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ISSN 0189-6016©2009**ETHNOMEDICINAL PLANTS AND THEIR UTILIZATION BY VILLAGERS IN KUMARAGIRI HILLS OF SALEM DISTRICT OF TAMILNADU, INDIA****C. Alagesaboopathi**

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Abstract

The present investigation deals with the ethnomedicinal plants of Kumaragiri Hills of Salem district, Tamilnadu. The indigenous knowledge of the village dwellers, the herbal medicine practitioners and other traditional healers and the native plants used for medicinal value were collected through questionnaire and personal interviewed during field trips. The study revealed some unknown medical uses of medicinal plants. The scientific name, family, vernacular name (Tamil), part used and traditional practice of 80 species, 65 genera and families are discussed here for the treatment of various ailments. The dicotyledons are represented by 73 species of 58 genera and 37 families while monocotyledons are represented by 7 species of 7 genera and 4 families. 91.25% dicotyledons and :8.75% monocotyledons were encountered .

Key words: Ethnomedicinal plants, Kumaragiri Hills, Traditional practice, Salem.

Introduction

Indian subcontinent is blessed with most varied and diverse soil and climate conditions suitable for the growth of veritable plant species. The indigenous people are well acquainted with the properties and uses of plants of their surroundings. People depend on the forest resources for various purposes like for wood, timber, non-timber forest products, medicines, food etc. (Pushpangadan, 1995). Plants have been used as medicines for thousands of years and are used today in their natural as well as processed from many medicinal plants which have been forgotten by modern man as a result of his dependence on the quick results of allopathic medicines and are being rediscovered because of growing awareness of unwanted side effects and others aspects of the later (Dwarakan and Alagesaboopathi, 1999). Plants have always been the source of medicines and have many uses to mankind. According to some earlier workers (Chopra et al., 1956; Jain, 1965; Kritikar and Basu, 1999; Nadkarni, 2001) plants have been used in traditional medicine for several thousand years (Abu-Rabia, 2005).

The knowledge of medicinal plants has been accumulated in the course of many centuries based on different medicinal systems such as Ayurveda, Unani and Siddha. In India, it is reported that traditional healers use 2500 plant species and 100 species of plants serve as regular sources of medicine (Pei, 2001). India is one of the twelve-megabiodiversity centers with 2 hot-spots of biodiversity in the Northeastern Region and Western Ghats. There are about 400 families in the world of the flowering plants; at least 315 are represented in India (Sharma, 2003).

Salem is one of the most important districts of Tamilnadu. It lies between 11°14'46" and 12°53'30" North latitude and between 77°32'52" - 78°53'05" East longitude. The district is mountainous in character. Enumerated below are some important Hills. They are Shevaroy Hills, Kolli Hills, Kalvarayan, Kanjamalai Hills, Suriyamalai, Kumaragiri Hills, Bodamalai and Palamalai. The district is well known for its unique assemblage of vegetation wealth.

In the present study, 80 medicinal plant species were surveyed to assess their therapeutic significance in managing various diseases. Ethnomedicinal exploration was conducted in the different localities of the Kumaragiri Hills and numbers of valuable data on the uses of indigenous medicinal plants were recorded.

Materials and Methods

Periodic field trips for ethnobotanical exploration were undertaken during November 2007 to April 2008 in Kumaragiri Hills of Salem district. During the surveys personal interviews were conducted with the village dwellers, the herbal medicine practitioners and other traditional healers. Each of the plant material was assigned field book number and documented as to family, scientific name, vernacular name (Tamil), part used and medicinal uses, plant parts that were identified as having use in ethnobotany were collected and compressed. Plant species collected were identified with the help of flora books (Hooker, 1884; Gamble, 1936; Henry et al., 1987; Matthew, 1983). Voucher specimens are deposited in the herbarium of Botany Department, Government Arts College (Autonomous) Salem.

Results and Discussion

During present observation and interaction with the village dwellers, the herbal medicine practitioners and other traditional healers of Kumaragiri Hills. 80 angiospermic plants were enumerated with their medicinal importance. Out of 80 plant species studied, 7 is monocot and 73 is dicot. All the 80 species have medicinal uses. 10 species are used for snake bite. Several species are used for jaundice, asthma, gonorrhoea, dyspepsia, diarrhoea and rheumatism. Species such as *Chloris barbata*, *Coccinia indica*, *Ficus glomerata*, *Gymnema sylvestris*, *Cyanodon dactylon* and *Syzygium cumini* are used to treat diabetes. Plants like *Butea frondosa*, *Carica papaya* and *Vetiveria zizanioides* are used to manage blood pressure. Pyresis is treated effectively with *Andrographis echinoides*, *Andrographis paniculata* and *Sida acuta*. The local people utilize *Abutilon indicum*, *Achyranthes aspera* and *Santalum album* as anti-diuretic agents.

People also make use of *Argemone mexicana*, *Calatropis gigantea*, *Euphorbia antiquorum*, *Gloriosa superba*, *Melia azedarach*, and *Ocimum sanctum* to treat leprosy. For treating skin diseases, *Azadirachta indica*, *Cissus quadrangularis*, *Solanum nigrum* and *Vernonia cinerea* are excellent remedies. Due to more demand of ethnomedicinal plants and more profit, local villagers have been motivated for conservation and cultivation of these plant species.

Enumeration:

The plant species are arranged in alphabetical order. Each plant is followed by its family, vernacular name (Tamil). The medicinal uses are described with details such as the part(s) used singly, combination with other ingredients or mixed with other plants, methods of preparation and mode of administration. The following is the list of 80 plants studied.

1. *Abutilon indicum* L. (Malvaceae). Vernacular name: Thuthi. Roots and leaves decoction is given for diuretic and purgative. The leaf paste is used in toothache.
2. *Acacia leucophloea* Willd. (Mimosaceae). Vernacular name: Vel – Velam. Leaf juice is given to treat fever and stomachache. Leaf juice 50ml mixed with cow's milk used to bleeding piles.
3. *Acalypha indica* L. (Euphorbiaceae). Vernacular name: Kuppaimeni. The whole plant powder is used in toothache. The leaf paste is applied on bed-sores.
4. *Achyranthes aspera* L. (Amaranthaceae) Vernacular name: Nayuruvi. Leaves decoction taken orally with water in stomach problems, diuretic, piles and skin diseases.
5. *Acorus calamus* L. (Aroideae). Vernacular name: Vashambu. Decoction of the rhizome is taken internally to treat dyspepsia, asthma and diarrhoea.
6. *Adathoda vasica* Nees (Acanthaceae). Vernacular name: Adathoda. The decoction of the leaves and root is given in asthma, dysentery and diarrhoea.
7. *Aegle marmelos* L. (Rutaceae). Vernacular name: Vilvam. Decoction of the fruit is used as dysentery and dyspepsia. Decoction of the stem and root powder of the plant would cure fever.
8. *Aloe barbedensis* Mill. (Liliaceae). Vernacular name: Gheekunvar. The juice of the whole plant is taken as remedy for jaundice, fever, rheumatism and piles.
9. *Andrographis echinoides* Nees. (Acanthaceae). Vernacular name: Gopuramthangi. Juice of leaves taken orally in antipyretic, anthelmintic and stomachache problems.
10. *Andrographis paniculata* Nees. (Acanthaceae). Vernacular name: Nilavembu. Decoction of the leaves is taken to treat dyspepsia, anthelmintic and stomachache, Decoction of the root is given in tonic and antipyretic.
11. *Anisomeles indica* O.Kze. (Lamiaceae). Vernacular name: Paeyemarati. Leaf juice is given to fever and dyspepsia. The leaf paste is applied on snake bites and scorpion sting.

12. *Anisomeles malabarica* R.Br. (Lamiaceae). Vernacular name: Siriyapaeyamarati. Leaf juice used in fever and stomachache. The leaf of juice mixed with water to drink which cure scorpion sting and snake bite.
13. *Annona reticulata* L. (Annonaceae). Vernacular name: Ram-sitapalam. Decoction of the bark is useful in astringent and tonic. Fruit juice given orally as vermifuge.
14. *Argemone mexicana* L. (Papaveraceae). Vernacular name: Perammathandu. The leaf decoction is given in ulcers and malarial fever. Seeds are useful in dropsy, jaundice, leprosy and alterative. Yellow juice of plant is applied on scorpion sting.
15. *Aristolochia bracteata* Retz. (Aristolochiaceae). Vernacular name: Aduthinnapalai. Decoction of the whole plant mixed with castor oil, which cures fever and worms. Leaves paste applied externally in skin diseases and snake bite.
16. *Aristolochia indica* L. (Aristolochiaceae). Vernacular name: Perumarindu. Decoction of the whole plant mixed with honey used for leprosy. Roots paste applied externally on snake bite and scorpion sting.
17. *Azadirachta indica* A.Juss. (Meliaceae). Vernacular name: Vembu. Decoction of the bark is useful in liver tonic. Paste of leaves is applied on skin diseases. Leaf juice is given internally in fever.
18. *Boerhaavia diffusa* L. (Nyctaginaceae). Vernacular name: Mookarattai. Decoction of the whole plant is employed in cough, scabies and jaundice.
19. *Bougainvillea spectabilis* Willd. (Nyctaginaceae). Vernacular name: Kaaghithapoo. Leaves juice is given in jaundice, dysentery and diarrhoea. Roots are used in cough and fever.
20. *Butea frondosa* Koen. (Papilionaceae). Vernacular name: Porasan. Juice of leaves is given in antiseptic, alterative and blood pressure.
21. *Cadaba indica* Lam. (Capparidaceae). Vernacular name: Viluthi. The leaf and flowers of 50ml juice mixed with castor oil and turmeric is taken as remedy for menorrhagia, purgative and syphilis.
22. *Calophyllum inophyllum* L. (Cuttiferaceae). Vernacular name: Punnaivirai. Ten to fifteen gram of leaf is made into paste with few drops of hot water. This paste is applied externally on rheumatism and gonorrhoea. Fresh bark juice is taken for eye disease.
23. *Calotropis gigantea* (L) R.Br. (Asclepiadaceae). Vernacular name: Erukku. The plant powder mixed with cow's milk it is used as a leprosy, syphilis, ulcer, dysentery, diarrhoea and rheumatism. Decoction of the flowers is taken as cough and asthma.
24. *Calotropis procera* L. (Asclepiadaceae). Vernacular name: Vellerukku. Roots in the form of paste are applied to toothache. The flowers powder mixed with black pepper and drink to treat snake bite and cholera.
25. *Canna indica* L. (Musaceae). Vernacular name: Kalvazhai. The rhizome and fresh fruit of juice mixed with water to drink which cure fever, dropsy and dyspepsia.
26. *Cardiospermum luridum* L. (Sapindaceae). Vernacular name: Moddacoatan. The whole plant powder mixed with goat's milk to drink which cure snake bite. The plant paste is applied on swelling joints and rheumatic pains.
27. *Carica papaya* L. (Caricaceae). Vernacular name: Pappali. Flower used in anthelmintic. Fruit decoction used in blood pressure.
28. *Cassia auriculata* L. (Caesalpiniaceae). Vernacular name: Avarai. Juice of seeds used orally for 4 days in diabetes and chylous urine. Leaves juice used in heart diseases and eye troubles.
29. *Centella asiatica* Urban. (Apiaceae). Vernacular name: Vallarai. Leaf Juice is given to improve memory and youth.
30. *Chloris barbata* SW. (Poaceae). Vernacular name: Grass. Leaves paste applied externally in skin diseases. Leaves juice is used in fever, diarrhoea and diabetes.
31. *Cissus quadrangularis* L. (Vitaceae). Vernacular name: Perandai. The whole plant powder taken orally with cow's milk in asthma. Plant extract taken orally in skin diseases.
32. *Citrus medica* L. (Rutaceae). Vernacular name: Naraththankayi. Leaves juice used as fever and dyspepsia.
33. *Cleome viscosa* L. (Capparidaceae). Vernacular name: Nayi-velai. Seed paste taken orally with hot water in anthelmintic and liver complaints.
34. *Clitoria ternatea* L. (Fabaceae). Vernacular name: Sangupoo. Leaf Juice is given internally in dropsy and antipyretic.
35. *Coccinia indica* W. (Cucurbitaceae). Vernacular name: Kovai. Leaf juice is mixed with honey and given for diabetes and bronchitis.
36. *Crotalaria verucosa* L. (Fabaceae). Vernacular name: Narimiratti. Flowers powdered with cow's milk are given in scabies. Fruits juice is given to dysentery and diarrhoea.
37. *Cyanodon dactylon* Pers. (Poaceae). Vernacular name: Arugampullu. Decoctions of plant are given in diabetes, chronic ulcers and promote coolness.

38. *Datura metal* L. (Solanaceae). Vernacular name: Umathai. Juice of leaves is used in antispasmodic, asthma and chronic ulcers.
39. *Datura stramonium* L. (Solanaceae). Vernacular name: Periyamathai. Decoction of leaves is useful in rheumatism, toothache and earache.
40. *Eclipta alba* Hassk. (Asteraceae). Vernacular name: Karishalanganni. Decoction of leaves used in tonic, jaundice and skin diseases.
41. *Embllica officinalis* Gaerth. (Euphorbiaceae). Vernacular name: Nellikkai. Dried fruit powder is used in diarrhoea, anaemia, jaundice and dyspepsia. The leaf juice mixed with black pepper and drink to treat scorpion sting.
42. *Ervatamia coronaria* Steapf. (Apocynaceae). Vernacular name: Nandhiyavatai. Two gram leaf powder with honey is used five days to cure rheumatism, dysentery, dyspepsia and diarrhoea. Decoction of the roots is a taken as alterative.
43. *Euphorbia antiquorum* L. (Euphorbiaceae). Vernacular name: Shadurakkly. Latex is applied earache, dropsy, syphilis and leprosy.
44. *Euphorbia hirta* L. (Euphorbiaceae). Vernacular name: Ammampachcharisi Crushed leaves mixed with goat's milk used in dysentery, diarrhoea and asthma.
45. *Evolvulus alsinoides* L. (Convolvulaceae). Vernacular name: Vishnukaranti. The whole plant powder mixed with hot water to drink which cure syphilis, diarrhoea, dysentery and nervous debility.
46. *Ficus benghalensis* L. (Moraceae). Vernacular name: Alamaram. Latex is applied on sores, ulcers and rheumatism. Decoction of the bark and seed powder of the plant cures gonorrhoea and dysentery.
47. *Ficus glomerata* Roxb. (Moraceae). Vernacular name: Atti. Decoction of the leaves and bark is used in dysentery. Seed powder mixed with honey, which cures diabetes and dysentery.
48. *Ficus religiosa* L. (Moraceae). Vernacular name: Arashamaram: Leaves in the form of paste are applied in skin diseases. The dried bark powder mixed with honey it is used as an aphrodisiac.
49. *Gloriosa superba* L. (Liliaceae). Vernacular name: Kalappai Kilangu. Decoction of the tuber is taken internally to treat aphrodisiac. Tubers are ground and a half glass of the tuber juice is mixed with goat's milk and taken orally to treat leprosy, gonorrhoea and piles.
50. *Glycyrrhiza glabra* L. (Fabaceae). Vernacular name: Athimathuram. The root powder mixed with hot water to drink which cure throat pain.
51. *Gymnema sylvestre* R.Br. (Asclepiadaceae). Vernacular name: Shiru-kurunja. The juice of the leaves is used to cure urinary complaints and diabetes.
52. *Heliotropium indicum* L. (Boraginaceae). Vernacular name: Nakkipoo. The leaf juice mixed with hot water is used in snake bite and scorpion sting.
53. *Ixora coccinia* L. (Rubiaceae). Vernacular Name: Vitche. The flowers and root of juice mixed with sugar is used to cure diarrhoea, fever and dysentery.
54. *Lantana camara* L. (Verbinaceae). Vernacular name: Arippu. The juice of the leaves mixed with cow's milk is used in snake bite and insect bites.
55. *Leucas aspera* Spreng. (Lamiaceae). Vernacular name: Thumbi. The leaf juice mixed with water which is taken as a cooling medicine for scabies. The root juice is mixed with goat's milk three times a day for four days to cure any poisonous bite.
56. *Lippia nodiflora* Mich. (Verbinaceae). Vernacular name: Poduthalai. The decoction of the plant is used to cure astringent and diarrhoea.
57. *Melia azedarach* L. (Meliaceae). Vernacular name: Mallayvembu. The flowers powdered with cow's milk are used to cure headache. The leaf paste is applied externally to cure leprosy, skin diseases and nervous disorders.
58. *Mimusops elengi* L. (Sapotaceae). Vernacular name: Maghizham. The decoction of bark, fruit and seeds are used in tonic, fever, diarrhoea and headache.
59. *Mirabilis jalapa* L. (Nyctaginaceae). Vernacular name: Andhimalli. The Leaf juice mixed with water which cures jaundice, dysentery, diarrhoea and dyspepsia.
60. *Mollugo midicalis* Lam. (Aizoaceae). Leaf juice is given to earache and antiseptic.
61. *Morinda tinctoria* L. (Rubiaceae). Vernacular name: Nuna. Decoction of the leaves is taken to treat tonic and febrifuge. A decoction of the roots mixed with black pepper used in diarrhoea and dysentery.
62. *Ocimum basilicum* L. (Lamiaceae). Vernacular name : Thirunetrupachilai. Leaf juice is used in urinary problems. The leaf juice when mixed with water used in cooling medicine gonorrhoea.
63. *Ocimum sanctum* L. (Lamiaceae). Vernacular name: Tulasi. The juice of the leaves is used in fever, leprosy and cough.
64. *Opuntia dillenii* Haw. (Cactaceae). Vernacular name: Sappathikali. The fruits are used in gonorrhoea. The fruits paste is applied on snake bite and dog bite.
65. *Pedaliium murex* L. (Pedaliaceae). Vernacular name: Anai-nerinji. The leaf extract is used against fever.

66. *Pergularia daemia* L. (Asclepiadaceae). Vernacular name : Veliparuthy. The paste of the leaf with black pepper is applied on forehead for the relief of headache. The decoction of the leaves is used in treatment of asthma and snake bite.
67. *Phyllanthus anarus* L. (Euphorbiaceae). Vernacular name: Kizhanelli. Decoction of the whole plant mixed with sugar is taken as remedy for jaundice and liver complaints.
68. *Pterocarpus marsupium* Roxb. (Papilionaceae). Vernacular name: Uthiravenkai. Decoction of the bark is useful in menses stomachache problems.
69. *Punica granatum* L. (Punicaceae). Vernacular name: Madulai. The flower buds mixed with salt are used in bronchitis, dysentery and diarrhoea.
70. *Quomoclit pinnata* L. (Convolvulaceae). Vernacular name: Mayilmaniccum. The juice of the leaves is used in bleeding piles and abdominal pain.
71. *Santalum album* L. (Santalaceae). Vernacular name: Sondhanam. Decoction of bark for sedative and diuretic. Leaf extract with cow's milk is taken orally three times a day for four days to get relief from gonorrhoea.
72. *Sida acuta* Burm. (Malvaceae). Vernacular name: Vathathiruppi. Fresh root is crushed with black pepper and is taken orally once daily for 7 days to cure antipyretic, diuretic and gonorrhoea.
73. *Solanum nigrum* L. (Solanaceae). Vernacular name: Manattakkali. The leaf and flowers of juice mixed with salt and black pepper to drink which cure skin diseases, piles and ulcer.
74. *Solanum surttense* L. (Solanaceae). Vernacular name: Kandan-katteri. Fruit paste is taken with cow's milk twice daily for seven days to cure toothache. The leaves are burnt and the ash is mixed with hot water and drink to treat dyspepsia and constipation.
75. *Solanum trilobatum* L. (Solanaceae). Vernacular name: Thuthuvalai. Juice extracted from crushed leaves is used asthma and lung diseases.
76. *Syzygium cumini* L. (Myrtaceae). Vernacular name: Naval. The fruits are given with hot water used to diabetes.
77. *Vernonia cinerea* (L.) Less. (Asteraceae) Vernacular name: Mukuthipundu. The whole plant is used as anthelmintic, alterative and skin disease.
78. *Vetiveria zizanioides* Nash. (Poaceae). Vernacular name Vettiver. Decoction of the rhizome is taken internally to treat blood pressure and stomachache problems.
79. *Vitex nugundo* L. (Verbinaceae). Vernacular name: Notchi. Leaf juice is given to vermifuge. Flowers powered with cow's milk are given in cholera and liver complaints.
80. *Withania somnifera* Dun. (Solanaceae). Vernacular name: Amukramkizhangu. Decoction of the leaves is taken as remedy for anthelmintic. The root powder mixed with black pepper used in rheumatic swellings.

Conclusion

The people of Kumaragiri Hills, Tamilnadu has been using numerous herbs of therapeutic purpose since time immemorial. Villagers chiefly depend on the herbs for all diseases. They are aware of the plant remedies for common ailments like diarrhoea, jaundice, rheumatism, dyspepsia, asthma, diabetes, dysentery, leprosy, antipyretic, gonorrhoea and skin diseases. They are also very familiar with the antidotes for snake bites and scorpion sting. Pharmacological and clinical traits will help in the confirmation of the efficacy of the report herbs. The use of the reported plant species were collected from the regional people, who use them as tradition. Therefore, it is not advisable to use them without consulting an experienced Siddha medicine practioner. For the benefit of the community the recorded plant species should be taken care of and also steps be taken for conservation as well as cultivation of these plant species.

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