skin ailments, respiratory diseases, and inflammatory conditions represents the key healthcare requirements of rural and semi-rural communities. Water quality, hygiene, occupational exposure, and climatic conditions that exist in tropical regions are usually related to digestive and dermatological disorders (Ovuru *et al.*, 2024). The fact that plant-based remedies are still used to treat these illnesses highlights the issue of the applicability of traditional medicine as a primary healthcare system.

The large percentage of polypharmaceutical medicinal species suggests the medical diversity of the local flora and confirms the idea of the so-called keystone medicinal plants, which are capable of having numerous healthcare roles (Wardill *et al.*, 2024). They can be species of cultural importance and can also be heavily used, so they are the first to be targeted in conservation and drug research efforts.

Results of the current research were the necessity of systematic reporting and preservation of medicinal plants in hillock ecosystems. The growth of anthropogenic pressures, alterations in land use, and erosion of the traditional knowledge pose a threat to the plant diversity and ethnomedicinal practices linked to them (Publishers, 2023). Localized inventories like the one offered in the current study offer baseline information that is necessary in biodiversity conservation planning, management of sustainable resources, and the preservation of native healthcare knowledge.

Altogether, one can observe that the Thirumalai hillocks are a landscape of ecological and ethnomedical interests that should be given special conservation concern (Coals *et al.*, 2024). The combination of traditional knowledge and scientific record should be integrated to facilitate sustainable healthcare systems in the region, and, preserving the biological and cultural heritage of the area.

4.1. Comparative Analysis with Regional Ethnobotanical Studies

To highlight the regional uniqueness and ethnobotanical significance of the Thirumalai hillocks, the medicinal plant diversity documented in the present study was compared with previously reported ethnobotanical investigations from the Western Ghats foothills, Kanyakumari district, and other hill ecosystems of Tamil Nadu (Table S1). Such comparisons are widely used in ethnobotanical research to contextualize species richness, dominant plant families, and traditional healthcare dependence across similar ecological zones.

Table S1. Ethnomedicinal profile of representative medicinal plant species recorded from Thirumalai Hillocks

S. No.	Botanical name	Family	Habit	Plant part used	Ethnomedicinal use
1	<i>Abrus precatorius L.</i>	Fabaceae	Climber	Leaves, seeds	Cough, fever, skin diseases
2	<i>Abrus pulchellus Wall. ex Thwaites</i>	Fabaceae	Climber	Leaves	Fever
3	<i>Abutilon indicum (L.) Sweet</i>	Malvaceae	Shrub	Leaves, roots	Anti-inflammatory, urinary disorders
4	<i>Abutilon pannosum (Forst.f.) Schtdl.</i>	Malvaceae	Shrub	Leaves	Wound healing, fever
5	<i>Acacia nilotica (L.) Delile</i>	Fabaceae	Tree	Bark	Diarrhoea
6	<i>Acalypha fruticosa Forssk.</i>	Euphorbiaceae	Shrub	Leaves	Skin diseases
7	<i>Acalypha indica L.</i>	Euphorbiaceae	Herb	Leaves	Skin infections, bronchitis
8	<i>Acanthus ilicifolius L.</i>	Acanthaceae	Shrub	Leaves	Rheumatism
9	<i>Achyranthes aspera L.</i>	Amaranthaceae	Herb	Roots, leaves	Rheumatism, digestive disorders
10	<i>Acorus calamus L.</i>	Acoraceae	Herb	Rhizome	Digestive stimulant
11	<i>Adhatodavasica Nees</i>	Acanthaceae	Shrub	Leaves	Bronchitis
12	<i>Aegle marmelos (L.) Corrêa</i>	Rutaceae	Tree	Fruits	Diarrhoea
13	<i>Aerva lanata (L.) Juss. ex Schult.</i>	Amaranthaceae	Herb	Whole plant	Kidney stones, diuretic
14	<i>Aeschynomene indica L.</i>	Fabaceae	Herb	Whole plant	Fever
15	<i>Ageratum conyzoides L.</i>	Asteraceae	Herb	Leaves	Wound healing, anti-inflammatory
16	<i>Ailanthus excelsa Roxb.</i>	Simaroubaceae	Tree	Bark	Dysentery
17	<i>Alangiumsalvifolium (L.f.) Wangerin</i>	Cornaceae	Tree	Bark	Snake bite
18	<i>Albizia lebeck (L.) Benth.</i>	Fabaceae	Tree	Bark	Anti-allergic
19	<i>Aloe vera (L.) Burm.f.</i>	Asphodelaceae	Herb	Leaves	Burns, skin care
20	<i>Alstonia scholaris (L.) R.Br.</i>	Apocynaceae	Tree	Bark	Fever

21	<i>Alternanthera sessilis</i> (L.) R.Br. ex DC.	Amaranthaceae	Herb	Whole plant	Anaemia
22	<i>Alysicarpusmonilifer</i> (L.) DC.	Fabaceae	Herb	Whole plant	Fever, stomach disorders
23	<i>Alysicarpus vaginalis</i> (L.) DC.	Fabaceae	Herb	Whole plant	Dysentery, fever
24	<i>Amaranthus tricolor</i> L.	Amaranthaceae	Herb	Leaves	Anaemia, digestive aid
25	<i>Amorphophallus paeoniifolius</i> (Dennst.) Nicolson	Araceae	Herb	Tuber	Piles
26	<i>Andrographis paniculata</i> (Burm.f.) Wall. ex Nees	Acanthaceae	Herb	Leaves	Fever
27	<i>Anisochilus carnosus</i> (L.f.) Wall.	Lamiaceae	Herb	Leaves	Cold, cough
28	<i>Annona squamosa</i> L.	Annonaceae	Tree	Leaves, seeds	Antidiabetic, lice control
29	<i>Anogeissus latifolia</i> (Roxb. ex DC.) Wall. ex Guill. & Perr.	Combretaceae	Tree	Bark	Ulcers
30	<i>Aphanamixis polystachya</i> (Wall.) R.Parker	Meliaceae	Tree	Bark	Anti-inflammatory
31	<i>Argemone mexicana</i> L.	Papaveraceae	Herb	Seeds	Skin diseases
32	<i>Aristolochiabracteolata</i> Retz.	Aristolochiaceae	Herb	Leaves, roots	Snake bite, skin diseases
33	<i>Aristolochia indica</i> L.	Aristolochiaceae	Climber	Roots	Antidote, fever
34	<i>Asparagus racemosus</i> Willd.	Asparagaceae	Climber	Roots	Galactagogue
35	<i>Atalantiamonophylla</i> (L.) DC.	Rutaceae	Shrub	Leaves	Digestive disorders
36	<i>Azadirachta indica</i> A.Juss.	Meliaceae	Tree	Leaves, bark	Antiseptic, skin disorders
37	<i>Azima tetracantha</i> Lam.	Salvadoraceae	Shrub	Leaves	Rheumatism
38	<i>Bacopa monnieri</i> (L.) Wettst.	Plantaginaceae	Herb	Whole plant	Memory enhancer
39	<i>Balanites aegyptiaca</i> (L.) Delile	Zygophyllaceae	Tree	Fruits	Anthelmintic
40	<i>Barleria cristata</i> L.	Acanthaceae	Shrub	Leaves	Anti-inflammatory
41	<i>Bauhinia purpurea</i> L.	Fabaceae	Tree	Bark	Diarrhoea
42	<i>Bauhinia racemosa</i> Lam.	Fabaceae	Tree	Bark	Ulcers
43	<i>Benincasa hispida</i> (Thunb.) Cogn.	Cucurbitaceae	Climber	Fruits	Cooling agent
44	<i>Bixa orellana</i> L.	Bixaceae	Shrub	Seeds	Antioxidant
45	<i>Blepharismaderaspatensis</i> (L.) B.Heyne ex Roth	Acanthaceae	Herb	Whole plant	Fever
46	<i>Boerhavia diffusa</i> L.	Nyctaginaceae	Herb	Roots	Diuretic, liver disorders
47	<i>Bombax ceiba</i> L.	Malvaceae	Tree	Bark	Diarrhoea
48	<i>Boswellia serrata</i> Roxb. ex Colebr.	Burseraceae	Tree	Resin	Arthritis
49	<i>Bridelia retusa</i> (L.) A.Juss.	Phyllanthaceae	Tree	Bark	Anti-inflammatory
50	<i>Butea monosperma</i> (Lam.) Taub.	Fabaceae	Tree	Flowers	Diarrhoea

51	<i>Caesalpinia bonduc (L.) Roxb.</i>	Fabaceae	Climber	Seeds	Fever
52	<i>Calotropis gigantea (L.) Dryand.</i>	Apocynaceae	Shrub	Latex, leaves	Pain relief, skin diseases
53	<i>Canavalia gladiata (Jacq.) DC.</i>	Fabaceae	Climber	Seeds	Digestive aid
54	<i>Capparis sepiaria L.</i>	Capparaceae	Shrub	Roots	Rheumatism
55	<i>Capparis zeylanica L.</i>	Capparaceae	Climber	Roots	Anti-inflammatory
56	<i>Carallumaadscendens (Roxb.) Haw.</i>	Apocynaceae	Succulent	Whole plant	Diabetes
57	<i>Cardiospermum halicacabum L.</i>	Sapindaceae	Climber	Leaves	Joint pain, inflammation
58	<i>Careya arborea Roxb.</i>	Lecythidaceae	Tree	Bark	Skin diseases
59	<i>Carica papaya L.</i>	Caricaceae	Tree	Leaves	Dengue fever
60	<i>Casearia elliptica Willd.</i>	Salicaceae	Tree	Leaves	Wound healing
61	<i>Cassia alata L.</i>	Fabaceae	Shrub	Leaves	Ringworm, skin infections
62	<i>Cassia auriculata L.</i>	Fabaceae	Shrub	Flowers	Antidiabetic
63	<i>Cassia fistula L.</i>	Fabaceae	Tree	Fruits	Laxative
64	<i>Catharanthus roseus (L.) G.Don</i>	Apocynaceae	Herb	Leaves	Anticancer
65	<i>Celosia argentea L.</i>	Amaranthaceae	Herb	Seeds	Eye disorders
66	<i>Centella asiatica (L.) Urb.</i>	Apiaceae	Herb	Whole plant	Memory enhancer, wound healing
67	<i>Ceropegia juncea Roxb.</i>	Apocynaceae	Climber	Tuber	Digestive disorders
68	<i>Chloroxylon swietenia DC.</i>	Rutaceae	Tree	Bark	Fever
69	<i>Chromolaena odorata (L.) R.M.King & H.Rob.</i>	Asteraceae	Shrub	Leaves	Wound healing
70	<i>Cissampelos pareira L.</i>	Menispermaceae	Climber	Roots	Fever, urinary problems
71	<i>Cissus quadrangularis L.</i>	Vitaceae	Climber	Stem	Bone fracture healing
72	<i>Cleome viscosa L.</i>	Cleomaceae	Herb	Seeds	Digestive disorders
73	<i>Clitoriaternatea L.</i>	Fabaceae	Climber	Roots, flowers	Brain tonic
74	<i>Coccinia grandis (L.) Voigt</i>	Cucurbitaceae	Climber	Leaves	Diabetes
75	<i>Cochlospermum religiosum (L.) Alston</i>	Bixaceae	Tree	Bark	Wound healing
76	<i>Commelina benghalensis L.</i>	Commelinaceae	Herb	Whole plant	Fever, urinary ailments
77	<i>Corallocarpusepigaeus (Rottl.) Hook.f.</i>	Cucurbitaceae	Climber	Tuber	Digestive disorders
78	<i>Cordia dichotoma G.Forst.</i>	Boraginaceae	Tree	Fruits	Cough
79	<i>Costus speciosus (J.Koenig) Sm.</i>	Costaceae	Herb	Rhizome	Diabetes
80	<i>Crateva magna (Lour.) DC.</i>	Capparaceae	Tree	Bark	Anti-inflammatory
81	<i>Crotalaria juncea L.</i>	Fabaceae	Shrub	Leaves	Skin diseases
82	<i>Cullen corylifolium (L.) Medik.</i>	Fabaceae	Herb	Seeds	Skin diseases
83	<i>Curcuma angustifolia Roxb.</i>	Zingiberaceae	Herb	Rhizome	Digestive tonic
84	<i>Cycleapeltata (Lam.) Hook.f. & Thomson</i>	Menispermaceae	Climber	Leaves	Ulcers
85	<i>Cynodon dactylon (L.) Pers.</i>	Poaceae	Herb	Whole plant	Diabetes, wound healing
86	<i>Dalbergia sissoo Roxb.</i>	Fabaceae	Tree	Bark	Anti-inflammatory

87	<i>Datura metel L.</i>	Solanaceae	Shrub	Leaves, seeds	Asthma, pain relief
88	<i>Decalepishamiltonii Wight & Arn.</i>	Apocynaceae	Climber	Roots	Appetizer
89	<i>Desmodium gangeticum (L.) DC.</i>	Fabaceae	Shrub	Roots	Fever
90	<i>Dillenia indica L.</i>	Dilleniaceae	Tree	Fruits	Digestive disorders
91	<i>Dioscorea bulbifera L.</i>	Dioscoreaceae	Climber	Tuber	Skin diseases
92	<i>Dioscorea oppositifolia L.</i>	Dioscoreaceae	Climber	Tuber	Nutritional tonic
93	<i>Dolichandrone atrovirens (Roth) Sprague</i>	Bignoniaceae	Tree	Leaves	Anti-inflammatory
94	<i>Ecliptaprostrata (L.) L.</i>	Asteraceae	Herb	Whole plant	Liver disorders
95	<i>Entada rheedii Spreng.</i>	Fabaceae	Climber	Seeds	Anti-inflammatory
96	<i>Erythrina variegata L.</i>	Fabaceae	Tree	Bark	Joint pain
97	<i>Euphorbia hirta L.</i>	Euphorbiaceae	Herb	Whole plant	Asthma, dysentery
98	<i>Fagoniacretica L.</i>	Zygophyllaceae	Herb	Whole plant	Fever
99	<i>Ficus racemosa L.</i>	Moraceae	Tree	Bark	Diabetes
100	<i>Flacourtia indica (Burm.f.) Merr.</i>	Salicaceae	Tree	Fruits	Diarrhoea
101	<i>Garcinia indica Choisy</i>	Clusiaceae	Tree	Fruits	Digestive aid
102	<i>Garuga pinnata Roxb.</i>	Burseraceae	Tree	Bark	Fever
103	<i>Gloriosa superba L.</i>	Colchicaceae	Climber	Tuber	Arthritis (processed)
104	<i>Gmelina arborea Roxb.</i>	Lamiaceae	Tree	Bark	Fever
105	<i>Grewia asiatica L.</i>	Malvaceae	Tree	Fruits	Cooling agent
106	<i>Gymnema lactiferum (L.) R.Br. ex Schult.</i>	Apocynaceae	Climber	Leaves	Diabetes
107	<i>Gymnema sylvestre (Retz.) R.Br.</i>	Apocynaceae	Climber	Leaves	Diabetes
108	<i>Haldina cordifolia (Roxb.) Ridsdale</i>	Rubiaceae	Tree	Bark	Fever
109	<i>Helicteresisora L.</i>	Malvaceae	Shrub	Fruits	Diarrhoea
110	<i>Heliotropium indicum L.</i>	Boraginaceae	Herb	Leaves	Wound healing
111	<i>Hemidesmus indicus (L.) R.Br.</i>	Apocynaceae	Climber	Roots	Blood purifier
112	<i>Hemidesmus indicus (L.) R.Br.</i>	Apocynaceae	Climber	Roots	Blood purifier
113	<i>Hibiscus vitifolius L.</i>	Malvaceae	Herb	Leaves	Fever
114	<i>Holarrhena pubescens Wall.</i>	Apocynaceae	Tree	Bark	Dysentery
115	<i>Holoptelea integrifolia (Roxb.) Planch.</i>	Ulmaceae	Tree	Bark	Skin diseases
116	<i>Hugoniamystax L.</i>	Linaceae	Shrub	Roots	Wound healing
117	<i>Hybanthus enneaspermus (L.) F. Muell.</i>	Violaceae	Herb	Whole plant	Male fertility
118	<i>Indigofera aspalathoides Vahl ex DC.</i>	Fabaceae	Shrub	Leaves	Leprosy
119	<i>Indigofera cassioides Rottler ex DC.</i>	Fabaceae	Shrub	Leaves	Skin diseases
120	<i>Indigofera tinctoria L.</i>	Fabaceae	Shrub	Leaves	Detoxification
121	<i>Ipomoea eriocarpa R.Br. ex Sweet</i>	Convolvulaceae	Climber	Whole plant	Fever
122	<i>Ipomoea nil (L.) Roth</i>	Convolvulaceae	Climber	Seeds	Laxative

123	<i>Ipomoea nil (L.) Roth</i>	Convolvulaceae	Climber	Seeds	Laxative
124	<i>Ixora coccinea L.</i>	Rubiaceae	Shrub	Flowers	Dysentery
125	<i>Jasminum angustifolium (L.) Willd.</i>	Oleaceae	Shrub	Leaves	Skin diseases
126	<i>Jatropha glandulifera Roxb.</i>	Euphorbiaceae	Shrub	Latex	Wound healing
127	<i>Justicia prostrata Gamble</i>	Acanthaceae	Herb	Leaves	Fever
128	<i>Justicia simplex D. Don</i>	Acanthaceae	Herb	Leaves	Fever
129	<i>Justicia tranquebariensis L.f.</i>	Acanthaceae	Shrub	Leaves	Anti-inflammatory
130	<i>Kirganelia reticulata (Poir.) Baill.</i>	Phyllanthaceae	Shrub	Leaves	Jaundice
131	<i>Kydiacalycina Roxb.</i>	Malvaceae	Tree	Bark	Dysentery
132	<i>Lantana camara L.</i>	Verbenaceae	Shrub	Leaves	Skin infections, wounds
133	<i>Lepidagathis cristata Willd.</i>	Acanthaceae	Herb	Leaves	Skin diseases
134	<i>Lepisanthetetrphylla (Vahl) Radlk.</i>	Sapindaceae	Tree	Fruits	Digestive disorders
135	<i>Leucas aspera (Willd.) Link</i>	Lamiaceae	Herb	Leaves	Cold, cough
136	<i>Leucas aspera (Willd.) Link</i>	Lamiaceae	Herb	Leaves, flowers	Cold, cough
137	<i>Limonia acidissima L.</i>	Rutaceae	Tree	Fruits	Digestive aid
138	<i>Litsea glutinosa (Lour.) C.B. Rob.</i>	Lauraceae	Tree	Bark	Diarrhoea
139	<i>Ludwigia parviflora Roxb.</i>	Onagraceae	Herb	Whole plant	Fever
140	<i>Ludwigia perennis L.</i>	Onagraceae	Herb	Whole plant	Fever
141	<i>Lycianthes laevis (Dunal) Bitter</i>	Solanaceae	Shrub	Leaves	Skin diseases
142	<i>Madhuca longifolia (J. Koenig) J.F. Macbr.</i>	Sapotaceae	Tree	Flowers, bark	Tonic, ulcers
143	<i>Mallotus philippensis (Lam.) Müll. Arg.</i>	Euphorbiaceae	Tree	Fruits, glands	Anthelmintic
144	<i>Mangifera indica L.</i>	Anacardiaceae	Tree	Bark, leaves	Diarrhoea
145	<i>Manihot esculenta Crantz</i>	Euphorbiaceae	Shrub	Tuber	Digestive disorders
146	<i>Melochia corchorifolia L.</i>	Malvaceae	Herb	Leaves	Dysentery
147	<i>Merremia tridentata (L.) Hallier f.</i>	Convolvulaceae	Climber	Whole plant	Fever
148	<i>Microstachys chamaelea (L.) Müll. Arg.</i>	Euphorbiaceae	Herb	Whole plant	Fever
149	<i>Millingtonia hortensis L.f.</i>	Bignoniaceae	Tree	Leaves	Asthma
150	<i>Mimosa pudica L.</i>	Fabaceae	Herb	Roots	Piles
151	<i>Mimusops elengi L.</i>	Sapotaceae	Tree	Bark	Dental ailments
152	<i>Mitragyna parvifolia (Roxb.) Korth.</i>	Rubiaceae	Tree	Bark	Fever
153	<i>Morinda citrifolia L.</i>	Rubiaceae	Tree	Fruits	Immunity booster
154	<i>Morinda tinctoria Roxb.</i>	Rubiaceae	Tree	Leaves	Skin diseases
155	<i>Moringa oleifera Lam.</i>	Moringaceae	Tree	Leaves	Nutritional tonic
156	<i>Mucuna pruriens (L.) DC.</i>	Fabaceae	Climber	Seeds	Nervous disorders
157	<i>Mukia maderaspatana (L.) M. Roem.</i>	Cucurbitaceae	Climber	Whole plant	Diabetes

158	<i>Murrayakoenigii</i> (L.) Spreng.	Rutaceae	Tree	Leaves	Digestive aid
159	<i>Naravelia zeylanica</i> (L.) DC.	Ranunculaceae	Climber	Leaves	Skin diseases
160	<i>Neolamarckiacadamba</i> (Roxb.) Bosser	Rubiaceae	Tree	Bark	Fever
161	<i>Neregamia alata</i> Wight & Arn.	Euphorbiaceae	Herb	Whole plant	Skin diseases
162	<i>Nothapodytesnimmoniana</i> (J.Graham) Mabb.	Icacinaceae	Tree	Bark	Anticancer
163	<i>Nyctanthesarbor-tristis</i> L.	Oleaceae	Tree	Leaves	Fever, arthritis
164	<i>Ochna obtusata</i> DC.	Ochnaceae	Shrub	Bark	Skin diseases
165	<i>Ocimum americanum</i> L.	Lamiaceae	Herb	Leaves	Cold, fever
166	<i>Ocimum basilicum</i> L.	Lamiaceae	Herb	Leaves	Digestive disorders
167	<i>Ocimum canum</i> Sims	Lamiaceae	Herb	Leaves	Fever
168	<i>Ocimum tenuiflorum</i> L.	Lamiaceae	Herb	Leaves	Cold, fever
169	<i>Oldenlandiacorymbosa</i> L.	Rubiaceae	Herb	Whole plant	Fever
170	<i>Operculina turpethum</i> (L.) Silva Manso	Convolvulaceae	Climber	Roots	Purgative
171	<i>Oroxylum indicum</i> (L.) Kurz	Bignoniaceae	Tree	Bark	Digestive disorders
172	<i>Orthosiphon thymiflorus</i> (Roth) Sleesen	Lamiaceae	Herb	Leaves	Kidney disorders
173	<i>Oxalis corniculata</i> L.	Oxalidaceae	Herb	Whole plant	Stomach disorders, scurvy
174	<i>Pandanus odorifer</i> (Forssk.) Kuntze	Pandanaceae	Tree	Roots	Rheumatism
175	<i>Parthenium hysterophorus</i> L.	Asteraceae	Herb	Leaves	Skin diseases
176	<i>Passiflora foetida</i> L.	Passifloraceae	Climber	Leaves	Anxiety
177	<i>Pavetta indica</i> L.	Rubiaceae	Shrub	Leaves	Fever
178	<i>Pedaliium murex</i> L.	Pedaliaceae	Herb	Fruits	Urinary disorders, aphrodisiac
179	<i>Peltophorumpterocarpum</i> (DC.) K.Heyne	Fabaceae	Tree	Bark	Anti-inflammatory
180	<i>Pergularia extensa</i> (Jacq.) N.E.Br.	Apocynaceae	Climber	Leaves	Snake bite
181	<i>Peristrophebicalyculata</i> (Retz.) Nees	Acanthaceae	Herb	Leaves	Fever
182	<i>Petiveriaalliacea</i> L.	Phytolaccaceae	Herb	Roots	Anti-inflammatory
183	<i>Phyllanthus amarus</i> Schumach. & Thonn.	Phyllanthaceae	Herb	Whole plant	Jaundice, liver disorders
184	<i>Phyllanthus maderaspatensis</i> L.	Phyllanthaceae	Herb	Whole plant	Diuretic, fever
185	<i>Phyllanthus reticulatus</i> Poir.	Phyllanthaceae	Shrub	Leaves	Jaundice
186	<i>Physalis minima</i> L.	Solanaceae	Herb	Whole plant	Urinary disorders
187	<i>Piper longum</i> L.	Piperaceae	Climber	Fruits	Respiratory disorders

188	<i>Pistia stratiotes L.</i>	Araceae	Aquatic herb	Leaves	Skin diseases
189	<i>Plumbago zeylanica L.</i>	Plumbaginaceae	Shrub	Roots	Digestive stimulant
190	<i>Polycarpaeacorymbosa (L.) Lam.</i>	Caryophyllaceae	Herb	Whole plant	Fever
191	<i>Polycarponprostratum (Forssk.) Asch. &Schweinf.</i>	Caryophyllaceae	Herb	Whole plant	Anti-inflammatory
192	<i>Polygalachinensis L.</i>	Polygalaceae	Herb	Roots	Tonic
193	<i>Pongamia pinnata (L.) Pierre</i>	Fabaceae	Tree	Seeds	Skin diseases
194	<i>Portulaca oleracea L.</i>	Portulacaceae	Herb	Leaves	Cooling agent, urinary problems
195	<i>Premnaserratifolia L.</i>	Lamiaceae	Shrub	Leaves	Anti-inflammatory
196	<i>Prosopis cineraria (L.) Druce</i>	Fabaceae	Tree	Bark	Diarrhoea
197	<i>Psidium guajava L.</i>	Myrtaceae	Tree	Leaves	Diarrhoea
198	<i>Pterospermumacerifolium (L.) Willd.</i>	Malvaceae	Tree	Bark	Ulcers
199	<i>Pterospermumrubiginosum Heyne ex Wight &Arn.</i>	Malvaceae	Tree	Bark	Anti-inflammatory
200	<i>Randia dumetorum (Retz.) Poir.</i>	Rubiaceae	Shrub	Fruits	Anthelmintic
201	<i>Rauwolfia serpentina (L.) Benth. ex Kurz</i>	Apocynaceae	Shrub	Roots	Hypertension
202	<i>Rauolfiatetraphylla L.</i>	Apocynaceae	Shrub	Roots	Sedative
203	<i>Rhynchosia minima (L.) DC.</i>	Fabaceae	Herb	Whole plant	Fever
204	<i>Ricinus communis L.</i>	Euphorbiaceae	Shrub	Seeds, leaves	Laxative, rheumatism
205	<i>Riveahypocrateriformis (Desr.) Choisy</i>	Convolvulaceae	Climber	Leaves	Anti-inflammatory
206	<i>Riveahypocrateriformis (Desr.) Choisy</i>	Convolvulaceae	Climber	Leaves	Anti-inflammatory
207	<i>Ruellia tuberosa L.</i>	Acanthaceae	Herb	Roots	Diabetes
208	<i>Salvadora persica L.</i>	Salvadoraceae	Tree	Roots	Dental care
209	<i>Santalum album L.</i>	Santalaceae	Tree	Heartwood	Skin diseases
210	<i>Santalum album L.</i>	Santalaceae	Tree	Heartwood	Skin diseases
211	<i>Saracaasoca (Roxb.) Willd.</i>	Fabaceae	Tree	Bark	Gynaecological disorders
212	<i>Schleichera oleosa (Lour.) Oken</i>	Sapindaceae	Tree	Seeds	Skin diseases
213	<i>Semecarpus anacardium L.f.</i>	Anacardiaceae	Tree	Fruits	Arthritis
214	<i>Senna occidentalis (L.) Link</i>	Fabaceae	Shrub	Leaves	Fever
215	<i>Senna tora (L.) Roxb.</i>	Fabaceae	Herb	Leaves	Skin diseases
216	<i>Sesamum prostratum Retz.</i>	Pedaliaceae	Herb	Seeds	Laxative
217	<i>Sida acuta Burm.f.</i>	Malvaceae	Herb	Roots	Fever
218	<i>Sida cordifolia L.</i>	Malvaceae	Herb	Roots	Fever
219	<i>Sida rhombifolia L.</i>	Malvaceae	Herb	Whole plant	Anti-inflammatory
220	<i>Solanum americanum Mill.</i>	Solanaceae	Herb	Leaves	Liver disorders
221	<i>Solanum erianthumD. Don</i>	Solanaceae	Shrub	Leaves	Anti-inflammatory

222	<i>Solanum indicum L.</i>	Solanaceae	Shrub	Fruits	Asthma
223	<i>Solanum nigrum L.</i>	Solanaceae	Herb	Leaves, fruits	Liver disorders
224	<i>Solanum surattenseBurm.f.</i>	Solanaceae	Herb	Fruits	Respiratory disorders
225	<i>Solanum torvum Sw.</i>	Solanaceae	Shrub	Fruits	Diabetes
226	<i>Solanum trilobatum L.</i>	Solanaceae	Climber	Leaves	Asthma
227	<i>Spermacoce hispida L.</i>	Rubiaceae	Herb	Whole plant	Fever
228	<i>SpermacoceocymoidesBurm.f.</i>	Rubiaceae	Herb	Whole plant	Fever
229	<i>Spilanthesacmella (L.) L.</i>	Asteraceae	Herb	Flowers	Toothache
230	<i>Stachytarpheta jamaicensis (L.) Vahl</i>	Verbenaceae	Herb	Whole plant	Fever
231	<i>Sterculia urens Roxb.</i>	Malvaceae	Tree	Gum	Ulcers
232	<i>Stereospermumchelonioides (L.f.) DC.</i>	Bignoniaceae	Tree	Bark	Inflammation
233	<i>Strychnos nux-vomica L.</i>	Loganiaceae	Tree	Seeds	Nervine tonic (processed)
234	<i>Strychnos potatorumL.f.</i>	Loganiaceae	Tree	Seeds	Water purification
235	<i>Swertia chirayita (Roxb.) H.Karst.</i>	Gentianaceae	Herb	Whole plant	Fever
236	<i>Syzygiumcumini (L.) Skeels</i>	Myrtaceae	Tree	Seeds, bark	Antidiabetic
237	<i>Syzygiumjambos (L.) Alston</i>	Myrtaceae	Tree	Leaves	Diarrhoea
238	<i>Tabernaemontana divaricata (L.) R.Br. ex Roem. & Schult.</i>	Apocynaceae	Shrub	Leaves	Eye disorders
239	<i>Tamarindus indica L.</i>	Fabaceae	Tree	Fruits	Digestive aid
240	<i>Tarenna asiatica (L.) Kuntze</i>	Rubiaceae	Shrub	Roots	Fever
241	<i>Tectona grandis L.f.</i>	Lamiaceae	Tree	Bark	Skin diseases
242	<i>Tephrosia purpurea (L.) Pers.</i>	Fabaceae	Herb	Whole plant	Liver disorders
243	<i>Terminalia arjuna (Roxb.) Wight & Arn.</i>	Combretaceae	Tree	Bark	Cardiac tonic
244	<i>Terminalia bellirica (Gaertn.) Roxb.</i>	Combretaceae	Tree	Fruits	Digestive tonic
245	<i>Terminalia chebula Retz.</i>	Combretaceae	Tree	Fruits	Laxative
246	<i>Terminalia paniculata Roth</i>	Combretaceae	Tree	Bark	Diarrhoea
247	<i>Thespesia populnea (L.) Sol. ex Corrêa</i>	Malvaceae	Tree	Bark	Skin diseases
248	<i>Thunbergia erecta (Benth.) T.Anderson</i>	Acanthaceae	Shrub	Leaves	Anti-inflammatory
249	<i>Tinospora cordifolia (Willd.) Miers</i>	Menispermaceae	Climber	Stem	Immunomodulator
250	<i>Tinospora sinensis (Lour.) Merr.</i>	Menispermaceae	Climber	Stem	Fever
251	<i>Trianthemaportulacastrum L.</i>	Aizoaceae	Herb	Whole plant	Diuretic, dropsy
252	<i>Tribulus terrestris L.</i>	Zygophyllaceae	Herb	Fruits	Urinary disorders
253	<i>Trichodesma indicum (L.) Lehm.</i>	Boraginaceae	Herb	Leaves	Anti-inflammatory
254	<i>Tridax procumbens L.</i>	Asteraceae	Herb	Leaves	Wound healing
255	<i>Trigonella foenum-graecum L.</i>	Fabaceae	Herb	Seeds	Diabetes, digestive aid
256	<i>Triumfettarhomboidea Jacq.</i>	Malvaceae	Shrub	Roots	Dysentery
257	<i>Tylophora indica (Burm.f.) Merr.</i>	Apocynaceae	Climber	Leaves	Asthma

258	<i>Tylophora indica</i> (Burm.f.) Merr.	Apocynaceae	Climber	Leaves	Asthma
259	<i>Urena lobata</i> L.	Malvaceae	Shrub	Roots	Anti-inflammatory
260	<i>Urena sinuata</i> L.	Malvaceae	Shrub	Roots	Dysentery
261	<i>Vanda tessellata</i> (Roxb.) Hook. ex G.Don	Orchidaceae	Epiphyte	Roots	Rheumatism
262	<i>Vateria indica</i> L.	Dipterocarpaceae	Tree	Resin	Wound healing
263	<i>Ventilagamaderaspatana</i> Gaertn.	Rhamnaceae	Climber	Bark	Skin diseases
264	<i>Vernonia cinerea</i> (L.) Less.	Asteraceae	Herb	Whole plant	Anthelmintic
265	<i>Vigna trilobata</i> (L.) Verdc.	Fabaceae	Climber	Whole plant	Fever
266	<i>Vitex negundo</i> L.	Lamiaceae	Shrub	Leaves	Joint pain
267	<i>Vitex trifolia</i> L.	Lamiaceae	Shrub	Leaves	Headache
268	<i>Volkameria inermis</i> L.	Lamiaceae	Shrub	Leaves	Anti-inflammatory
269	<i>Waltheria indica</i> L.	Malvaceae	Shrub	Roots	Fever
270	<i>Wattakakavolubilis</i> (L.f.) Stapf	Apocynaceae	Climber	Leaves	Fever
271	<i>Wedelia chinensis</i> (Osbeck) Merr.	Asteraceae	Herb	Leaves	Hair tonic
272	<i>Withaniasomnifera</i> (L.) Dunal	Solanaceae	Shrub	Roots	Stress relief
273	<i>Wrightia tinctoria</i> (Roxb.) R.Br.	Apocynaceae	Tree	Bark	Psoriasis
274	<i>Xanthium strumarium</i> L.	Asteraceae	Herb	Fruits	Skin diseases
275	<i>Xylia xylocarpa</i> (Roxb.) Taub.	Fabaceae	Tree	Bark	Wound healing
276	<i>Zanthoxylum rhetsa</i> (Roxb.) DC.	Rutaceae	Tree	Fruits	Toothache
277	<i>Zehneria scabra</i> (L.f.) Sond.	Cucurbitaceae	Climber	Whole plant	Fever
278	<i>Zingiber zerumbet</i> (L.) Roscoe ex Sm.	Zingiberaceae	Herb	Rhizome	Anti-inflammatory
279	<i>Ziziphus indicus</i> Lam.	Rhamnaceae	Tree	Fruits	Cooling agent
280	<i>Ziziphus oenopolia</i> (L.) Mill.	Rhamnaceae	Shrub	Roots	Digestive disorders
281	<i>Ziziphus rugosa</i> Lam.	Rhamnaceae	Tree	Fruits	Digestive disorders
282	<i>Zornia diphylla</i> (L.) Pers.	Fabaceae	Herb	Whole plant	Fever

To determine the regional and ethnobotanical importance of the Thirumalai hillocks, the medicinal plant diversity recorded in the current study was contrasted with past reported ethnobotanical studies in the Western Ghats foothills, Kanyakumari district, and other hills in

Tamil Nadu (Table 3). These comparisons have been extensively employed in ethnobotanical studies to put into context the species richness, dominant plant families, and dependency of traditional healthcare in like ecological zones.

Table 3. Comparative Overview of Medicinal Plant Diversity in Thirumalai Hillocks and Other Selected Regions

Region	No. of Medicinal Plant Species	Dominant Families Reported	Ref.
Thirumalai hillocks, Munchirai Panchayat Union (present study)	282	<i>Fabaceae, Euphorbiaceae, Acanthaceae, Lamiaceae</i>	Present study
Western Ghats foothill regions (Tamil Nadu & Kerala)	180–250	<i>Fabaceae, Asteraceae, Euphorbiaceae, Lamiaceae</i>	(Publishers, 2023; Coals <i>et al.</i> , 2024)
Kanyakumari district (various locations)	120–200	<i>Fabaceae, Euphorbiaceae, Acanthaceae</i>	(Mathew <i>et al.</i> , 2014; Akash <i>et al.</i> , 2025)
Hill ecosystems of Tamil Nadu (scrub and semi-evergreen hills)	90–170	<i>Fabaceae, Malvaceae, Acanthaceae, Solanaceae</i>	(Pragasam, 2022; Jeevith and Manjunath, 2023)
<i>Note: Species numbers vary depending on sampling intensity, habitat type, and documentation methods used by different studies.</i>			

The Thirumalai hillocks have a relatively greater medicinal plant diversity and a wider range of therapeutic uses than other ethnobotanical studies that have been performed on the Western Ghats foothills and hills ecosystem of Tamil Nadu, as a source of crucial influence on the maintenance of traditional healthcare systems.

4.2. Conclusion

The current study shows very clearly that the Thirumalai hillocks of the Munchirai Panchayat Union are a critical source of medicinal plant diversity and traditional healthcare knowledge. Among the 403 species of plants reported, a substantial percentage (69.97) were medicinal, which demonstrates the close ecological and cultural association between the hillock vegetation and the local healthcare systems. The presence of families like *Fabaceae* (17.8%), *Euphorbiaceae*(13.1%), and *Acanthaceae*(9.3%) is due to their long-term therapeutic applicability and one that could be easily adapted to the ecosystem of the hillocks. The high percentage of herbs (41.8) and high percentage of stacked use of leaves (62.4) suggest accessibility and a rather sustainable method of harvesting with the traditional knowledge systems. Treatment of

gastrointestinal disorders, skin diseases, respiratory diseases, fever, and wound care at the time of need constituted the core groups of therapeutics, and these related to primary healthcare requirements in the person of local communities. Nevertheless, there are growing anthropogenic pressures, habitat changes, and loss of traditional knowledge that are a significant threat to this ethnomedicinal heritage. The research gives the necessary baseline information concerning conservation of biodiversity, the sustainable use of medicinal plants, and conservation of indigenous knowledge. It is important to combine ethnobotanical records and conservation planning to protect the biological and cultural integrity of the Thirumalai hillock ecosystem for future generations.

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Conflicts of Interest

The authors declare that we have no conflict of interest.

Competing Interests

The authors declare that we have no competing interest.

Data Availability Statement

All datasets supporting the findings of this research are publicly accessible and have been retrieved from the sources listed in the manuscript. Further information on dataset structure, accessibility, and documentation is available in the cited references.

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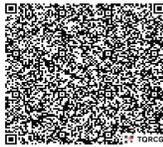
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