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MEDICINAL PLANTS OF THE TAMHINI GHATS, MAHARASHTRA: A NATURAL TREASURE OF HEALING FLORA

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Abstract

The Tamhini Hills in Maharashtra, part of the Western Ghats, are an important biodiversity hotspot known for their rich variety of medicinal plants and diverse ecosystems. Located at a considerable elevation, these hills create an ideal environment for numerous endemic species, many of which are integral to traditional medicine. The region's cool, moist climate, combined with dense forests, fosters the growth of medicinal herbs renowned for their healing properties. This natural wealth not only makes the Tamhini Hills an ecological treasure but also a crucial source of traditional remedies, with local communities depending on these plants for their medicinal value. Given its unique elevation and biodiversity, the area plays a key role in conservation efforts, helping to protect these valuable plant species for future generations

***Keywords*:** Medicinal plants, Western Ghats, Phytoconstituents, and Medicinal uses.

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1. Introduction

The Western Ghats in India are recognized as one of the world's leading biodiversity hotspots, home to a vast array of plant species. Medicinal plants hold significant ecological and cultural importance in this region. Local communities and traditional healers have relied on these plants for their therapeutic and medicinal benefits for centuries. The Western Ghats is not only one of the most biodiverse tropical forest regions in the world but also a critical area for conservation. It serves as a reservoir of valuable plants with medicinal and various other applications. India's Western Ghats, also known as the Sahyadri Mountains, form a breathtaking and ecologically vital landscape that stretches over 1,600 kilometers along the western coast of the country.

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This vast mountain range is renowned for its exceptional biodiversity, making it one of the world's richest tropical forest regions, celebrated not only for its vibrant ecosystems but also for its stunning natural beauty. Traditional medical practices in the Western Ghats often emphasize the use of plant-based remedies. These medicinal plants are carefully selected, and the methods for preparing them have been refined over generations. Their therapeutic properties are used to treat a wide range of ailments, from common issues like colds, fevers, and digestive problems to more serious health conditions. The Western Ghats are a rich source of medicinal plants, with their bioactive compounds showing great promise in drug discovery and development. Many plants native to this region have been extensively researched for their valuable bioactive properties. Many indigenous communities residing in the Western Ghats possess a rich traditional knowledge of medicinal plants and their therapeutic properties. These plants are integral to their healthcare systems, offering solutions for various ailments. Ethnomedicinal plants play a vital role in traditional healthcare practices in the Western Ghats, serving as a primary source of treatment for local communities.

Protecting these plants and their natural habitats is crucial for the conservation of the Western Ghats. The loss of these species would not only impact local communities but also limit opportunities for future drug discovery. Preserving these plants and their ecosystems is essential for maintaining the biodiversity of the region. The disappearance of these species would harm local populations and diminish the potential for future medicinal advancements.[i]

2. Materials and methods

2.1 Materials

- Smartphone
- Field notebook
- Camera (for photographing plants)
- Sample bags (for collecting plant samples)
- Identification guides

2.2 Methodology

1. Site Selection: Tamhini Hills, Sahyadri Range, Western Ghats, Pune, Maharashtra. As part of one of the world's biodiversity hotspots, this area is home to a rich variety of medicinal plants.

2.Data Collection: Photographs were taken, and plant samples were collected for further analysis.
3.Plant Identification: Local botanists were consulted for accurate plant identification.
4.Data Analysis: Data were compiled and organized in a database or spreadsheet, noting species names, family, English names, scientific names, key identification features, and medicinal uses.

2.3 Results

The results present a scientifically categorized list of plant species identified in the Tamhini Ghats, a biodiversity hotspot in the Western Ghats. This region is home to a diverse range of flora, encompassing both economically significant trees and ecologically important species. [Table 1] [Table 2]

Table 1. List of important medicinal plants found in Tamhini Hills.

S.No	Botanical Name	Family	Common Name	*Sanskrit Name*	*Local Name*
1	*Actinodaphne hookeri* Meisn.	Lauraceae	Hooker's Actinodaphne	*Pisa*	*Kanjir*
2	*Bridelia retusa*(L.)AJuss.	Phyllanthaceae	Brielia Tree	*Asana*	*Asund,Kusumb*
3	*Calophyllum inophyllum L.*	Calophyllaceae	Alexandrian Laurel / Tamanu Tree	*Punnag*	*Undi*
4	*Clerodendr serratum* (L.)Moon	Verbenaceae	Blue Glory	*Bharangi*	*Bharangi*
5	*Commiphora Mukul (*Hook.ex Stocks)	Burseraceae	Indian Bdellium	*Guggulu*	*Guggul*
6	*Costus speciosus*(J.Koenig).Sm	Zingiberaceae	Crepe Ginger	*Kebuk*	*Keu or Pushkarmul*
7	*Cryptolepis buchananii* R.Br.ex Roem.	Asclepiadaceae	Green Gold / Buchanania	*Krishna Sariva / Jambu Patra Sariva / Karanta*	*Kandal*
8	*Dioscorea bulbifera* Linn	Dioscoreaceae	Air Potato / Bulbous Yam	*Varahikanada*	*Gandhakand*
9	*Elephantopus scaber* L.	Asteraceae	Elephant's Foot	*Gojihwa*	*Ganjal*
10	*Embelia tsjeriam-cottam (*Roem.&Schult.)A.DC. */ Embelia robusta / Embelia basal*	Myrsinaceae	Indian Long Pepper	*Vanya Marich*	*Vidang*

11	*Grewia hirsute* Vahl.	Tiliaceae	Rough-leaved Grewia	*Nagabala*	*Nagbala*
12	*Gymnema sylvestre* (Retz.R.Br.ex Sm.)	Asclepiadaceae	Gymnema	*Gudmar / Madhunashini*	*Gurmar*
13	*Haldina cordifolia (*Roxb.)	Rubiaceae	Adena	*Haldu*	*Haldu*
14	*Helicteres isora* L.	Sterculiaceae	Indian screw tree	*Avartani*	*Kuda*
15	*Leea macrophylla(*Roxb.ex.Horne m) */ Leea angustifolia*	Vitaceae	Leea / Indian Ginseng	*Hastikarna Palasha / Gajakarna*	*Khadkesh*
16	*Madhuca indica*(J.F.Gmel.) */ Madhuca longifolia*	Sapotaceae	Butter Tree	*Madhuka*	*Moho or Mohwa*
17	*Mallotus philippensis*(Lam.)	Euphorbiaceae	Monkey Face Tree	*Kampillaka*	*Kapila, Shendari*
18	*Oroxylum indicum*(L.)Kurz	Bignoniaceae	Indian Trumpet Tree / Midnight Horror	*Shyonak*	*Tetu / Shyonak*
19	*Piper nigrum* L.	Piperaceae	Black Pepper	*Vanya marich*	*Miri*
20	*Pterocarpus marsupium* Roxb.	Fabaceae	Indian Kino Tree	*Vijayasara*	*Bijasar or Pitasal*
21	*Pterocarpus santalinus* L.f	Papilionaceae	Red Sandalwood	*Raktachandana*	*Lal Chandana*
22	*Schleichera trijuga(L*our.)Merr.	Sapindaceae	Ceylon Oak / Kusum Tree	*Koshamara*	*Koshmar*
23	*Semecarpus travancorica* Bedd.	Anacardiaceae	Indian Screw Tree / Saffron Tree / Saffron Bulb	*Nadibhallataka*	*Nadibhallatak / Ran Bibi*
24	*Senna tora* (L.)Roxb. *(Cassia tora)*	Caesalpiniaceae	Ringworm Plant / Sicklepod / Sickle Senna	*Chakramarda*	*Takla*
25	*Shorea robusta* Gaertn.	Dipterocarpaceae	Sal Tree	*Sal*	*Saal*
26	*Smilax macrophylla* Roxb.ex.D.Don	Liliaceae	Giant Greenbriar / Mountain Smilax	*Chopchini*	*Kanchar*
27	*Strobilanthes callosa* Nees	Acanthaceae	Kuntala	*Kalpavriksha*	*Gulancha Kuntala*
28	*Terminalia arjuna(*Roxb.ex.DC)Wight& Arn	Combretaceae	Indian *Arjuna*	*Arjuna*	*Arjuna*
29	*Woodfordia fruticose*(L.)Kurz	Lythraceae	Fire Flame Bush	*Dhataki*	*Dhataki*
30	*Zanthoxylum alatum* Roxb.	Rutaceae	Toothache Tree / Nepalese Pepper	*Tejwati / Tejowaha / Tejaswini*	*Tejphal / Tambatich a Miri*

Table 2: Identification and uses of the plant species identified in the Tamhini Ghats, highlighting their ecological and economic significance

S.N	Botanical Name	Family	Identification features with uses
1	*Actinodaphne hookeri* Meisn.	Lauraceae	1. **Young Leaves:** Dense, soft, rusty, velvety, and hairy. 2. **Mature Leaves:** May be hairless. 3. **Water Soaked with Leaves**: Even one leaf, when soaked overnight, makes the water sticky, and this water is called *Balavardhaka.* 4. **Leaf Arrangement:** 5-7 leaves are arranged in whorls. 5. **Leaf Shape:** Leaves are ovate, elliptical, or lanceolate with fine tips, often wavy and shiny. 6. **Leaf Color:** The upper surface is dark green and shiny, while the lower surface is green with a matte finish. 7. **Fruit:** Ellipsoid in shape, seated on a thickened, nearly bell-shaped perianth tube.
2	*Algnea (Haldina) Cordifolia* (Roxb.)	Rubiaceae	1. **Exudate**: Yellow in color, similar to that of *Haridra*, and is called *Haridraka*. 2. **Alternate Name**: Also referred to as **Parvata Kadamba**. 3. **Intrapetiolar Stipules**: A characteristic feature of this plant. (Note: *Madanphala* and *Nadihingu* also have intrapetiolar stipules.) 4. **Leaf Shape**: Caudate-shaped simple leaves. This feature is peculiar to the *Rubiaceae* family, like in *Kadamba* (*Mitragyna parvifolia*). 5. **Fruit Size**: Large fruit similar to that of *Kadamba* → *Kadddam* → *Haldu* → *Bhumikadama*.
3	*Bridelia retusa*(L.)AJuss.	Phyllanthaceae	1. **Identification Features**: Used in place of *Vijayasara*.Found in dry regions. 2. **Fruit**: Acts as a magnet for birds.Can be edible by everyone. 3. **Field Characteristics**: Midribs, secondary veins, and tertiary veins are perpendicular to the secondary veins. 4. **Local Name**: Known as **Ekveer** in *Raj Nighantu*.Also called **Kantekavach** on the bark (only in the young stage, serves as a protection mechanism). 5. **Other Species**: Scandent species used as a stone-breaking agent. 6. **Leaf Characteristics**: Long leaves with no additional distinguishing features.

4	*Calophyllum inophyllum* L.	Guttifeare	1. **Leaf Characteristics**:Leaves are thick with a prominent midrib.The leaves are light green on the upper surface, while the leaf lamina is dark green.Glossy texture, ovate in shape with an obtuse apex. 2. **Growth Rate**:Very slow-growing plant
5	*Clerodendron serratum* (L.) Moon	Verbenaceae	1. **Characteristics**:Simple, opposite, and lanceolate in shape.Petioles are very stout. 2. **Flower Characteristics**:Numerous flowers, bluish to dark purple in color. 3. **Common Names and Features**:**Brahmanyashtika**: Stem is very thin and bluntly quadrangular.**Padma**: Flowers resemble that of the lotus.**Kharashaka**: Leaves are dry.**Angarvalli**: When in bloom, the flowers appear like red-hot coal.
6	*Commiphora Mukul (*Hook.ex Stocks)	Burseraceae	1. **Leaf Structure**: 1-3 foliate (leaflets in groups of one to three).The terminal leaflet is larger than the others. 2. **Leaflet Characteristics**: Leaflets are subsessile (almost stalkless).Rhomboid-ovate shape with serrated edges, with teeth concentrated in the upper part of the leaf. 3. **Surface Texture**: Glabrous (smooth and without hairs).
7	*Costus speciosus*(J.Koenig).Sm	Zingiberaceae	1. **Flower Characteristics**:Flowers are white in color.Bracts are red in color. 2. **Leaf Characteristics**:Leaves are spirally arranged.Oblong or oblanceolate shape, glabrous (smooth) on the upper surface. 3. **Stem**:Stem is red in color. 4. **Edible Use**:Tender leaves are used as a vegetable. 5. **Common Names and Features**:***Supatra:*** Refers to the beautiful leaves.***Swalpavitapa:*** The plant is not very tall.
8	*Cryptolepis buchananii* R.Br.ex Roem.	Asclepiadaceae	1. **Growth Habit**:It is a climber. 2. **Latex**:Characteristic feature is the presence of latex. 3. **Fruit**:Fruit is called ***Shringakara***. 4. **Bark**:When the bark matures, it becomes black, earning the name ***Krishna Sariva***.Dots are present on the stem.The black bark is similar to ***Guggulu*** and exfoliates during the summer. **5. Other Species**:***Ichnocarpus frutescens*** is another variety of ***Krishna Sariva***.

9	*Dioscorea bulbifera* Linn	Dioscoreaceae	1. **Midrib Characteristics**:9-11 lined midrib.Equally divided midribs, with one in the middle. 2. **Geographical Reference**:Known as ***Magadhi***, referring to the region of **Magadh Pradesh**. 3. **Habitat**:***Vanya*** **/** ***Vanamilibi****:* Grows abundantly in forests. 4. **Tuber Characteristics**:***Kharkanda***: Named due to the rough surface of the tuber.
10	*Elephantopus scaber* L.	*Asteraceae*	1. **Medicinal Uses**:Leaves are used in applications for **eczema** and **ulcers**. 2. **Leaf Arrangement and Shape**:Leaves are mostly arranged in a **basal rosette**.The shape is **oblong-ovate** to **oblong-lanceolate**. 3. **Stem Characteristics**:The stem is few in number and much smaller. 4. **Leaf Surface**:Leaves are covered with small hair-like structures and small nodules, giving them a rough appearance.The rough texture is compared to the tongue of a cow, so the plant is called ***Gojhiwa***. 5. **Other Common Names**:Known as ***Kharparnini*** or ***Kharpatra*** due to its rough leaf surface.Due to its thickness, it is often called ***Darpapatri***.
11	*Embelia tsjeriam-cottam (*Roem.&Schult.)A.DC. */ Embelia robusta / Embelia basal*	Myrsinaceae	1. **Leaf Characteristics**:Leaves are **blackish** in color.The venation is also **blackish**.Leaves are **ovate** and **pointed** in shape. 2. **Stem Characteristics**:**Blackish lenticels** are present on the stem.
12	*Grewia hirsuta* Vahl.	Tiliaceae	1. **Flower Characteristics**:Flowers are **white** in color, turning **yellow** as they mature.The flowers are arranged **2-4 together**. 2. **Leaf Characteristics**:Leaves are **oblong** and **narrow**, gradually tapering to the apex.The upper surface of the leaves has **very small stellate hairs**.
13	*Gymnema sylvestre* (Retz.R.Br.ex Sm.)	Asclepiadaceae	1. **Medicinal Uses**: ***Madhunashini***: Destroys the sweet taste on the tongue, and the tongue perceives the taste again after 10-15 minutes. 2. **Growth Habit**:It is a **climber** (referred to as ***Vartika***). 3. **Stem Characteristics**:The stem is weak and covered with small hairs. 4. **Leaf Characteristics**:The leaves are **ovate** or **elliptical** in shape.They are **opposite** and have small hairs on both surfaces. 5. **Common Names and Features**:***Meshashrgi*** **/** ***Ajshringi****:* The leaves resemble the **horn of a goat.**

14	*Helicteres isora* L.	Sterculiaceae	1. **Leaf Characteristics**:Leaves are **simple** and closely dotted with **stellate hairs**.They resemble the leaves of ***Parushaka***. 2. **Flower Characteristics**:Flowers are seen in **axillary clusters**. **Fruit Characteristics**:The fruit is a **follicle**, linear in shape and twisted into the form of a screw.
15	*Leea macrophylla (*Roxb.ex.Hornem)	Vitaceae	1. **Leaf Characteristics**:Leaves are large, resembling **elephant ears** (referred to as ***Mahaparna***, ***Hastikarna***, ***Mahapatralu***).The leaves are **simple**, **alternate**, and **ovate-cordate** in shape, with **serrate** margins.The upper surface is **glabrous** to **sparsely hairy**. 2. **Medicinal Uses**:The leaves are used as food.***Kanda*** (tuber) is considered ***Balya*** (promoting strength) and ***Rasayana*** (rejuvenating). 3. **Common Names and Features**:***Palash-patra***: Referring to the leaves of the *Palash* tree.***Pippal***: Referring to the **fruit** of the *Pipala* tree (likely Piper longum).***Peepal***: Referring to ***Ficus religiosa*** (sacred fig).***Daru-Kashtha****:* Referring to wood from specific trees.
16	*Madhuca indica*(J.F.Gmel) */Madhuca longifolia*	Sapotaceae	1. **Bark Characteristics**:Bark is **blackish** or **greyish** in color and appears torn, while the wood is **brownish**. 2. **Leaf Characteristics**:Leaves are **8 to 15 cm** in length (referred to as Dheergpatra due to their elongated shape).Simple, **oblong-oval** shape with **10 to 12 veins**.Leaves end in bunches. **Common Names and Features**:***Mahadruma*** or ***Rodhravruksha***: The tree is large.***Vanaprastha****:* Found in forested areas.
17	*Mallotus philippensis*(Lam.)	Euphorbiaceae	1. **Leaf Characteristics**:**Reddish venation**: The veins are net-like and uneven in nature.**Reddish swollen petiole**: The petiole is swollen and reddish.The **leaf base** is swollen. *2.* **Fruit Characteristics**:Fruits are **red** in color, and therefore it is called ***Raktanga***, ***Raktachurnaka***, ***Ranjaka***, or ***Lohitanga***. 3. **Flowering and Fruiting**:**Flowering** occurs in **November-December**.**Fruiting** occurs around **February-March**, typically around ***Mahashivratri***. 4. **Medicinal Use**:A **reddish-brown powder** is called ***Phalaraja***. **5.** **Pioneer Plants**:**Mycranga peltata** and **Mallotus philippensis** are identified as pioneer plants.

18	*Oroxylum indicum*(L.)Kurz	Bignoneaceae	1. **Leaf Characteristics**:Leaves are **compound**, very large, and **elliptic** or **ovate** in shape.The leaf apex is **acuminate**, and the base is **rounded**.The leaves are **glabrous** (smooth) on both sides.**Imparipinnate** arrangement with opposite leaflets.Petiole is **6-15 mm** long (referred to as ***Dhirgavrinta***).***Patrourna:*** Refers to leaves that have **hairs**.Leaves resemble those of ***Mandukparna***. 2. **Flowering Characteristics**:**Midnight horror**: The flowers bloom at **night** and are pollinated by **bats**.
19	*Piper nigrum* L.	Piperaceae	1. **Nods and Internodes**: A **peculiar feature of *Marich*** is that the **venation** starts from a **single point**.In ***Vanya Marich***, the venation starts from **different points**, as shown in the comparison.
20	*Pterocarpus santalinus* L.f	Papilinoaceae	1. **Leaf Characteristics**:The leaves are **compound**, with **3-5 leaflets in young age**, later becoming **5-7 leaflets**.The leaves are **broadly elliptic** with an **obtuse** apex. 2. **Useful Part**:The **heartwood** (referred to as **Saara**) is the useful part of the plant.The heartwood is **reddish-brown** in color. 3. **Stem Characteristics**:The stem is **zig-zag** in shape. 4. **Wood Characteristics**:The wood is quite **heavy** and **sinks in water**.There is **no odor** in ***Raktachandana*** (Red Sandalwood).***Shishampa*** and ***Khadir*** heartwood are sometimes used in place of **Raktachandana**. 5. **Common Names**:***Raktachandan***, ***Raktasara***, ***Raktanga***, ***Tamrasara***, and ***Tamradaru*** all refer to **red-colored wood**.
21	*Pterocarpus marsupium* Roxb.	Fabaceae	1. **Leaf Characteristics**:The leaves are **compound**, of **imparipinnate** type, and have a **wavy** nature. 2. **Heartwood Characteristics**: ***Pitasara***: The **heartwood** is **yellow** in color.***Pitasalaka***: The **heartwood** resembles that of ***Sala*** wood.***Sugandh Neela Niryasa***: The **heartwood** has a **pleasant odor**.
22	*Schleichera oleosa* (Lour.) Merr	Sapindaceae	1. **Leaf Characteristics**:The leaves are **pointed** but not **blunt** (as referred to in ***Arishtaka***).

			2. **Common Names and Features**: ***Koshamra* / *Kshudraamra* / *Vanamara***: These names are used because the fruit has **spines** on the outer side and is **rounded**, similar to **mango pulp**. The taste is also similar to ***amra*** (mango). **Fruit Characteristics**: The fruit is **delicious**, with a **unique sweet-sour taste**, resembling a mango but distinct in flavor.The fruit ripens by the **end of June**. 3. **Quality and Type**:The best quality is referred to as ***Lak Kusumbhi Laka*** (By Laccifera laka). 4. **Insect Attraction**:The tree is known as ***Krumivrukshaka* / *Krumitaru***, meaning it attracts **insects**.
23	*Semecarpus travancorica* Bedd.	Anacardiaceae	1. **Common Name and Location**:The plant is referred to as ***Nadi Bhllataka*** (also called ***Ran Bibi*** locally) because it is found near water. **Leaf Characteristics**:The leaves are **simple**, with an arrangement that can be **alternate** and **whorled**.The **petiole** has a **pulvinus** (swollen base). There are **two moustache-like auricles** present at the base of the leaf. Different varieties of the plant are recognized based on the **auricles**. 2. **Venation**: The **secondary venation** is **forked**.
24	*Senna tora* (L.)Roxb. *(Cassia tora)*	Caesalpiniaceae	1. **Leaf Characteristics**:The leaves are **compound**.The leaflets are arranged in **three pairs** (referred to as ***Shatpanktipatra***). 2. **Flower Characteristics**:The flowers are **yellow** in color. 3. **Pod Characteristics**:The **pods** are larger, around **6 inches** in size. 4. **Substitutes**: ***Cassia uniflora***: A substitute with **5 pairs** of leaflets (whereas the original *Chakramarda* has **3 pairs**). 5. **Synonyms**: ***Meshalochana*** and ***Meshakshikusuma:*** These names are used because the leaves and flowers resemble a **sheep's eye**. 6. **Growth Habit**:***Chakri***: This plant grows **gregariously** (in groups).***Chakra:*** Refers to its ***chakrakar krama*** (circular or spiral growth pattern).

25	*Shorea robusta* Gaertn.	Dipterocarpaceae	1. **Bark Characteristics**:The bark is **thick**, **rough**, and has **deep vertical furrows**. It is **brown** in color. 2. **Leaf Characteristics**:The leaves are **shiny**, **simple**, and **leathery**.When young, the leaves are **reddish** in color, later turning **green**.The leaves are **arranged alternately**, **ovate** in shape, and have a **tapering tip**. 3. **Fruit Characteristics**:The fruits are **large** and **oval** in shape.The fruits are **hairy** when young and **brown** in color. 4. **Flower Characteristics**:The flowers have **yellowish-white petals**, with the **outside** of the petals being **orange** and the **inside** being **white**. 5. **Common Names and Features**:***Ashwakarna***: The leaves resemble the **ears of a horse**.***Maricha Patraka:*** The leaves resemble those of ***Maricha*** (pepper).
26	*Smilax macrophylla* Roxb.ex.D.Don	Liliaceae	1. **Leaf Characteristics**:The leaves are **elliptic**, **ovate**, or **lanceolate** (sometimes described as **heart-shaped**).The petiole is **red** and **swollen**.The leaves have **5-7 red veins**. 2. **Fruit Characteristics**:The fruit is **round**, similar in shape to a **chickpea**.The fruit is **green** when unripe and turns **red** when ripe. 3. **Root Characteristics**:The root is **reddish** in color.
27	*Strobilanthes callosa* Nees	Acanthaceae	1. **Lifecycle**:The **Karvi** (Strobilanthes callosa) is **semelparous**, meaning it flowers only **once in its lifetime** and then dies off shortly after seeding.This flowering event occurs every **seven years** and transforms the lush greenery of the Sahyadris into the **Neelgiris** (the "Blue Mountains"). 2. **Flowering Event**:The phenomenon is described as the "**Purple Carnival**," where the plant blooms in a vibrant display of purple flowers every **seven years**. 3. **Medicinal Uses**: The **leaves** of *Karvi* are crushed, and the juice obtained is traditionally believed to be a **sure cure for stomach ailments**. Scientific research has confirmed its validity in folk medicine as an **anti-inflammatory**, **antimicrobial**, and **anti-rheumatic** herbal remedy.

28	*Terminalia arjuna (*Roxb.ex.DC)Wight&Arn	Combreteaceae	1. **Bark Characteristics**:The bark is **grey to brown** in color and is referred to as ***Dhavala***. 2. **Wood Characteristics**:The **sapwood** is **reddish-brown**, and the **heartwood** has a characteristic color (unspecified, but presumably darker). 3. **Tree Characteristics**: ***Kakubha***: A **large tree** that covers a **large area**.***Veervruksha***: Known as a **potent tree**, suggesting it has significant medicinal or symbolic importance.
29	*Woodfordia fruticose*(L.)Kurz	Lytheraceae	1. **Petiole**:The leaf has **almost no petiole**, making it **almost sessile** (referred to as ***avrinta***). 2. **Leaf Shape and Structure**:The **leaf base** is **caudate** (tapered at the base).The **apex** of the leaf is **tapering**. 3. **Color Characteristics**:The **upper surface** of the leaf is **green**.The **lower surface** of the leaf is **light green**. **4.** **Texture**:The leaf has a **rough** appearance, but when observed closely, it seems ***snighdha*** (smooth or oily).
30	*Zanthoxylum alatum* Roxb.	Rutaceae	1. **Leaf Characteristics**:The leaves are **opposite** and **glabrous** (smooth, without hairs).The leaf shape is **acuminate** (tapering to a point), and the leaves are **imparipinnate** (having a single leaf at the end and an odd number of leaflets).The leaves are also **lobed**. 2. **Fruit Characteristics**:The fruit is called ***Tumbru*** (also known as ***Nepali Dhania***). 3. **Stem and Spines**:The plant has **Shalmali-like spines** present on the stem, earning it the name ***Kantavruksha*** (spiny tree).The **midrib** of the leaf may also have **spines** in some cases. 4. **Other Common Names and Effects**:It is commonly referred to as the **Toothache Plant**, due to the tingling effect it has on the tongue.The plant produces a **tingling effect on the tongue**, which is one of its notable characteristics.

3. **Therapeutic uses according to classics:**

a. ***Mallotus philippensis*****(Lam.)**-*Kampillaka* (*Mallotus philippensis*) powder is used as an anthelmintic to treat *Krimi* (worms). [ii] Oil processed with *Kampillaka* (*Mallotus philippensis*) can indeed improve wound healing (*Vranaropana*)[iii]. *Kampillaka* powder, when combined with sugar and honey, helps alleviate *Raktaja Gulma* (blood-related boils or abscesses).[iv]

b. ***Piper nigrum*** **L.-** Taking a fine powder of *Maricha* (Black pepper) and *Pippali* (long pepper) can provide immediate relief from even chronic dysentery (*Pravahika*). This combination helps control the symptoms effectively and quickly. [v] A mixture of *Maricha* (Black pepper), *Chitraka* (*Plumbago zeylanica*), and *Suvarchala Lavana* (Black salt) with buttermilk can effectively treat *Grahani* (Irritable Bowel syndrome), helping restore digestive function and balance.[vi] Consuming a fine powder of Maricha (Black pepper) mixed with ghee, honey, and sugar can effectively treat all types of cough (*Kasa*). This combination soothes the throat and supports respiratory health.[vii]

c. ***Embelia tsjeriam-cottam (*****Roem.&Schult.)A.DC. / *Embelia robusta / Embelia basal*-** *Vidanga* is utilized in food, beverages, baths, and fumigation, as well as for topical application in treating skin diseases (*Kustha),* similar to *Khadira* (Acacia catechu). Its antimicrobial and anti-inflammatory properties make it beneficial for skin conditions.[viii] *Vidanga* powder combined with ghee and honey serves as an excellent *Rasayana* (rejuvenative) in Ayurveda. This formulation enhances vitality, boosts immunity, and promotes overall health due to the synergistic effects of *Vidanga* is medicinal properties along with the nourishing benefits of ghee and honey. [ix] It shows antifungal activity.[x]

d. ***Dioscorea bulbifera*** **Linn-** It is used in treating conditions like *Raktaatisar* (bloody diarrhoea), *Pravahika* (chronic dysentery), *Udar Shool* (abdominal pain), and *Arsha* (hemorrhoids). Its fruit is often combined with *Jeera* (cumin) and *Sharkara* (jaggery) for enhanced therapeutic effects.[xi]It is used in various skin diseses[xii]

e. ***Elephantopus scaber*** **L.-** It is used as *Mayushikha* in tribal areas. Its *panchanga* (the whole plant) is utilized to prepare a *Kwatha* (decoction) that helps treat *Mutrakrichra* (difficult urination).[xiii] In cases of *Jvara* (fever), the *panchanga* (whole plant) of Elephantopus scaber is cooked in *peya* (rice water) and given as a medicinal drink. This preparation helps reduce fever and provides nourishment. [xiv] The root (*Mool*) of Elephantopus scaber is used in treating *Raktaatisar* (bloody diarrhea) and *Balaatisar* (infantile diarrhoea). Its medicinal properties help manage these conditions effectively.[xv]

f. ***Senna tora*** **(L.)Roxb.** ***(Cassia tora)*****-** A combination of *Cassia tora* seeds, when ground with sour substances and applied to the scalp, can relieve various head-related diseases. This preparation is effective in addressing conditions such as dandruff, scalp irritation, and other related issues**.[xvi]** *Cassia tora* seeds are used in treating skin diseases such as *Kustha* (leprosy), *Kandu* (itching), and *Dadru* (ringworm). These seeds possess anti-inflammatory and antimicrobial properties, making them effective in managing various skin conditions.**[xvii]**

g. ***Clerodendron serratum*** **(L.) Moon**-A paste made from *Bharangi (*Clerodendrum serratum), combined with ghee and honey, is traditionally taken by licking.[xviii] In cases of *Arsha* (hemorrhoids), buttermilk processed with *Bharangi* (Clerodendrum serratum), *Aafot* (possibly referring to *Apamarga* or *Achyranthes aspera*), *Yava* (barley), *Amlaki* (Indian gooseberry), and *Guduchi* (*Tinospora cordifolia*) is recommended for drinking. This combination is believed to help alleviate the condition by balancing the doshas and promoting digestion.[xix] In the treatment of *Madatyaya* (alcoholism or alcohol intoxication), a decoction made from *Bharangi* is used for bathing. This practice is believed to help detoxify the body, reduce symptoms of intoxication, and restore balance.[xx]

h. ***Madhuca indica*****(J.F.Gmel)-**The fruit of *Madhuca* (*Madhuca indica*) is fried in ghee and used as a remedy for piles (*Arsha*). This preparation is thought to help reduce inflammation, ease bowel movements, and provide relief from the symptoms associated with piles.[xxi] The stem bark of *Madhuca* (*Madhuca indica*) is used in the treatment of *Kandu* (itching) and *Sandhivata* (osteoarthritis). It is believed to have anti-inflammatory and soothing properties, which help relieve itching and reduce joint pain and inflammation associated with arthritis.[xxii] The oil of *Madhuca indica* (Madhuca oil) is considered *Vatanashaka* in Ayurveda, meaning it helps to pacify aggravated *Vata dosha*. It is often used to alleviate conditions related to *Vata*, such as joint pain, dryness, and stiffness, due to its warming and lubricating properties. This oil is commonly applied externally in massages to soothe pain and inflammation.[xxiii]

i. ***Pterocarpus marsupium*** **Roxb.**-*Pterocarpus marsupium* and *Khadir* are used in *Kustha* (skin disorders) in different forms like decoctions, pastes, and powders. Pterocarpus is valued for its anti-inflammatory and detoxifying properties, while *Khadir* is known for its blood-purifying and skin-healing effects.[xxiv] The intake of *Bhringraj* (Eclipta alba) fried in oil kept in an iron vessel, followed by milk processed with *Bijak* , is believed to help in curing *Shvitra* (vitiligo or leucoderma). This Ayurvedic remedy is thought to restore skin pigmentation and balance the doshas involved in the condition.[xxv]

j. ***Woodfordia fruticosa*****(L.)Kurz**-The blend of *Dhataki pushpa* (flowers of *Woodfordia fruticosa*), sugar, and *Laaja* is utilized in Ayurveda for the treatment of *atisara* (diarrhoea)[xxvi]. A blend of juice from *Dhataki pushpa* (flowers of *Woodfordia fruticosa)*, *Badar patra* (leaves of *Ziziphus jujuba*), and *Kapitha* (wood apple), along with *Lodhra* (symplocos) honey and buttermilk, is commonly used in Ayurveda to treat *pravahika* (dysentery)[xxvii]. A paste made from *Lodhra* (Symplocos racemosa), *Dhataki* (Woodfordia fruticosa), *Vatasaka* (*Fagonia cretica*), *Karanja* and Malti is effective as an ointment for treating *Kushtha* (skin diseases or leprosy) in Ayurveda.[xxviii]

4. Observation

4.1 Pharmacopieal drugs

The List below illustrates various pharmacopoeial drugs, which are essential in ensuring the safety, efficacy, and quality of medicinal treatments. These drugs are recognized and regulated through official pharmacopoeias, which set strict standards for their identity, purity, and potency. The importance of pharmacopoeial drugs lies in their reliability

for consistent therapeutic outcomes, supporting both modern medicine and traditional practices.

Table 3: Pharmacopeial drugs

S.No	Pharmacopeial
1	*Clerodendron serratum* (L.) Moon[xxix]
2	*Commiphora Mukul (*Hook.ex Stocks)[xxx]
3	*Cryptolepis buchananii* R.Br.ex Roem.[xxxi]
4	*Dioscorea Bulbifera* Linn[xxxii]
5	*Gymnema sylvestre* (Retz.R.Br.ex Sm.)[xxxiii]
6	*Madhuca indica*(J.F.Gmel) */Madhuca longifolia*[xxxiv]
7	*Mallotus philippensis*(Lam.)[xxxv]
8	*Oroxylum indicum*(L.)Kurz[xxxvi]
9	*Pterocarpus marsupium* Roxb.[xxxvii]
10	*Pterocarpus santalinus* L.f[xxxviii]
11	*Senna tora* (L.)Roxb. *(Cassia tora)*[xxxix]
12	*Shorea robusta* Gaertn.[xl]
13	*Terminalia arjuna (*Roxb.ex.DC)Wight&Arn[xli]
14	*Woodfordia fruticose*(L.)Kurz[xlii]
15	*Zanthoxylum alatum* Roxb.[xliii]

4.2 Extra Pharmacopeial drugs

Extra pharmacopoeial drugs, while not officially listed in pharmacopoeias, are listed below hold significance in expanding therapeutic options, especially for conditions that are difficult to treat with standard drugs. Their use often requires careful evaluation, as they may not undergo the same rigorous testing for quality and efficacy.

Table 4: Extra pharmacopeial drugs

S.No	Extra pharmacopeial
1	*Actinodaphne hookeri* Meisn.
2	*Algnea cordifolia/Haldina cordifolia*(Roxb.)
3	*Bridelia retusa*(L.)AJuss.
4	*Calophyllum inophyllum* L.
5	*Costus speciosus*(J.Koenig).Sm
6	*Elephantopus scaber* L.
7	*Embelia tsjeriam-cottam (*Roem.&Schult.)A.DC. */ Embelia robusta / Embelia basal*
8	*Grewia hirsuta* Vahl.
9	*Helicteres isora* L.
10	*Leea macrophylla (*Roxb.ex.Hornem)
11	*Piper nigrum* L.
12	*Schleichera oleosa* (Lour.) Merr.
13	*Semecarpus travancorica* Bedd.
14	*Smilax macrophylla* Roxb.ex.D.Don
15	*Strobilanthes callosa*

5. Discussion

The current review discusses the identification features and medicinal uses of plants found in the Western Ghats region, aiming to enhance the understanding of their identification so that they can be recognized for their therapeutic properties. Many of these plants are facing significant threats due to unsustainable harvesting practices. Therefore, it is crucial to develop new conservation strategies to ensure the long-term protection of these valuable resources for the benefit of future generations. This study aims to raise awareness among researchers and environmentalists about the importance of these medicinal plants.

The current review highlights the rich diversity of medicinal plants found in the Western Ghats; a biodiversity hotspot known for its vast range of flora. Proper identification of these plants is critical for both botanical and pharmacological purposes. Ensuring correct identification is essential for recognizing these plants for their therapeutic properties, which are deeply embedded in traditional knowledge systems like Ayurveda. However, the review also sheds light on the significant threats faced by many of these species, primarily due to overharvesting driven by growing demand for herbal medicines. This unsustainable use has placed immense pressure on these ecosystems, putting many plant species at risk of depletion or extinction.In response to this growing concern, the study stresses the urgent need to develop new conservation methods or strategies. Such measures could include sustainable harvesting practices, community-led conservation programs, and the integration of traditional ecological knowledge with modern conservation efforts. By adopting these approaches, we can protect these invaluable natural resources and ensure their availability for future generations while maintaining ecological balance.

Furthermore, the study highlights the importance of plant-based therapeutic agents that are not yet included in the official pharmacopeia of Ayurveda. These lesser-known plants, which may hold great therapeutic potential, are often overlooked in formal medicinal systems. Raising awareness about their medicinal benefits, alongside proper scientific validation, could expand the scope of Ayurvedic medicine and foster the development of novel therapeutic agents. This review serves as a call to action for researchers, environmentalists, and policymakers to recognize the significance of these medicinal plants and prioritize their preservation and integration into medicinal practice.By raising awareness, the study aims to spark interest and prompt collaborative efforts between scientists and environmentalists to safeguard the medicinal wealth of the Western Ghats, ensuring that this natural treasure trove is protected for both its ecological and therapeutic values.

6. Conclusion

Field surveys of medicinal plants play a crucial role in preserving biodiversity and traditional knowledge. By following a structured methodology, researchers can effectively document and analyze these valuable resources, contributing to both scientific understanding and community health.

Nadibhallataka 	Vanya marich 	Leea asiciatica 
Chandada 	Kampillaka 	Varahikanda 
Gojighva(mayurshikha 	Haridru 	Krishna sariva 
Chakramarda 	Bharangi 	Madhuka 

Asana 	Raktachandana 	Gorakshi 
Tejowati 	Kebuka 	Nagbala 
Pisa 	Shyonak 	Patrang 
Avartani 	Hastikarnapalash 	Guggulu 
Karvi 		

Reference

1. Gadgil, M., & Meher-Homji, V. M. (1995). Conservation potential of the Western Ghats of India. Current Science, 69(3), 238-240.
2. Subrahmanya, M. N., Ganeshaiah, K. N., & Shaanker, R. U. (2012). Medicinal plants of the Western Ghats: A case for conservation priorities. Journal of Biodiversity, 3(4), 256-262.
3. Kumar, V., Kumar, D., Datt, B., Kumar, M., & Singh, N. (2018). Medicinal plants of the Western Ghats: A review on their ethnobotany, diversity, and pharmacological importance.
4. Mathew, D., Anitha, S., Shaji, C., Remya, K., & Anuja, G. (2015). Ethnomedicinal plants used by indigenous communities of the Western Ghats, India for the treatment of snakebites: A scientific approach. Journal of Ayurveda and Integrative Medicine, 6(1), 43-50.
5. Balachandran, N., Vishnu, K., & Arun, A. B. (2014). Ethnomedicinal Plant Knowledge of the Mullu Kurumba Tribe of the Nilgiri District, Tamil Nadu, India. Ethnobotany.
6. Mishra, B. S. (Ed.). (2010). Bhavaprakasha Chikitsa (Chapter 7, Verse 22). Varanasi: Chaukhambha Sanskrit Sansthan.
7. Sharma, R. K., & Dash, B. (Eds.). (2012). (Chapter 25, Verse 93). Varanasi: Chaukhambha Sanskrit Series Office.
8. Chunekar, K. (2007). Bhavprakash Nighantu, Chikitsa Sthan (p. 25, Verse 93). Varanasi: Chaukhambha Bharti Academy.
9. Vahatacharya. (2019). Ashtanga Hridaya Samhita, Chikitsa Sthan (Chapter 9, Verse 40). Commentary by Indu, Varanasi: Chaukhamba Krishnadas Academy.
10. Sharangadhara. (2013). Sharangadhara Samhita (Chapter 6, Verse 53). Varanasi: Chaukhambha Surbharti Prakashan.
11. Tripathi, B., & Pandey, G. S. (Eds.). (2014). Charak Samhita with Charak Chandrika Hindi Commentary, Chikitsasthana (Chapter 18, Verse 180). Varanasi: Chaukhambha Surbharti Prakashan.
12. Tripathi, B., & Pandey, G. S. (Eds.). (2014). Charak Samhita with Charak Chandrika Hindi Commentary, Chikitsasthana (Chapter 7, Verse 159). Varanasi: Chaukhambha Surbharti Prakashan.
13. Vahatacharya. (2019). Ashtanga Hridaya Samhita, Uttartantra (Chapter 39, Verse 152). Commentary by Indu, Varanasi: Chaukhamba Krishna Academy.
14. Rani, A. S., Saritha, K., Nagamani, V., & Sulakshana, G. (2011). In vitro evaluation of antifungal activity of the seed extract of Embelia Ribes. Indian Journal of Pharmaceutical Sciences, 73(2), 247-9.
15. Chunekar, K. (2007). Bhavprakash Nighantu (p. 373). Varanasi: Chaukhambha Bharti Academy.
16. Chunekar, K. (2007). Bhavprakash Nighantu (p. 464). Varanasi: Chaukhambha Bharti Academy.
17. Vahatacharya. (2019). Ashtanga Hridaya Samhita, Uttartantra (Chapter 24, Verse 10). Commentary by Indu, Varanasi: Chaukhamba Krishna Academy.
18. Dalhanacharya. (2014). Sushruta Samhita, Uttartantra (Chapter 51, Verse 39). Varanasi: Chaukhamba Surabharati Prakashan.
19. Dalhanacharya. (2014). Sushruta Samhita, Chikitsa Sthana (Chapter 6, Verse 13). Varanasi: Chaukhamba Surabharati Prakashan.
20. Dalhanacharya. (2014). Sushruta Samhita, Uttartantra (Chapter 47, Verse 36). Varanasi: Chaukhamba Surabharati Prakashan.
21. Chunekar, K. (2007). Bhavprakash Nighantu (p. 568). Varanasi: Chaukhambha Bharti Academy.
22. Vahatacharya. (2019). Ashtanga Hridaya Samhita, Chikitsasthana (Chapter 20, Verse 8). Commentary by Indu, Varanasi: Chaukhamba Krishna Academy.
23. API, Vol. 1-6 (1st ed.). (Various years). New Delhi: Government of India, Ministry of Health and Family Welfare, Department of AYUSH.