DIVERSITY OF MEDICINAL PLANTS IN ERATTI HILL, THAMARAIKARAI BEAT OF BARGUR RESERVE FOREST, WESTERN GHATS IN ERODE DISTRICT, TAMILNADU, INDIA

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ABSTRACT

Objective: This study was conducted to document the medicinal plants in Eratti hill.

Methods: The medicinal plants were collected during their flowering period from July to September. Voucher specimens of all medicinally valuable plants were collected, poisoned, dried, and mounted with voucher number following the conventional methods.

Results: Survey of medicinal plants wealth of Eratti hill, Bargur reserve forest, Western Ghats of Tamil Nadu, India, was carried out during 2016-2018. 295 medicinal plant species belonging to 66 families were documented. Of these, the highest number of species belongs to the families were Asteraceae, Acanthaceae, Euphorbiaceae, Fabaceae, Convolvulaceae, Solanaceae, Amaryllidaceae, Lamiaceae, Asclepiadaceae, Malvaceae, Mimosaceae, and Apocynaceae. Herbs held the dominant position followed by shrubs, trees, climbers, and epiphytes. The medicinal plants were used to treat various ailments such as skin diseases, rheumatoid arthritis, asthma, fever, colic pain, biliousness, wounds, eczema, cardiac disorders, and eye diseases used by the Solagars, Lingayats, and Malayali tribals in the hill.

Conclusion: Medicinal plants in Eratti hill play a significant role in primary health care of the ethnic people. This study provides knowledge about herbal treatment of the ethnic people and subsequent pharmacognostical and pharmacological investigations should be made to confirm their mode of preparations.

Keywords: Eratti hill, Medicinal plants, Data collection, Therapeutic uses.

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INTRODUCTION

Plants play an important role in traditional medicine, and according to the World Health Organization (WHO), about 65–80% of the world’s population in developing countries depends essentially on plants for their primary health care due to poverty and lack of access to modern medicine [1]. The knowledge of the medicinal plants has been accumulated in the course of many centuries based on different medical systems such as Ayurveda, Unani, and Siddha [2]. India is about 8% of the estimated biodiversity of the world with around 12,600 species. It is one of the 12 mega biodiversity with two hotspots in the Western Ghats and North-Eastern region [3,4]. It has the rich heritage of using medicinal plants in folklore practices [5]. The traditional people have knowledge of medicinal uses of plants growing around them and used for the treatment of common diseases [6]. The traditional healers of Asia use about 2500 plant species and 100 species of plants serve as regular source of medicine [7]. The knowledge about medicinal plants has been passed orally without any written documents from one generation to other [8]. Ethnomedicinal studies are a suitable source of information regarding useful medicinal plants that can be targeted for domestication and management [9]. These studies are major importance and enhancing the traditional knowledge about medicinal plants. The use of ethnobotanical information in medicinal plant research has gained considerable attention in segment of the scientific community [10], and several active compounds have been discovered from plants on the basis of ethnobotanical information and used directly as patented drugs [11]. Hence, the present study aimed to survey the diversity of medicinal plants and their remedial practices among Lingayats, Solagars, and Malayali tribals of Thamaraikarai beat of Bargur reserve forest. Western Ghats of Erode district. The aboriginal community is familiar with the very intricate rules for collecting plants for use as medicine, such as the time of collection, parts to be collected and care in the conservation and management aspects of medicinal plants. Despite the fact that the area is environmentally degraded, moderate number of medicinal plants categorized in diverse genera and families were recorded. This demonstrates the taxonomic diversity of medicinal plants grown in the Eratti hill as well as the immense knowledge associated with the plants. During the survey, it was also learned that the traditional knowledge regarding medicinal plants and the knowledge is passed down from generation to generation only by means of verbal communication. Therefore, it is necessary to popularize the identity and utility of the medicinal plants.

METHODS

Study area

Eratti hill of Thamaraikarai beat of Bargur reserve forest is located in the North East of Erode district in Tamil Nadu, India, and the hill is about 70 km away from Erode. It comes under the part of Western Ghats. The total area of Thamaraikarai beat is about 3066.55 hectares and the Eratti hill is about 600 hectares. The latitude is 11°45.963’ N, the longitude is 077°33.58’ E, and the altitude is 1054 m above mean sea level. The mean temperature of the hill is around 25°C in the winter and in summer, it is 32°C and the annual rainfall of this hill ranges from 400 mm to 750 mm. The people of the Eratti hill and the surroundings are Lingayats, Solagars, Malayalis, Gounder, and Padayachi. Solagars, Lingayats, and Malayalis are ethnic people inhabiting the hill around 400 years. The main food of the ethnic people is ragi, maize, saamai, and bajra, and the other people used rice as their main food. The main occupation of the people is agriculture and cattle rearing. The people speak Tamil and Kannada. The Eratti hill is surrounded by Thevar malai, Bejilety, Oosi malai, Solaganai, Bodha malai, Kuttalyur, Onnakara, Sundappur, Thamratti, Periyasengulam, Sinna sengulam, Koll natham, and Velampatti. A temporary waterfall occurs at the top of the hill and flows in the adjacent areas. There is a dam called Varattupallam at the foothill. The photography of the study area and map was showed in Plate 1a-f.
Data collection
The medicinal plants were collected during their flowering period (July–November). Voucher specimens of all medicinally valuable plants were collected, poisoned, dried, and mounted with voucher number following the conventional methods [12] and deposited at the Department of Botany Herbarium, Vellalar College for Women, Erode, Tamil Nadu. Photographs of few plants were also taken to supplement the herbarium.

Identification
Identification of medicinal plants was done using Flora of the Presidency of Madras, Gamble and Fischer [13] and the flora of the Tamil Nadu Carnatic, Matthew [14-18]. Flora of Tamil Nadu series [19-21] was used at best for nomenclature. The plants were enumerated following the natural system of classification of Bentham and Hooker.

Table 1: The list of some medicinally important plants in Eratti hill

| S. No. | Botanical name/family | Vernacular name/common name | Parts used | Therapeutic uses |
|--------|-----------------------|-----------------------------|------------|-----------------|
| 1.     | *Clematis gouriana* Roxb. Ranunculaceae | -                           | Whole plant and leaves paste | Whole plant juice - cold, headache, wound healing. Leaf extract applied externally for eczema, boils, and itches, leaf paste applied to scabies, cuts, and wounds. |
| 2.     | *Annona reticulata* L. Annonaceae | Ramchita                     | Fruit, leaves, whole plant | To treat dysentery, epilepsy, cardiac problem, constipation, hemorrhage, bacterial infection, fever, ulcer and the plants have anti-inflammatory, antipyretic, anthelmintic, cytotoxic effects, analgesic and wound healing properties. |
| 3.     | *Cissampelos pareira* L. Menispermaceae | Malai mattiri                | Roots, leaves | The roots astringent, anthelmintic, carminative, stomachic, digestive, anti-inflammatory, pungent. Diuretic, febrifuge, expectorant, galactagogue, diuretic, febrifuge, expectorant, galactagogue, and bitter tonic. It is used in dyspepsia, indigestion, flatulence, abdominal pains, diarrhoea, dysentery, blood disorders, cardiac disorders, edema, leprosy, sensation, cough, corryza, asthma, bronchitis, cystitis, dysuria, and lactation disorders. |
| 4.     | *Nymphaea stellata* Willd. Nymphaeaceae | Alli                         | Whole plant | Whole plant - liver disorders in Ayurveda. Leaves, roots, and flowers - diabetes, antifertility, heart troubles, dysentery, eruptive fevers, indigestion and as a cardiotoxic, emollient, diuretic, narcotics, stimulant, and aphrodisiac. |
| 5.     | *Argemone mexicana* L. Papaveraceae | Brammathandu                 | Leaves, roots, and whole plant | Leaves - malarial fever, ulcers, and skin problems. Root - chronic skin diseases. Plant juice - jaundice and skin problems. Latex - cataract, reddening, and itching in the eyes. |
| 6.     | *Cleome monophylla* L. Cleomaceae | Ellukku sakkalathi           | Whole plant | Anti-HIV activity. |
| 7.     | *Cleome felina* Lf. Cleomaceae | Naaai kaduku                 | Whole plant | Anticancer, anti-inflammatory, antimicrobial activities. |
| 8.     | *Capparis divaricata* Lam. Capparidaceae | Thoratti                     | Whole plant, roots, and leaves | Whole plant - blood purifier stomachic, tonic, and appetizer. Root powder - inflammation, muscles diseases, and snakebites. |
| 9.     | *Capparis grandis* Lf. Capparidaceae | -                           | Whole plant | Inflammations, skin, renal, and central nervous disorders. |
| 10.    | *Ionidium suffruticosum* Ging. Violaceae | Orithal thamara             | Whole plant, roots, and leaves | Whole plant - tonic, demulcent and diuretic, stranguary and to treat dysentery, vomiting, asthma, and cough. Root - diuretic, gonorrhea, and urinary affections. Dried powdered leaves - asthma. |

(Contd...)
| S. No. | Botanical name/family | Vernacular name/common name | Parts used | Therapeutic uses |
|--------|-----------------------|-----------------------------|------------|------------------|
| 11.    | Polygala javana DC.   | -                           | Whole plant| Asthma           |
| 12.    | Shorea roxburghii G.Don. | Talari                    | Resins     | Headache and chest pain in children |
| 13.    | Mahavastra coromandelianum Garcke. | Ariva-mooku keerai       | Whole plant| Plant decoction - fever, dysentery, digestive disorders, and wounds |
| 14.    | Malvastrum coromandelianum Garcke. |  | -           | Skin disorders |
| 15.    | Pavonia odorata Willd. | Peramutti                 | Root powder| Applied externally once a day for 3 days to cure swellings |
| 16.    | Pavonia zeylanica Cav. | Sevagan                   | Leaves paste| To cure acidity |
| 17.    | Hibiscus syriacus L.   | -                          | Whole plant| Inflammation, cough, cold, skin diseases, and urinary tract diseases |
| 18.    | Helicteres isora L. Sterculiaceae | Valampuri               | Leaf, fruit, and seed decoctions | Fruit - diarrhea, asthma, and cough |
| 19.    | Melania incana Heyne | -                          | Whole plant| Fever, cold, and cough |
| 20.    | Grewia tilaefolia Vahl. | Palisamaram              | Stem and root bark decoctions| Root bark decoction - bone fracture of animals and possesses analgesic and anti-inflammatory activities |
| 21.    | Triumfetta pentandra A.Rich.  | Kapodam                 | Roots      | Root bark decoction - bone fracture of animals and possesses analgesic and anti-inflammatory activities |
| 22.    | Erythroxylum monogynum Roxb.  | Devadara                | Leaves     | Malaria, jaundice, and kill intestinal worms |
| 23.    | Ozaisi latifolia Kunth.  | Tenpaku                  | Leaves     | To cure acidity |
| 24.    | Toddalia asiatica Lam.  | Kaatu milagu            | Leaves, fruit, root| Leaves - rheumatism, lung diseases stomach ache, and snakebites, fruit - cough and malaria |
| 25.    | Chloroxylon swietenia DC.  | Porasu                  | Whole plant and stem bark| Root bark decoction - bone fracture of animals and possesses analgesic and anti-inflammatory activities |
| 26.    | Allanthus malabarica DC.  | Kaatu kariveppilai      | Leaf extract| Diarrhea and inflammations |
| 27.    | Simaroubiaceae         | -                        | Whole plant and stem| Root extract is mixed with sugar candy and one cup of this mixture is taken during early morning for 6 days to increase sperm count |
| 28.    | Cipadessa baccifera Miq.  | Pullip panchedi         | Leaf juice and paste| Hand and leg pains |
| 29.    | Maytenus heyeana (Roth) D.C.S.Raju. and Babu. | -                       | Whole plant| Leaf paste - applied externally to cure piles. |
| 30.    | Celstraceae           | Sooraipalam             | Leaves and fruits| Antitumor activity |
| 31.    | Ziziphus nummularia W. and A. Rhamnaceae | Koel       | Flowers     | The leaves - skin problems and scabies |
| 32.    | Ziziphus glabrata W. Rhamnaceae | Kaetupirantai         | Aerial parts and leaves| Dried stem bark - dysentery and diarrhea |
| 33.    | Crotalaria calycina Schr.  | -                       | Whole plant| The plants possess anti-inflammatory activities |
| 34.    | Crotalaria verrucosa L. Fabaceae | -                       | Whole plant| Wounds, convulsions, venereal sores, cholera, hematuria, dysentery, and syphilis |
| 35.    | Buchanania lanzan Spr.  | Charam                   | Whole plant and stem bark paste| The leaves - emetic, expectorant, biliousness, dyspepsia, heart complaints, fever and mouth diseases |

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### Table 1: (Continued)

| S. No. | Botanical name/family | Vernacular name/common name | Parts used | Therapeutic uses |
|--------|-----------------------|-----------------------------|------------|------------------|
| 40.    | *Crotalaria pallida* Aiton Fabaceae | Kilukkupai chedi | Whole plant, roots, and leaf extracts | Urinary problem, fever, prevents skin infections, and eczema |
|        |                       |                             |            | Roots - cure painful swelling of joint |
|        |                       |                             |            | Leaf extracts act as vermifuge |
|        |                       |                             |            | Wound healing properties |
| 41.    | *Indigofera enneaphylla* L. Fabaceae | Seppu nerunji | Whole plant | Roots - digestive, laxative, diuretic, anti-inflammatory, and antiarthralgia activity and to treat cough, diarrhea, biliousness, emetic, piles, asthma, rheumatism, arthritis, and post-delivery problems |
| 42.    | *Desmodium gangeticum* DC. Fabaceae | Pulladi | Root | Leaves - insects bites |
| 43.    | *Butea monosperma* (Lam.) Taub. Fabaceae | Kinchugam or parasu | Leaves and seeds | Datura, jaundice, skin infections, piles, ulcers, constipation, wound healing, and coughs |
| 44.    | *Pterocarpus santalinus* L.f. Fabaceae | Swappu santhanam | Wood oil and paste | Wood paste - removes warts |
| 45.    | *Cassia hirsuta* L. Caesalpiniaceae | - | Leaf decoction, paste, and root | Cure kidney stone and the leaf paste - applied externally to cure skin problems |
|        |                       |                             |            | Roots - rheumatic pain |
| 46.    | *Acacia modesta* Wall. Mimosaceae | Karuvelam | Leaves, fruits, stem bark, gum, and roots. | Anticancer, antipyretic, antiasthmatic, antidiabetic, antiplasmodial, and antifungal activities |
| 47.    | *Acacia nilotica* L. Mimosaceae | Vel-naga-maram | Whole plant | Leukorrhea, back pain, and sexual debility |
| 48.    | *Pterolobium indicum* A.Rich. Mimosaceae | Indumullu | Young leaves | Diarrhea, jaundice, skin infections, piles, ulcers, constipation, wound healing, and coughs |
| 49.    | *Rubus ellipticus* Sm. Rosaceae | Mullipazham. | Roots and leaves | Stomach disorders |
| 50.    | *Drosera spatulata* Labill. Droseraceae | Alugini cedi | Whole plant | Asthma, lung diseases, and ulcers |
| 51.    | *Anogeissus latifolia* (Roxb. ex DC.) Wall. ex Guill. & Perr. Combretaceae | Velvarai | Whole plant | Stem bark infusion |
|        | *Syzygium aromaticum* (L) Merr. and Perry. Myrtaceae | - | Whole plant | Stem bark infusion |
| 52.    | *Ammannia baccifera* L. Lythraceae | Kalluruvi | Leaves and whole plant | Anti-inflammatory and analgesic properties |
| 53.    | *Passiflora edulis* Sims Passifloraceae | - | Leaves | To control blood pressure |
| 54.    | *Bryonia laciniosa* L. Cucurbitaceae | Sivalingi | Whole plant | Used as an antibacterial, antifungal, anti-inflammatory, cytotoxic, analgesic, and antipyretic agent |
| 55.    | *Citrus aurantium* L. Rutaceae | Kalluruvi | Leaves and stem | Plant possesses antioxidant, antidiabetic, anti-inflammatory, antimicrobial, gastrointestinal, antianergic, and analgesic properties |
| 56.    | *Vernonia cinerea* Less. Asteraceae | Nanjul | Whole plant | It improves the memory power and blood circulations, stimulates the hair growth, tissue strengthen, reducing arthritis, and wound healing |
|        | *Ruber cordifolia* L. Rubiaceae | Neer kadambu | Stem bark paste | The plants possess antimicrobial, antitumor, and antidiabetic properties |
| 57.    | *Canthium dicoccum* (Gaertn.) Merr. Rubiaceae | Neer kadambu | Stem bark paste | To relief rheumatic pain |
| 58.    | *Viceae indica* DC. Asteraceae | Kathambam | Plant juice, decoction, and root paste | Plant juice - applied for externally to treat wounds and parasitic infections |
| 59.    | *Siegesbeckia orientalis* L. Asteraceae | Mookuthi poo | Leaf decoction | Plant decoction - rheumatoid arthritis |

(Contd...)
| S. No. | Botanical name/family | Vernacular name/ common name | Parts used | Therapeutic uses |
|-------|----------------------|-----------------------------|------------|-----------------|
| 65.   | *Senecio vulgaris* L. Asteraceae | -                            | Whole plant | Antiscorbutic, diaphoretic, anthelmintic, purgative, and diuretic |
| 66.   | *Plumbago zeylanica* L. Plumbaginaceae | Chithira moolam | Whole plant | Diabetes skin wounds, rashes |
| 67.   | *Rauvolfia tetraphylla* L. Apocynaceae | Pampu kakaalachchedi | Roots | To cure mental disorders and high blood pressure |
| 68.   | *Vallaris solanacea* O. Kze. Apocynaceae | - | Whole plant paste | Wounds, ringworm, skin diseases, and eczema. The plant has antitumor, antimicrobial, analgesic, and anti-inflammatory activities |
| 69.   | *Gomphocarpus physocarpus* E.Mey Apocynaceae | Anaitta vitakoti | Whole plant, leaves, and fruits | Ulcer, itches, and sore throats. Crushed leaves - jaundice and fruits - body pain and cold |
| 70.   | *Oxystelma esculentum* R.Br. Asclepiadaceae | Anaitta vitakoti | Whole plant, leaves, and fruits | Ulcer, itches, and sore throats. Crushed leaves - jaundice and fruits - body pain and cold |
| 71.   | *Sarcostemma brevistigma* W. and A. Asclepiadaceae | Kodikalli | Whole plant | To cure emetic |
| 72.   | *Exacum pedunculatum* L. Gentianaceae | - | Leaf paste | To treat headaches, swelling, pain, and snakebites |
| 73.   | *Anagallis arvensis* L. Gentianaceae | Kallurukki | Grounded leaves | Fever |
| 74.   | *Cordia obliqua* Wild. Boraginaceae | - | Root juice | Kidney stones and whooping coughs |
| 75.   | *Rivea hypocrateriformis* Choisy. Convolvulaceae | - | Leaves | To promote hair growth |
| 76.   | *Ipomoea obscura* K.Gawl. Convolvulaceae | - | Leaves | To promote hair growth |
| 77.   | *Ipomoea pes-tigrisida* L. Convolvulaceae | Pulichovadi | Whole plant | To treat headaches, swelling, pain, and snakebites |
| 78.   | *Evolvulus nummularius* L. Convolvulaceae | Elikkathu illai | Leaves | Purify blood and improve memory power |
| 79.   | *Solanum surattense* Burm.f. Solanaceae | Kandan kathiri | Whole plant | Skin diseases, cough, bronchitis, anorexia, and urinary tract disorders |
| 80.   | *Physalis pruinosa* L. Solanaceae | Milagu thakkali | Whole plant | Asthma, microbial infections, and liver diseases |
| 81.   | *Datura discolor* Bernh. Solanaceae | Kattu valli | Root | To promote hair growth |
| 82.   | *Scoparia dulcis* L. Scrophulariaceae | Novu pacchilai | Whole plant | Chronic, fatigue, skin diseases, and urinary infection |
| 83.   | *Thunbergia fragrans* Roxb. Acanthaceae | - | Root | Used as a health tonic |
| 84.   | *Ruellia tuberosa* L. Acanthaceae | Kanakavalli cedi | Root | To promote hair growth |
| 85.   | *Andrographis echioides* Nees. Acanthaceae | - | Root | To promote hair growth |
| 86.   | *Rhinacanthus nasutus* (L.) Kurz. Acanthaceae | - | Root | To promote hair growth |
| 87.   | *Scutellaria violacea* Heyne Lamiaceae | Naganama | Whole plant | Tuberculosis |
| 88.   | *Leucas longifolia* Hk. f. Lamiaceae | - | Leaves | To promote hair growth |
| 89.   | *Anisochilus carnosus* Wall. Lamiaceae | - | Leaves | To promote hair growth |
| 90.   | *Anisomeles indica* O. Kze. Lamiaceae | Siruminatti | Root | To promote hair growth |
| 91.   | *Ocimum gratissimum* L. Lamiaceae | Ramthulasi | Whole plant | Rheumatism and cough |
| 92.   | *Coleus barbatus* Benth. Lamiaceae | Kattu valli | Whole plant | Bronchitis, asthma, cold, cough, and sore throat |
| 93.   | *Anisochilus carnosus* Wall. Lamiaceae | Canakavalli cedi | Grounded and boiled leaves and root piece | Applied externally to cure skin itches |
| 94.   | *Anisomeles indica* O. Kze. Lamiaceae | - | Whole plant | Root piece is chewed to cure cold |
| 95.   | *Scutellaria violacea* Heyne Lamiaceae | Novu pacchilai | Whole plant | Rheumatism, cold, fever, skin sores, and abdominal pain |
| 96.   | *Leucas longifolia* Hk. f. Lamiaceae | Kaatu thumbai | Whole plant | Chronic, fatigue, skin diseases, and urinary infection |
| 97.   | *Allamanda longopedunculata* Gamblen. Comb. Amaranthaceae | Kumutti | Whole plant | Antimicrobial activity |
| 98.   | *Papalia lappacea* Moq. Amaranthaceae | - | Whole plant | Cough, malaria, and hair fall |

(Contd...)
| S. No. | Botanical name/family | Vernacular name/common name | Parts used | Therapeutic uses |
|-------|-----------------------|-----------------------------|------------|-----------------|
| 98.   | *Alternanthera tenella* Colla. Amaranthaceae | Ottanamull | Whole plant | Anti-inflammatory activities |
| 99.   | *Chenopodium ambrosioides* L. Chenopodiaceae | Sakkaraarthi keerai | Whole plant decoction | Stomach pain, cough, asthma, fever, and headache |
| 100.  | *Persicaria chinensis* (L.) Polygonoaceae | - | Whole plant | The infusion of the plant is to treat eye diseases and eczema of the ear |
| 101.  | *Polygonum persicaria* (L.) Small. Polygonoaceae | - | Whole plant | Skin diseases and vaginal diseases |
| 102.  | *Aristolochia bracteata* Retz. Aristolochiaceae | Aaduthiendaappalai | Whole plant and leaf paste | Plant possesses antifungal properties |
| 103.  | *Aristolochia indica* L. Aristolochiaceae | Isvanmuli | Root paste | Given orally to treat snake bite poison The root paste with Calotrops gigantea leaves is externally applied for dog bite |
| 104.  | *Neolitsea scrobiculata* Gamble Lauraceae | - | Whole plant | Antimicrobial activities |
| 105.  | *Helaanthera parasitica* Lour. Loranthaceae | - | Whole plant | Antioxidant and antimetastatic effect |
| 106.  | *Santalum album* L. Santalaceae | Santhana maram | Wood oil | Skin disorder, facial warts, and pimples used as refrigerant |
| 107.  | *Osyris wightiana* Wall. Santalaceae | Vella santhanam | Bark infusion | Given to women after delivery to stop bleeding |
| 108.  | *Euphorbia antiquorum* L. Euphorbiaceae | Sathurakallai | Latex and stem juice | The latex applied externally to treat boils, wounds, rhematism, and toothache Stem juice - earache |
| 109.  | *Synadenium grantii* Hook.f. Euphorbiaceae | - | Whole plant | Neoplastic and gastric disorders. Plants have antiulcer and antitumor activity |
| 110.  | *Phyllanthus maderaspatensis* L. Euphorbiaceae | Arunelli | Leaves | Cough, strangury, and sweating, seeds are laxative, diuretic, and diaphoretic properties |
| 111.  | *Phyllanthus emblica* L. Euphorbiaceae | Malai nelli | Whole plant | Jaundice, inflammation, and diarrhea |
| 112.  | *Phyllanthus virgatus* G.Forst. Euphorbiaceae | Naduvanelli | Whole plant | Skin itches, gonorrhea, measles, venereal diseases, and jaundice |
| 113.  | *Glochidion zeylanicum* A. Juss. Euphorbiaceae | - | Whole plant | The plants have anticancer activity |
| 114.  | *Mallotus philippinensis* M. Arg. Euphorbiaceae | Kunkuma maram | Whole plant | Antifilarial, anti-inflammatory and immunoregulatory, antioxidant, antiradical, hepatoprotective, and purgative activities |
| 115.  | *Acalypha fruticosa* Forsk. Euphorbiaceae | Sinni | Whole plant | Dyspepsia, skin disorders, wounds, and poisonous bites |
| 116.  | *Acalypha paniculata* Wall. Euphorbiaceae | Kozipoondu | Whole plant | Antioxidant properties |
| 117.  | *Tragia involucrata* L. Euphorbiaceae | Kaanjori | Roots and leaves | Itching skin, bronchitis |
| 118.  | *Jatropha curcas* L. Euphorbiaceae | Kaatukottai | Leaves and seeds | Leaves - jaundice Leases - rheumatism and tumor Seeds - the oil is to treat skin diseases and rashes |
| 119.  | *Jatropha glandulifera* Roxb. Euphorbiaceae | Vellai kattukottai | Whole plant oil and latex | Plant oil - antiparalytic and antirheumatic properties Latex applied externally for warts and tumor |
| 120.  | *Trema orientalis* Bl. Ulmaceae | Ambarathi | Root decoction and stem bark | Root decoction - hematuria, diarrhea, and epilepsy Stem bark - muscular pains |
| 121.  | *Artocarpus heterophyllus* Lam. Moraceae | palamaram | Seed, leaves, latex, roots, and woods | Seeds - relieve bilousness, aphrodisiac Leaves - ulcers Latex - promotes healing of abscesses, snakebites, and glandular swelling Root - skin diseases |
| 122.  | *Alpinia galanga* Sw. Zingiberaceae | Aruttai | Whole plant | Sore throat and hoarseness of the voice, bad odor mouth, indigestion, and inflammations |
| 123.  | *Curculigo ochridoides* Gaertn. Amaryllidaceae | Nilapanai kilangu | Rootstocks | Skin diseases, asthma, bronchitis, jaundice, diarrhea, dyspepsia, colic, vomiting, the dried rhizome used as a tonic in the treatment of decline in physical strength, sexual weakness, leukorrhea, and menstrual disorders |

(Contd...)
Table 1: (Continued)

| S. No. | Botanical name/family | Vernacular name/ common name | Parts used | Therapeutic uses |
|--------|-----------------------|------------------------------|------------|------------------|
| 124.   | Dioscorea bulbifera L. Dioscoreaceae | Kaatu seerakavalli | Whole plant | Ulcers, boils, wounds, sores, diabetes, dysentery, and cancer |
| 125.   | Asparagus racemosus Wild. Liliaceae | Thaneevittan kilangu | Roots | Galactagogue, diuretic, laxative, and antidiarrheic properties |
| 126.   | Gloriosa superba L. Liliaceae | Senkenthal | Whole plant and leaves | Chronic ulcers, colic pain, gonorrhea, and piles |
| 127.   | Sansevieria roxburghiana Schult. f. Liliaceae | Marul | Whole plant | Cold, rheumatism, expectorant, and ear pain |
| 128.   | Furcraea foetida (L.) Haw. Liliaceae | Kattralai | Leaf paste | Useful in preparing shampoos |
| 129.   | Scilla indica Bak. Liliaceae | Kozhi vengayam | Whole plant | Diuretic, deostruent, emetic, emmenagogue, expectorant, cathartic, and anticancer agent |
| 130.   | Spirodea polyrhiza (L) Schleid. Araceae | C.N - duck weed | Whole plant | To treat inflammation, chronic rheumatism, and rashes in skin, swellings, and eczema |
| 131.   | Kyllinga nemoralis (J.R.Forst. and G.Forst.) Dandy ex Hutch. and Dalziel Amaryllidaceae | Vellutha neerpaasi | Whole plant | Antioxidant and antibacterial activities |
| 132.   | Vettiveria zizanioides Nash. Poaceae | Vettiver | Roots | Used as a refrigerant |
| 133.   | Actinopetrum radiana (J. Koenig ex Sw.) Link. Actinotteridaceae | Visirivalai | Whole plant | Plant extract - to control blood pressure, tuberculosis |
| 134.   | Hemionitis arifolia (Burm. f.) T. Moore. Pteridaceae | Ithaya illai | Whole plant | Dried plant - cough |
| 135.   | Pteris tremula R.Br. Pteridaceae | Whole plant | Juice of plant - cure burns and the plants possess hypoglycemic and anti-diabetic activities |
| 136.   | Adiantum caudatum L. Adiantaceae | Anai chuvadi | Whole plant | Stomach disorders, poisonous bites, rheumatism, asthma, fever, and diabetes |
| 137.   | Adiantum lunulatum Burm. fil. Adiantaceae | Seruppadai | Whole plant | Plant possesses analgesic, anti-inflammatory, anti-implantation, and antimicrobial activities. To treat diabetes, coughs, fever, migraine, and skin diseases |
| 138.   | Targionia hypophylla L. Targioniaceae | - | Whole plant | Cough, diarhea, burns, and hoarseness |

with binomial, local name, description of the plant, and uses. A survey of literature was made to find out the active principles of drug plants identified [22-24].

RESULTS

The present survey at Eratti hill Bargur range of reserve forest has documented a total of 289 angiospermic plants belonging to 66 families, six pteridophytic plants belonging to three families, one bryophyte thallus, and one type of foliose lichen. Of these 289 angiospermic plants, 273 dicotyledons and 16 monocotyledonous plants from the dicotyledons 107 species were polypetalae plants, 126 were gamopetalae plants, and 56 were monochlamydeae plants, these were used to treat various ailments such as diabetes, eczema, fever, cold, cough, toothache, rheumatoid arthritis, liver disorders, cardiac disorders, microbial infections, headache, and blood pressure. The family-wise analysis showed that the families Asteraceae, Acanthaceae, and Euphorbiaceae held the dominant position by representing more number of species (17 species each), followed by Fabaceae (14 species), Convolvulaceae (13 species), Solanaceae (12 species), Amaryllidaceae (11 species), Lamiaceae (11 species), Asclepiadaceae (9 species), Malvaceae (9 species), and Moraceae (8 species). Acanthaceae (8 species), Capparidaceae (6 species), Tiliaceae, Sapindaceae, Caesalpiniaceae, Gentianaceae, Boraginaceae, Verbenaceae (5 species each), Liliaceae (4 species each), Rhamnaceae, Pedalidaceae, Loranthaceae (3 species each), Sterculiaceae, Vitaceae, Combretaceae, Myrtaceae, Passifloraceae (3 species each), Oxalidaceae, Simaroubaceae, Meliaceae, Anacardiaceae, Rosaceae, Aizoaceae, Chenopodiaceae, Aristolochiaceae, Santalaceae, Moraceae, Polygonaceae, and Dioscoreaceae (2 species each) and the remaining families such as Rhamnaceae, Annonaceae, Menispermmaceae, Nymphaeaceae, Papaveraceae, Violaceae, Polygonumaceae, Portulacaceae, Dipterocarpaceae, Zygophyllaceae, Celastraceae,

Drosenaceae, Lythraceae, Onagraceae, Apiaceae, Carpodocaceae, Plumbaginaceae, Myrsinaceae, Ebenaceae, Loganiaceae, Nyctaginaceae, Lauraceae, Ulmaceae, Orchidaceae, Zingiberaceae, Amaryllidaceae, Palmaceae, and Araceae were represented by a single species each. From the survey in the study, area represented the herbs were held the dominant position followed by the shrubs, trees and climber, four parasitic plants, and one epiphytic plant were reported (Table 1).

DISCUSSION

The observation of the present study at Eratti hill showed that traditional medicinal plants play an important role in the life of tribal communities. The medicinal plants used as a therapeutic agent of paramount importance in addressing health problems of traditional communities and third world countries as well as industrialized societies [25]. Habit wise analysis represents the dominance of herbs followed by shrubs, trees, and climbers. These diverse habits indicate the richness of all habits. One epiphytic plant and four parasitic plants were reported. This is in line with the findings of Venkataswamy et al. [26], in Malasar tribals, Coimbatore district, (2010) and Arunachalam and Parimelazhgan [27], in Kadambur hills (2011). This study found that though whole and different parts of the medicinal plants were used as medicine, the most commonly used plant part was leaves. This is in agreement with the earlier findings of Ranganathan et al. [28], Bose et al. [29], Alagesaboopathi [30], Gritto et al. [31], and Sathiyar et al. [32]. The family-wise analysis represents that the family Asteraceae, Acanthaceae, and Euphorbiaceae held the dominant position by exhibiting more number of species (17 species each). This is followed by Fabaceae (14 species) and Convolvulaceae (13 species). This is in consonance with the findings of Senthilkumar et al. [33], in Malayali tribes, Vercaud hills (2013).
Western Ghats is one of the plant biodiversity hotspots of India. Agumbe region of Western Ghats is known for rich plant diversity and traditional medicinal practices. Raveesha and Nagabhushan [34] documented ethnomedical practices followed in this region to treat fungal infections and their scientific validation in vitro.

Vidyasagar and Pooja [35] selected the work deals with the studies on ethnomedicinal plants used by Rajgond Tribes of Haladkeri village in Bidar district, Karnataka, India. A total of 60 ethnomedicinal plants belonging to 37 families were recorded during the survey. The leaves were mostly used parts, followed by fruit, root, bark, flower, stem, and latex. These plants are being used to treat various ailments such as injuries, wounds, mouth ulcers, fever, diarrhea, ulcers, swelling, snakebite skin care, toothache, asthma, cough and cold diabetes, and cancer.

CONCLUSION

Medicinal plants in Eratti hill play a significant role in primary health care of the ethnic people. In the present study, 295 plants were documented and among these 289 plants were angiospermic plants, 6 were pteridophytic plants, one bryophytic thallus, and one type of fololose lichen. The plant species were used as a remedy for certain ailments. This study provides knowledge about herbal treatment of the ethnic people and subsequent pharmacognostical and pharmacological investigations should be made to confirm their mode of preparations.

AUTHOR’S CONTRIBUTIONS

Vijayashalini, P. carried out the study and was the charge of overall performance and planning. Abirami, P. has suggested the study and supervised the research work.

CONFLICTS OF INTEREST

The authors acknowledge that there are no conflicts of interest concerning this article publication.

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