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ETHNOBOTANICAL SIGNIFICANCE OF PLANTS REFERRED IN HOLY BIBLE FOUND IN THE AGASTHIAMALAI RANGE, THE TAIL END OF WESTERN GHATS

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Abstract

An ethnobotanical study of holy plants found in the Bible from the Agasthiamalai region of Western Ghats. A total of 39 plant species were selected belong to 27 families were recorded. The species are distributed with in different life forms. Herb (37%), shrubs (17%), trees (32%),Aquatic herb, Annuals, grass, and climbing shrubs are (3%) equally and climbing herb (1%).The sacred plants and parts of plants utilized thereof are categorized on the basis of their socio-cultural perspective. Traditionally various parts of plants such as leaves(9sps.),seed(12sps), fruit(7sps),whole plant (6sps), bark (4sps), flower 4sps), bulb (3sps), wood (2sps) and gum, resin, oil, cotton, stem, and roots are equally (1sps) are used in religious and traditional resources. The study also contributed to the ethnomedicinal uses of such plants in the study area. We collected the idea from the priest for various denominations of Christian communities.

Key words : Ethnobotanical, Traditional, Christian communities.

Introduction

Ethno-botanical studies vary across space and time from archeological investigations of the role of plants in ancient civilizations. Plant used for many purposes, such as heeling and protection. Holy plants play a key role in human spirituality, religion and culture and are an integral part of biodiversity. India is rich in natural wealth and traditional knowledge for the enrichment of nation. The traditional use of plant in drug is from ancient time to this day all over the humanity (Bhattarai *et al.*, 2009). During the last few decades there has been an rising awareness in the study of medicinal plants and their traditional use in different parts of India, and there many reports on the use of plants in traditional curative by either ethnic people or native communities of India (Maruthi *et al.*, 2000, Chhetri *et al.*, 2005). Such traditional practices have been habitually working in different parts of India (Anthwal *et al.*, 2006).

Particularly, traditional herbal healing is extensively skillful throughout the population as their most important health care system (Yineger and Yewhalaw, 2007., Seid and Tsegay, 2011). Ethnomedicinal treatment is not simply a medicinal system but part of traditions (Thomas,1998). More-over, reports have also indicated the reliance of nearly on utilizing plant based traditional medicine as the majority vital health- care system (Dawit, 2001). Health care system has been residential in different corner of the world anywhere they were living in close communication with the nature. Thus the ethnobotanical study is tried to preserve important traditional knowledge for both future generations and other community.

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Materials and Methods

Description of the study area

Agasthyamalai and its environs is a very potential area for a bioreserve. The Western Ghats, West Coast sub region (The Malabar rain forest Province) may be the richest biogeographic province in Indian subcontinent. The Agasthyamalai ranges have ecosystem diversity at high altitudinal zone and consist of southern tropical thorn, southern tropical dry deciduous, southern tropical moist deciduous, southern tropical wet evergreen and sub

tropical montane forest types with grass lands at low altitudes. The study area is approximately 2000 sq.km and falls within the hilly tracts of Tirunelveli and Kanyakumari districts of Tamil Nadu on eastern and south eastern sides and Trivandrum district of Kerala on the west. The latitude of the area lies between $77^0$5' and $77^0$40' E and $8^0$20' and 8^0 50'N.

The Churches of Western Ghats particularly St. Mary's church Pattom, St. Thomas church Ambilikonam, St. Mary's church Mariagiri, C.S.I. Church Kaliakavilai, Christ the King Church Marthandam, Abbs Memmorial church Cheruvarakonam, C.S.I. Church Marthandam, St.Pious Church Cheruvarakonam, St. Therese Catholic Church Kandanvilai, Hocker Memorial Church Moolachal, C.S.I. Church Azhagiamandapam, Thomaiyar church Thiruvithancode Arappally, St. Fathima Church Moolachal, St. Xaviers Church Manaly, St. Sebastian Church Madathattuvilai, C.S.I. Church Villukuri, St. Elias Church Thuckely, C.S.I. Church Kaliyancadu, C.S.I. Home Church Nagercoil and other churches were visited to collect the Christian Holy plants and identify the religious values.

Priest from various denominations of Christian communities, Holy Bible has been referred to find out what are the plants indicated in the Holy Bible and identify the ethnoreligious value of the holy plants.

Plant materials

A field study was carried out over a period of just about one year. During this period, information about ethno-botanically important holy plants was collected. The plants were pressed in the field and prepared for detection. The name of plant families were listed in alphabetical order. Scientific names of plant species were recognized according to the International plant name index. In addition, the medicinal uses of these plants were compiled from the literature. We examine whether the plants use in had journalism records or not.

Results and Discussion

The present study has recorded valuable ethnomedicinal knowledge from the area. Some of these plants have a lot of medicinal values and religious important. A total of 39 species belonging to 36 genera and 27 families have been recorded. These species are distributed with in different life forms. Herbs (37%), shrubs (17%), Trees (32%), climbers (2%), Aquatic herb, Annual, Grass and climbing shrubs are (3%) same as in each species.

Konta community use in addition of herbs (about 68species) trees (20species) (Bekalo *et al.,* 2009). In similar pattern as report from India, were about 19 out of 54 species were herbs and shrubs were about 12 species (Ayyanar and Ignacimuthu, 2005). More than half of the plant remedies were also obtained from herbs (Giday *et al.,* 2003). Similar studies on ethnomedicinal plants of Uttarakhand have been carried out for the Jaunsari tribals and a total of 66 plant species were recorded, including 9 trees, 11 shrubs and 46 herbs(Bhatt and Negi 2006).

Among 27 families Fabaceae mark in 1st Rank, Apiaceae, Lilliaceae and Poaceae 11nd rank, Cucurbitaceae, Moraceae and Lauraceae 111rd Rank, and 20 families are being represented by only one genera and one species each. Various plant parts such as whole plant (6species), leaves (9species), seed (12 species), fruit (7 species), flower (4 species), bark (4 species), bulb (3 species), wood (2 species) and gum, resin, oil, cotton, stem and roots are used one species each.

In the present study medicinal plants are identified (39 species, 36 genera and 27 families) and their uses by the area of kanyakumari district. seed is one of the most used plant parts (12species) in the preparation of traditional herbal medicine followed by leaves (9species), fruits (7species), whole plant (6species), bark (4species) and flowers (4species) reveals the importance of the sacred plants for ethno-medicinal aspects. Most of the plants are used for the religious and for health. Some of the plants relieves from the intestinal worms, scalp diseases, reduce problem of maturation in children. Thus the sacred plants have got natural healing properties. So these plants can also be utilized medicinally.

The plant parts were used as decoction, paste, powder, cooked and as raw. Paste and decoction were the mainly used form of medicine in the study area. People use entire plant, leaves, stem, pseudostem, roots, barks, seeds, fruits, rhizome, thalamus, flower, gel, resin and latex for their medicinal purposes. Fresh plant parts were frequently used for the medicine preparation. Leaves were mainly used than other parts of the plants for the medicinal purpose and it was also agreed by the pattern ethnobotanical researches (Sivaperumal *et al.,* 2010, Jeeva and Femila, 2012; Shanmugm *et al.,* 2012, Natarajan *et al.,* 2013). Juice and paste formulations were quite common for external applications (Natarajan *et al.,* 2013) and internal application predominates over external application which was also cited in the earlier studies (Sivaperumal *et al.,* 2010, Sivaperumal *et al.,* 2009, Remya *et al.,* 2009). Though many plant species were utilized as a single drug for the treatment of certain diseases, a few plant species were given in combination with other plant species also.

Table1: List of plants referred in Holy Bible.

Sl.No.	Botanical name	Family	Name	Habit	Part used	Medicinal value
1.	*Alhagi camelorum* Fisch	Fabaceae	Camel thorn	Shrub	Leaves	It is used in the treatment of rheumatism good in vomiting, asthma, piles and small pox eruptions.
2.	*Allium cepa* L.	Lilliaceae	Venkayam	Herb	Bulb	It is used in the treatment of asthma, malaria, cholera, stomachache and common cold.
3.	*Allium porum* L.	Lilliaceae	Leek	Herb	Bulb	Treatment of kidney problems, heart diseases, kidney stones and dropsy.
4.	*Allium sativum* L.	Lilliaceae	Poondu	Herb	Bulb	Head ache, chest pain, Blood disorders, Gastrointestinal problem, Snake bite, abdominal pain and decrease cholesterol.
5.	*Amygdalus communis* L.	Rosaceae	Almond	Tree	Seed	Skin diseases, Treatment of asthma.
6.	*Anethum graveolens* L.	Apiaceae	Dill	Herb	Seed, Leaf	Carminative, stomachic and diuretic.
7.	*Astrangalus biflorus* L	Fabaceae	Milk vetch	Herb	Gum	Seasonal allergies and heart failure.
8.	*Boswellia serrata* Birdrw.	Bruseraceae	Kundurukkam	Tree	Resin	Asthma, diuretic and for painful menstruation
9.	*Brassica nigra* L.	Bracicaceae	Kaduku	Herb	Seed, oil	Abdominal pain and culinary purposes.
10.	*Cinnamomum iners* Reinw.	Lauraceae	Chinnamon	Tree	Bark	Antiseptic, sedative and anti-inflammatory.
11.	*Citrus medica* L.cv.	Rutaceae	Citron	Shrub	Fruit	It is widely used for treating abdominal colic, digestive disorders and piles.
12.	*Coriandrum sativum* L.	Apiaceae	Kothamalli	Herb	Whole plant	It is used in digestive disorders, cough and dysentery
13.	*Cucumis melo* L.	Cucurbitaceae	Melon	Herb	Fruit	Reduce blood pressure, Purgative, maintaining kidney function and cooling agent for skin.
14.	*Cucumis sativus* L.	Cucurbitaceae	Vellarikai	Climbing Herb	Fruit	Cure skin and eye problem, cooling and headache
15.	*Cuminum cyminum* L.	Apiaceae	Cumin	Herb	Seed	Variety if flavors, perfumes and essential oil.
16.	*Ficus racemosa* L.	Moraceae	Kaattathi	Tree	Whole plant	Dysentery, diabetics, antiseptic, skin disorders, urinary disorders, astringent, dysentery and diabetics.
17.	*Gossypium herbaceum* L.	Malvaceae	Paruthi	Shrub	Cotton	Used in auspicious ceremonies.
18.	*Hordeum vulgare* L.	Poaceae	Barli	Herb	Seed	Bone setting, Ulcer and Hypertension.
19.	*Juglans regia* L.	Juglandaceae	Walnut	Tree	Whole plant	Bark is used as dye, Seed oil is used for cooking and in rheumatic pain and Fruit is edible.
20.	*Laurus nobilis* L.	Lauraceae	Laurel	Tree	Leaves	Heals disorders, Intestinal worms, rheumatism and detergent.
21.	*Lawsonia inermis* L.	Lythraceae	Maruthani	Tree	Leaves, seeds, Flowers	Paste of leaf is used to cure skin troubles, Blood purifier sore of thumbs and incase of pimples, Seed is used in case of piles. Flowers promote sleeping.
22.	*Lens culinaris* Medik.	Papiloinaceae	Lentils	Herb	Seed	To cure heart and skin problem.
23.	*Mentha arvensis* L	Lamiaceae	Podina	Herb	Leaf	Gastro intestinal problem, vomiting, to cure pimples and pustules.
24.	*Morus nigra* L.	Moraceae	Mulberry	Tree	Fruit, Leaves	Cleaning throught infection, Kidney problem, laxative, cooling, aromatic, anthelmintic and astringent.

Table1 contd....

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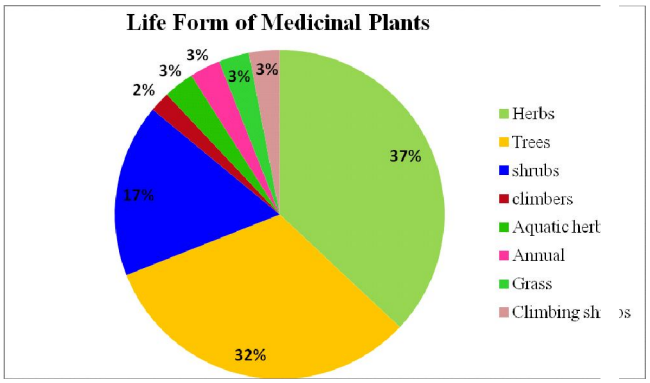
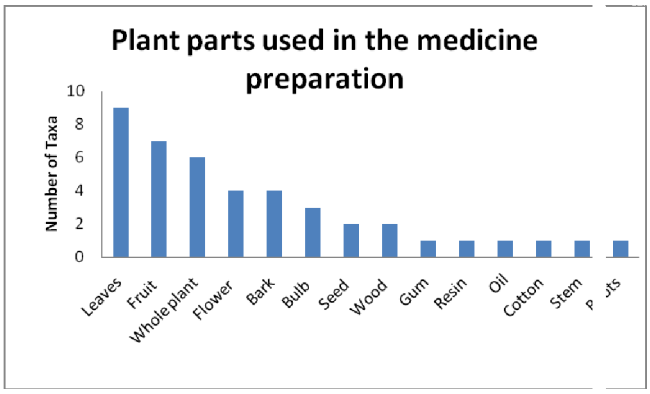
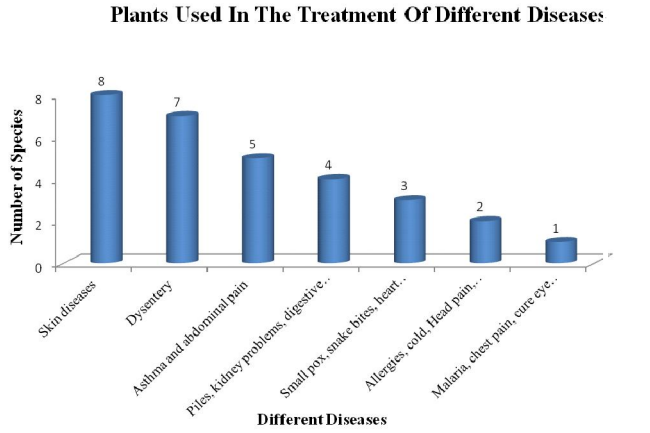
Sl.No.	Botanical name	Family	Name	Habit	Part used	Medicinal value
25.	*Myrtus communis* L.	Myrtaceae	Naval	Tree	Fruit, seed	Abdominal pain, treatment of gastric pain and diarrhea.
26.	*Nelumbo nucifera* Gaertn.	Nelumbonaceae	Lotus	Aquatic herb	Flower	Leucoderma, small pox, fever, cholera, anticancer, antibacterial and antiinflamatory.
27.	*Olea europae* L.	Oleaceae	Olive Tree	Tree	Leaves	Rabies, snake bites and abdominal pain.
28.	*Papaver somniferum* L	Papaveraceae	Abini	Herb	Flower, fruit	Anemia, Asthma, Bleeding, cancer, cholera, reduces the problem of maturation in children and dysentery.
29.	*Plantanus orientalis* L.	Plantaceae	Plane	Tree	Wood, bark	Antiseptic, dysentery and Tumor.
30.	*Polyalthia longifolia* var.	Annonaceae	Ashoka tree	Tree	Leaves, flower, seed.	Fever, skin disease, diabetes and hypertension.
31.	*Pterocarpus santalinus* L.	Fabaceae	Chanthanam	Tree	Wood	Stomach ulcers, diabetes and dysentery.
32.	*Punica granatum* L.	Punicaceae	Madulai	Shrub	Whole plant	Blood dysentery, Bronchitis, dysentery, vermicide, diarrhea, Whooping cough, Gastro intestinal, Chest infections and blood purifier.
33.	*Ricinus communis* L.	Euphorbiaceae	Amanakku	Shrub	Seed	Gastrointestinal problem, Antifertility, skin diseases, liver diseases, rabies and leather preservative.
34.	*Saccarum officinarum* L.	Poaceae	Karumbu	Annual	Stem	Making rope, relief from body ache, strengthens the teeth's, blood purifier and fever.
35.	*Silybum marianum* L.	Asteraceae	Thistle	Herb	Whole plant	Anti viral, Anti toxic and Allergy.
36.	*Tamarix aphylla* L	Tamaricaceae	Sirusavukku	Shrub	Bark, root	The treatment of small pox, leprosy swelling, tumor and wound.
37.	*Triticum aestivum* L.	Poaceae	Godumai	Grass	Whole plant	Kidney infection, cough, skin disease and ulcers.
38.	*Vicia faba* L.	Fabaceae	Beans	Herb	Seed	Stomach pain, asthma, swelling, tumors and cough.
39.	*Vitis vinifera* L.cv.	Vitaceae	Grapes	Climbing shrub	Fruits	Carminative purpose, small pox and chicken pox.

Among the 39 plant species recorded, 8 species were used in the treatment of skin diseases, 7 species are used in the treatment of dysentery, 5 plant species used in the treatment of asthma and abdominal pain, 4 plant species were recorded in the treatment of piles, kidney problems, digestive disorders and fever, 3 plant species were used to treat small pox, snake bites, heart disease, diabetics, hypertension, blood disorders and cough, 2 plant species were treat in allergies, cold, Head pain, menstruation problem, ulcer, cholera, rabies tumor, and one species for malaria, chest pain, cure eye problem, cooling, cancer, bronchitis, antiviral and anti toxic problems.

Mostly the plants are used in the study area to treat different ailments like antipyretic and gastro intestinal problem. Same findings were reported from other region of Pakisthan (Adnan *et al.*, 2012; Khan *et al.*, 2011). Generally, the diseases most treated by medicinal species are digestive disorders. These values are comparable to the results found by (Meddour *et al.*, 2010). Nowadays, natural food and herbal medicine have been suggested for the treatment of diabetes (Gupta and Kumar, 2002). The majority of plant species reported in the study area were used for blood purifying (Hamayun, 2004) purposes and each of the species was used to treat stomach or chest problem. These findings are in line with other ethnobotanical studies (Adnan *et al.*, 2012; Khan, 2003) where most plant species were reported to be used for the treatment of chest, fever or gastro intestinal related diseases. In Garhwal of Central Himalaya, (Kumar *et al.*, 2008) recorded a total of 61 plant species used by the local inhibitants for curing various diseases (dysentery, cold, cholera, fever etc.).







Conclusion

The present work total of 39 plants was selected for the ethnobotanical study. Most of the plants are used in several diseases and to treat a wide spectrum of human ailments and local healers in the preparation of various ethnomedicinal remedies. Thus the comprehensive study revealed for the information of local community and the importance of the plants and conserves the plant in Kanyakumari district.

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