A qualitative ethanobotanical survey was carried out among the local Irula tribals of Kalavai village, Vellore district, Tamil Nadu, to study the various medicinal plants that are used by the people for the treatment of common ailments such as fever, cold, cough, diabetes, jaundice, diarrhea, rheumatism, snake bite, and headache, in order to evaluate the potential medicinal uses of local plants. 250 respondents were interviewed. A total of 50 species of plants used by the local tribes of Kalavai are described in this study based on questionnaire, interviews and discussions with the local people. Several plants were found to be effective in curing asthma, skin disease, headache, wound healing, cough, cancer, fever, cold, rheumatism, hepatitis, diarrhea, paralysis, dyspepsia, ulcers, dysentery, tumors, some viral infections and scorpion bite. Conservation and cultivation of these plants is essential for sustaining the medicinal and cultural resource of mankind.

Key words: Folklore medicinal plants, Fruit plants, Ornamental plants, Vegetable, Medicinal plants.

INTRODUCTION

During the last few decades, there has been an increase in the study of medicinal plants and their traditional use in different parts of the world (Lev, 2006). Herbal remedies are considered as the oldest forms of health care known to mankind on this earth. Prior to the development of modern medicine, the traditional systems of medicine that have evolved over the centuries within various communities are still maintained as a great traditional knowledge base in herbal medicines (Mukherjee and Wahl, 2006). Traditionally, this treasure of knowledge has been passed on orally from generation to generation without any written document (Perumal Samy and Ignacimuthu, 2000) and is still retained by various indigenous groups around the world. Traditional folk medicine uses the knowledge, skills and practices based on the theories, beliefs and experiences indigenous to its cultures for maintenance of health. Documenting the indigenous knowledge through ethnomedical surveys is important for the conservation and utilization of biological resources. Ethnobotanical surveys have been found to be one of the reliable approaches to drug discovery (Fabricant and Farnsworth, 2001).

Several active compounds have been discovered from plants on the basis of ethnomedical information and are used directly as patented drugs (Carney et al., 1999). As indigenous cultures are closely maintained by the tribal and other forest dwellers throughout the world, the ethnobotanical investigation is a prerequisite for any developmental planning concerned with the welfare of tribals and their environment. It is an urgent necessity to record as quickly as possible all information about plants and the role of tribes in conserving them. The main focus of the present study is to obtain detailed information on the use of plants and their therapeutic practice among Irula tribes of Kalavai Village, Tamil Nadu.
MATERIALS AND METHODS

An ethnobotanical survey was carried out in Kalavai area, Vellore District, Tamil Nadu (Fig 1). The entire area of Kalavai, with latitude of 12.77 A° N and a longitude of 79.42 A° E, and an average elevation of 133 meters above the sea level is a populated place located in the state of Tamil Nadu, in India. The area receives an annual rainfall of about 996.7 mm. The minimum and maximum temperature varies between 22.78ºC and 31.11ºC. The ethnobotanical survey was carried out among the local population and a tribe called Irulas living in this area the members of tribal community were interviewed in their residential areas. Field visits were conducted several times.

Ethnobotanical data were collected according to the methodology suggested by (Jain, 2001). The ethnobotanical data were collected using questionnaire, interviews and discussions with the local people. 250 respondents were interviewed; which included males and females, who depend on plant as sources of medicines either for self medication or for treating others. The Flora of Presidency of Madras (Gamble, 1935) and an excursion flora of central Tamilnadu (Matthew, 1991) were used to ascertain the nomenclature of the plant species used for identification and authentication of the plants. Folklore medicinal plants are arranged in alphabetical order in Table 1 which represents their botanical names followed by the family, vernacular name, part used and ailments treated.

RESULTS AND DISCUSSION

The Study is based on the survey of traditional information on the medicinal plants from Kalavai of Vellore district. Present data are the general results of the ethnobotanical survey conducted from March 2010 to January 2011. The traditional informations regarding the medicinal uses of medicinal plants have been collected and are represented. During the study, it was found that 50 plant species are used as herbal remedy for the treatment of several ailments. Plants of families Euphorbiaceae and Malvaceae were largely represented (4 species each) followed by Asteraceae, Lamiaceae, Cucurbitaceae, Moraceae, Fabaceae and Solanaceae (3 sp each). The rest of the families recorded one or two species only. Among them, 42% plants were herbs, 27% tree species, 24% shrubs and 7% climber species (Chart 1). Among the various plant parts used, the leaves represent the major part used with 51%, while the use of others (whole plant - 7%, fruit - 13%, root - 3%, bark - 7%, latex - 5%, seed - 7%, and flower 7%) is relatively low (Chart 2). During this survey the responses were collected from the village herbalists, village dwellers, the herbal medical practitioner, elders and other traditional healers.

Several plants are appreciably effective in curing asthma, skin disease, headache, wound healing, cough, cancer, fever, cold, rheumatism, hepatitis, diarrhea, paralysis, dyspepsia, ulcers, dysentery, tumors, some viral infections and scorpion bite (Table 1). Species such as Marsilea minuta L, Momordica charantia L and Syzygium cumini L are used to cure diabetes. Plants like Abutilon indicum and Azadirachta indica are used to manage leprosy.

Jaundice is treated effectively with Eclipta prostrata and Phyllanthus amarus. People also make use of Aegle marmelos and Catharanthus roseus to treat blood pressure. Few species namely, Andrographis paniculata, Azadirachta indica, Thebespia populnea and Cassia auriculata are used to treat several kinds of skin ailments. Some medicinal plants namely, Eucalyptus tereticornis (Smith), Eclipta alba L, Euphorbia Hirta L, Ficus religiosa L, Jatropha curcas L, Leucas aspera (Wild) and Momordica charantia L are used for various kinds of diseases. Due to the need for more of ethnomedicinal plants and more income local villagers have been motivated for conservation and cultivation of these plants.
Table 1: Medicinal plants used by local people from Kalavai, Vellore district of Tamil Nadu.

<table>
<thead>
<tr>
<th>S. No</th>
<th>Botanical Name and family</th>
<th>Vernacular Name</th>
<th>Parts used</th>
<th>Ailments treated</th>
</tr>
</thead>
<tbody>
<tr>
<td>01.</td>
<td>Euphorbia Hirta Linn. (Euphorbiaceae)</td>
<td>Ammaan pachcharsi</td>
<td>Leaves and fruit</td>
<td>Dysentery, diarrhea and pimples</td>
</tr>
<tr>
<td>02.</td>
<td>Jatropha curcas Linn. (Euphorbiaceae)</td>
<td>Katta amankku</td>
<td>Bark and latex</td>
<td>Stomach related problems during pregnancy</td>
</tr>
<tr>
<td>03.</td>
<td>Phyllanthus amarus Linn. (Euphorbiaceae)</td>
<td>Keela nelli</td>
<td>Root and fruit</td>
<td>Liver problems</td>
</tr>
<tr>
<td>04.</td>
<td>Acalypha indica L. (Euphorbiaceae)</td>
<td>Kuppaimeni</td>
<td>Leaves</td>
<td>Eczema and chest pain</td>
</tr>
<tr>
<td>05.</td>
<td>Abutilon indicum G. Don. (Malvaceae)</td>
<td>Thuthi</td>
<td>Leaves</td>
<td>Ulcer, diarrhoea, rheumatism and leprosy</td>
</tr>
<tr>
<td>06.</td>
<td>Hibiscus rosa-sinensis L. (Malvaceae)</td>
<td>Semparuththi</td>
<td>Flower</td>
<td>Cleaning hair</td>
</tr>
<tr>
<td>07.</td>
<td>Sida cordata (Malvaceae)</td>
<td>Arrival manippundu</td>
<td>Seed</td>
<td>Diarrhoea</td>
</tr>
<tr>
<td>08.</td>
<td>Thespesia populnea (Malvaceae)</td>
<td>Poovarasu</td>
<td>Leaves</td>
<td>Skin disease</td>
</tr>
<tr>
<td>09.</td>
<td>Eclipta prostrata Linn. (Asteraceae)</td>
<td>Manjal karisalanganni</td>
<td>Whole plant</td>
<td>Jaundice</td>
</tr>
<tr>
<td>10.</td>
<td>Eclipta alba L. (Asteraceae)</td>
<td>Karisalaanganni</td>
<td>Leaves</td>
<td>Hepatitis</td>
</tr>
<tr>
<td>11.</td>
<td>Tridax procumbens Linn. (Asteraceae)</td>
<td>Mookuthi chedi</td>
<td>Leaves</td>
<td>Wound healings</td>
</tr>
<tr>
<td>12.</td>
<td>Hibiscus rosa-sinensis L. (Malvaceae)</td>
<td>Semparuththi</td>
<td>Flower</td>
<td>Cleaning hair</td>
</tr>
<tr>
<td>13.</td>
<td>Sida cordata (Malvaceae)</td>
<td>Arrival manippundu</td>
<td>Seed</td>
<td>Diarrhoea</td>
</tr>
<tr>
<td>14.</td>
<td>Leucas aspera (Willd). (Lamiaceae)</td>
<td>Naithulasi</td>
<td>Flower and bark</td>
<td>Stomach upset</td>
</tr>
<tr>
<td>15.</td>
<td>Ocimum sanctum Linn (Lamiaceae)</td>
<td>Thulasi</td>
<td>Leaves</td>
<td>Cough and cold</td>
</tr>
<tr>
<td>16.</td>
<td>Ocimum americanum, L. (Lamiaceae)</td>
<td>Naithulasi</td>
<td>Flower and bark</td>
<td>Stomach upset</td>
</tr>
<tr>
<td>17.</td>
<td>Ocimum sanctum Linn (Lamiaceae)</td>
<td>Thulasi</td>
<td>Leaves</td>
<td>Cough and cold</td>
</tr>
<tr>
<td>18.</td>
<td>Clossia ternatea L. (Fabaceae)</td>
<td>Sangu pushpam</td>
<td>Latex</td>
<td>Eye and headache</td>
</tr>
<tr>
<td>19.</td>
<td>Seshania grandiflora (L.) Poiret (Fabaceae)</td>
<td>Agaththi</td>
<td>Leaves</td>
<td>Peptic ulcer</td>
</tr>
<tr>
<td>20.</td>
<td>Vigna mungo (L) Hepper (Fabaceae)</td>
<td>Ulunthu</td>
<td>Seed</td>
<td>Breast cancer</td>
</tr>
<tr>
<td>21.</td>
<td>Solanum nigrum L. (Solanaceae)</td>
<td>Mana thakkaali</td>
<td>Seed</td>
<td>Deworming and fever</td>
</tr>
<tr>
<td>22.</td>
<td>Solanum xanthocarpum Schrad (Solanaceae)</td>
<td>Kandan kattiri</td>
<td>Fruit</td>
<td>Paralysis and dyspepsia</td>
</tr>
<tr>
<td>23.</td>
<td>Solanum hirtum L. (Solanaceae)</td>
<td>Thuthuvalai</td>
<td>Leaves and Fruit</td>
<td>Cough and cold</td>
</tr>
<tr>
<td>24.</td>
<td>Ficus retusa Linn. (Moraceae)</td>
<td>Athi maram</td>
<td>Leaves and fruit</td>
<td>Diabetes, bone fracture; cold and swellings</td>
</tr>
<tr>
<td>25.</td>
<td>Ficus benghalensis L. (Moraceae)</td>
<td>Alamaram</td>
<td>Leaves</td>
<td>Heel cracks</td>
</tr>
<tr>
<td>26.</td>
<td>Bauhinia tomentosa Linn. (Caesalpiniaceae)</td>
<td>Mantharai</td>
<td>Leaves</td>
<td>Digestive disorders</td>
</tr>
<tr>
<td>27.</td>
<td>Cassia auriculata L. (Caesalpiniaceae)</td>
<td>Aavaram poo</td>
<td>Whole plant</td>
<td>Hair, body heat and diabetes</td>
</tr>
<tr>
<td>28.</td>
<td>Aegle marmelos Corr.ex Roxb (Rutaceae)</td>
<td>Vilmam</td>
<td>Leaves</td>
<td>Diabetes, blood pressure, dysentery and dyspepsia</td>
</tr>
<tr>
<td>29.</td>
<td>Karveppilai</td>
<td>Fruits, leaves &amp; seed</td>
<td>Vomiting, liver problem</td>
<td></td>
</tr>
<tr>
<td>30.</td>
<td>Catharanthus roseus G. Don. (Apocynaceae)</td>
<td>Nithyakalyani</td>
<td>Whole plant</td>
<td>Diabetes, high blood pressure and cancer</td>
</tr>
<tr>
<td>31.</td>
<td>Nerium oleander (Sol). (Apocynaceae)</td>
<td>Arali</td>
<td>Fruit edible</td>
<td>Ear pain</td>
</tr>
<tr>
<td>32.</td>
<td>Eucalyptus tereticornis (Smith) (Myrtaceae)</td>
<td>Thailamaram</td>
<td>Leaves and flower</td>
<td>Coughs, cold and chest pain</td>
</tr>
<tr>
<td>33.</td>
<td>Syzygium cumini Linn. (Myrtaceae)</td>
<td>Naval palam</td>
<td>Seed</td>
<td>Diabetes</td>
</tr>
<tr>
<td>34.</td>
<td>Isora coecinea L. (Rubiacae)</td>
<td>Idilipo</td>
<td>Leaves and flower</td>
<td>Liver toxicity</td>
</tr>
<tr>
<td>35.</td>
<td>Morinda tinctoria Roxb. (Rubiacae)</td>
<td>Nuna</td>
<td>Leaves</td>
<td>Dysentery</td>
</tr>
<tr>
<td>36.</td>
<td>Acalypha aspera Linn. (Amaranthaceae)</td>
<td>Nauruvi</td>
<td>Leaves</td>
<td>Snake bite</td>
</tr>
<tr>
<td>37.</td>
<td>Alternanthera sessilis L. (Amaranthaceae)</td>
<td>Ponaganikerai</td>
<td>Leaves</td>
<td>Headache, hepatitis and asthma</td>
</tr>
</tbody>
</table>
CONCLUSION

This study provides an ethnobotanical data of the medicinal plants used by the local people to cure different diseases. Moreover, it may promote a practical use of medicinal plants and the focus must be on its pharmacological validation.

ACKNOWLEDGEMENT

Authors are grateful to the people of different localities of Kalavai, Vellore District, for their kind support and cooperation during the study.

REFERENCES


How to cite this article: