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Ethnobotanical survey of folklore plants for the treatment of some disease in Thiruvallur district

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Abstract
Medical plants have played an important role in treating and preventing a variety of diseases throughout the world. In the present study, the medical plants were collected from 26 plant species belonging to 25 families were recorded. The survey aimed to identifying the plant used for the ground health of indigenous people of the study area in Thiruvallur district. In this study the most dominant family was *Euphorbiaceae* and leaves were most frequently used for the treatment of diseases.

Keywords: medical plants, *euphorbiaceae*, treatment

Introduction
Indigenous knowledge is the main resource of all the ethnobotanical investigations and is generally known as traditional ethnobotanical knowledge. Even today, 70% of the world's population relay on traditional plant medicine (World Health Organization 2002) [13]. Plants have been used in traditional medicine for thousands of years and herbal medicine are much in demand throughout the world (Abu-Rabia, 2005) [1]. The knowledge of medicinal plants has been accumulated in the course of many centuries based on different medicinal system such as Ayurveda, Unani and Siddha. Traditional medicinal knowledge of medicinal plants and their use by indigenous cultures are not only useful for conservation of cultural traditions and biodiversity but also for community healthcare and drug development in the present and future (Pei, 2001) [10]. Over 7,500 species of plants are estimated to be used 4,635 ethnic communities human and veterinary health across the country (Baba *et al*., 2012). The objective of this study was to interact with local traditional healers and document their usage and the types of diseases treated etc.

Materials and methods
Thiruvallur District, the study area lies between 12°15' and 13°15' N Latitude and 79°15' and 80°20' E Longitude. The district is surrounded by Kancheepuram District in the south, Vellore District in the west, Bay of Bengal in the East and Andhra Pradesh state in the North. The district spreads over an area of about 3422 sq.kms. The mean annual rainfall is 1152.8 mm, which is received largerly at North East Monsoon. Annual mean maximum and mean minimum temperatures are 37.9°C and 18.5°C. Paddy is major crop cultivated followed by Cumbu, Green gram, Black gram, Sugarcane & Groundnut. During the course of study several field trips were carried out from June – November 2017 in the study area. During the survey period, information was gathered using the method (Jain, 1964) [6]. The ethnobotanical data were collected using questionnaire, interviews and discussions in their local tribal people. The surrounding forested area and agricultural land of the villages were also surveyed with local knowledgeable elders for the identification of different medicinal plant species and their medicinal users. A totally more than 50 respondents were interviewed, these included males and females that depended on plant as source of medicines either for self-medication or for treating others. The samples of the specimens were collected in the field and deposited at L. N. Government College, Ponneri. The identification and nomenclature of the listed plants were done with the help of various 'Floras' such as, The Flora of Presidency of Madras (Gamble,1915) [3], The flowering plants of Madras City and its immediate Neighborhood (Mayuranathan, 1929) [8], An Excursion Flora of Central Tamilnadu (Matthew,1991) [7]. The revised and latest names of the plants were taken from Flora of Tamilnadu (Henry *et al*; 1983-89) [5]. Presented data are the general results of the ethnobotanical survey were done during June to November 2017.

Results and discussion
The results of the survey are presented in Table 1 and the botanical names are arranged in alphabetical order. In the present investigation 26 medicinal plants belonging to 25 genera and 20 families are used for the treatment of skin problems, cold, fever, headache, Gastro-Intestinal problem, Jaundice, Swelling in Joints, Toothache, poison(Snake, Rat and insect bites). For each species botanical name, family local name, parts used and medicinal uses are provided in Table 1.

Table 1: Medicinal Plants used by traditional healers

S.No	Botanical Name	Family	Local Name	Parts Used	Treatment
1	*Abutilon hirtum G. Don*	*Malvaceae*	*Vadettuti*	Root, Leaves	Ulcer, Leprosy, Jaundice
2	*Achyranthes aspera L.*	*Amaranthaceae*	*Nayurivi*	Root, Leaves	Abdominal disorder, toothache, healing bone fracture
3	*Ammania baccifera L.*	*Lythraceae*	*Nirumel – neruppu*	Leaves	Ringworm & other parasitic skin infection
4	*Andrographis paniculataa(Burm.f.)*	*Acanthaceae*	*Nilavembu*	Leaves	Diabetics, snake bites.
5	*Bauhinia purpurea L.*	*Caesalpiniaceae*	*Mandharai*	Bark, Flowers	Diarrhoea, Laxative
6	*Calotropis gigantea (L.) R.Br.*	*Asclepiadaceae*	*Erukkan*	Whole plant, latex	Snake bite, Swelling in joints, Leprosy
7	*Cassia occidentalis L.*	*Caesalpiniaceae*	*Pey-averai*	Leaves, flowers	Skin problems, Cough, healing bone fracture, insect bites
8	*Cassia tora L.*	*Caesalpiniaceae*	*Tagarai*	Leaves	Ring worm, skin disorder, abdominal disorder
9	*Cantheranthus roseus (L.) G. Don Gen*	*Apocynaceae*	*Nithyakalyani, Sudugatu malli*	Flower	Diabetes, Blood pressure
10	*Centella asiatica (L.) ureban*	*Apicaeae*	*Vallarai*	Leaves	Brain tonic, digestive disorder
11	*Cymphostemma setosum*	*Vitaceae*	*Pulinarali*	Leaves	Piles, worm infestation
12	*Dioscorea pentaphylla L.*	*Dioscoreacee*	*Nalveli – Kilangu*	Root, Tubers	Swelling
13	*Dodonea viscosa Jacq*	*Sapindaceae*	*Ivirali*	Leaves	Swelling, Wounds
14	*Euphorbia hirta L.*	*Euphorbiacae*	*Ammanpatcharisi*	Leaves, Latex	cough, Latex applied to warts
15	*Euphorbia thymifolia L.*	*Euphorbiacae*	*Sittrapaladai*	Leaves, Latex	Ring worms, Anthelmintic
16	*Hemidesmus indicus (L) Schult*	*Periplocaceae*	*Nannari*	Whole Plant	Diabetic, jaundice, Rheumatism, Diuretic
17	*Hugonia mystax L.*	*Linaceae*	*Motirakanni, Agori*	Bark, Root	Antidote to Poisoning, Swelling
18	*Jatropha curcas L.*	*Euphorbiaceae*	*Kattamanakku*	Leaf, Seeds	Constipation, Rat-Bite Poisoning, Abdominal Disorders, Skin Disorders
19	*Morinda pubescens J.E.Sm*	*Rubiaceae*	*Manjanuna*	Leaf, Fruit, Bark	Skin Disorders, Ulcers, Cough, Digestive disorders
20	*Pedalium murex L.*	*Pedaliaceae*	*Perunerunjil*	Whole Plant	Urino – Genital Disorders
21	*Pergularia daemia (Forssk) chiov*	*Asclepiadaceae*	*Vaeliparuthi*	Leaf	Worm Infestation, Poisoning
22	*Phyllanthus simplex Retz.*	*Euphorbiaceae*		Whole Plant	Eye Disease, Jaundice, Urinary disorder
23	*Plumbago zeylanica L.*	*Plumbaginaceae*	*Venkodiveli*	Root	Diarhoea, Piles, Skin infections
24	*Rivea hypocrateriformis(Derr.)*	*Convolvulaceae*	*Mistai*	Root, Leaves	Jaundice, Urino-genital disorder, Ulcer
25	*Tribulus terrestris L.*	*Zygophyllaceae*	*Nerunji*	Leaves, Fruit	Stomachic, lithotriptic, used in painful micturition
26	*Vitex negundo L.*	*Verbenaceae*	*Vennochi*	Leaves, dried fruit	Fever, heaviness of head, dullness of hearing, vermifuge

The tribal peoples of western Madya Pradesh of India used in 13 plants for the treatment of Jaundice (Samvatsar and Diwanji, 2000) [11]. Various studies have reported on the indigenous use of medicinal plants in the treatment of oral diseases (Tapsoba and Deschamps 2006, and Hebbar *et al*., 2004,) [12, 4]. *Andrographis paniculata, Catharanthus roseus, Hemidesmus indicus* were used to treat diabetes by the local traditional healers. Maximum number of plants was used for skin diseases, followed by gastro-intestinal disorders, antidote to poisoning (rat bite, snake bite, scorpion) and Jaundice. The dose of drugs always depends on the age of patient, type, or severity of illness. In the present study only one plant species (Vitex negundo) was noted as to relief from headache. Whereas (Muthu *et al*., 2006 *and* Busia, 2005) [9, 2] reported eight and thirty seven plant species for headache respectively. Different parts of medicinal plants were used as medicine by the local people. Among the different plant parts, the leaves were most frequently used for the treatment of diseases followed by the root, whole plant parts, latex, stem bark and fruit. In view of the importance of traditional medicine which provides health services to 75 – 80% of the world populations, increased demand of herbal drugs by the pharmaceuticals and depleting natural plant resources, it is high time to document the medicinal utility of less known plants available in remote areas of country (Zaidi and Crow 2005) [14].

Conclusion

The interest in bio-dynamic phytotheraphy has been increased many fold all over the world because of reasonably safe and affordable remedies for many diseased conditions. In developing countries like India, the indigenous systems of medicine together with folklore medicine continue to play a significant role in the health care system of the population. The present communication deals with 26 medicinal plants which are extensively used by local people of Ponneri and prominently the uses are novel and new ones.

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