

# Medico - Botanical studies of angiosperms from select areas of Agastheeswaram Taluk in Kanyakumari District, Tamilnadu, Southern India

Jerlin Deletta. G and B. Parthipan\*

P.G. & Research Department of Botany, S.T.Hindu College, Nagercoil, Tamilnadu (Affiliation of Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli- 627 012, Tamilnadu, India)

\*Corresponding author- E.mail : parthipillai64@gmail.com

## ABSTRACT

The present study highlights some important medicinal plants used in Agastheeswaram Taluk, Kanyakumari District, Tamilnadu, Southern India. Medicinal plants have been continuously used to cure various ailments both for human beings and veterinary uses in the study area. Extensive field surveys are conducted in 12 areas for about two years from October 2014- October 2016 to survey the medicinal plants and collect the information from villagers. A total of 319 medicinal plant species used by local people were documented. These medicinal plant species were distributed in 241 genera belonging to 84 families and 36 order under 8 clades / groups. Among the 319 species, 283 species belongs to dicotyledons and 36 species belongs to monocotyledons. The dominant clade is Rosides (127 species from 92 genera) followed by Asterids (116 species from 90 genera), Monocots (36 species from 29 genera), Superasterids (26 species from 18 genera). The most dominant family in the present study area is Fabaceae with 44 species. Next to that Apocynaceae (18 species), Asteraceae (17 species), Acanthaceae and Lamiaceae (15 species each). The dominant genera is *Ipomoea* (7 species) followed by *Crotalaria*, *Indigofera*, *Euphorbia*, *Phyllanthus*, *Solanum* and *Senna* (4 species each). The dominant habit of plant species is herbs (150 species) followed by shrubs (75 species), trees (49 species) and climbers (45 species). All these 319 medicinal plant species ethnomedicinally used, next to that 248 species used in folklore followed by Siddha (234 species), Ayurveda (200 species), Unani (94 species) and Homeopathy (42 species). This study focused the importance, utilization and conservation of the medicinal plants among the people.

**Keywords:** Ethnomedicine, Medicinal plants, Traditional uses, Agastheeswaram Taluk

## I. INTRODUCTION

Biodiversity brings enormous benefits to mankind from direct harvesting of plants and animals for food, medicine, fuel construction material, and other uses to aesthetic, cultural, recreational and research values. Many plant species used for medicinal purposes by local people for long time in the human history was documented in Vedic literature of Charak Samhita and Sushruta Samhita (Pushpangadan, 1995). According to Schippmann *et al.* 2002 more than 50000 species are used for medicinal purposes worldwide, of

which almost 13% are flowering plants. The World Health Organisation (WHO) estimated that 80% of the populations rely on traditional medicines, mostly plant drugs, for their primary health care needs in developing countries (Farnworth *et al.*, 1985)

Over 8000 plant species are used in traditional and modern medicine in India (Planning Commission, 2002), and 90- 95% collection of medicinal plants is from the wild, of which more than 70% collection involves destructive and unscientific extraction.

Approximately 1500 species of vascular plants are used for medicinal purposes by tribal and ethnic groups in India (Muthu *et al.*, 2006). Over 70% of the plant collection involves destructive harvesting because of the use of the parts like roots, bark, wood, stem and the whole plant in case of herbs. The assessments done so far for the prioritized native medicinal species have resulted in the assignment of threatened status to nearly 200 plant species (Ved *et al.*, 2005).

However, Ethnomedicine is specifically referred to as the study of traditional medical practice which is concerned with the cultural interpretation of health, diseases and illness and also addresses the healthcare seeking process and healing practice of people (Krippner, 2003). Ethnobotanical research can be a door into cultural realities as well as a way to understand the future of human relationships. The study of the indigenous herbal medicine can therefore, serve to validate and enhance the existing local uses, and to provide clues to remedies (Joshi and Edington, 1990). Medicinal plants and their uses in the indigenous medicine are well known to many Indian communities. The recent trend has been to blend the traditional knowledge with modern health care practices to provide effective health care services to a wider population (Chetna and Anoop, 2009)

Many ethnomedicinal studies have been conducted in different parts of world (Friedman *et al.*, 1986; Joud *et al.*, 2001; Eddouks *et al.*, 2002; Saleh Al-Qura's, 2007; Muthu Kumar and Samuel, 2010; Misra *et al.*, 2012; Singh *et al.*, 2013; Jyothi and Suresh Kumar, 2014; Johnson *et al.*, 2015; Deori, 2015; Aadhan and Anand, 2017) Thus, it is clear that ethnomedicinal studies are undertaken by many researchers worldwide in different levels.

In Kanyakumari also some of the medico- botanical researches have been brought out (Kingston *et al.*, 2009; Sukumaran and Raj, 2010; Sathya Geetha *et al.*, 2010; Meena *et al.*, 2010; Renuga *et al.*, 2013; Lohidas

*et al.*, 2014; Sukumaran *et al.*, 2014; Uma and Parthipan, 2015; Ida and Arul, 2016). A review of literature revealed that the medico botanical studies in Agastheeswaram Taluk is limited especially the traditional knowledge on the plant use of local people. The documentation of various uses of medicinal plants species and their distribution are much essential for proper conservation and management of medicinal plants. Hence this work concentrates on traditional knowledge of medicinal plants and conservation along with therapeutic uses of some important medicinal plants used by the villagers of Agastheeswaram Taluk, Kanyakumari District, Tamilnadu, India.

## II. MATERIALS AND METHODS

### Study area

Kanyakumari is the southernmost district of Tamil Nadu. This district lies between 77°07'- 77°35' E, 08°05'- 08°35' N, and it occupies an area of about 1672 sq. km. The District is bound by Tirunelveli District on the north and the east. The South Eastern boundary is the Gulf of Mannar. On the South and the South West, the boundaries are the Indian Ocean and the Arabian Sea. On the West and North West it is bound by Kerala. The rainfall varies from 103-310 cm and altitude is about 1,829 m asl (Raj, 2002). Topographically, the district may be broadly classified as coastal, middle, and mountainous regions (Henry and Swaminathan, 1981 and Spillett, 1968). This district is comprised of four Taluks namely, Agastheeshwaram, Thovalai, Kalkulam and Vilavancode. In Agastheeswaram Taluk 21 towns and 19 villages were located, Out of these only 12 areas were selected for the study area is given (Table 1 and Fig. 1).

### Medicinal plant survey

An extensive systematic field survey of the plants for the period of two years (Oct 2014 to Oct 2016). The

plant specimens were collected at various seasons and that different reproductive stages (flower either fruit or both) from their natural habitats. When floristic documentation of select areas in Agastheeswaram Taluk, interviews were conducted with local people, medicine men and elderly settlers near by the ponds for documenting indigenous knowledge of the local people and utilization value of the plant species. The interviews were made particularly for knowing medicinal value of the plants and plant parts used of each plant species the results were tabulated with all details (Jain, 1991).

### Preservation and identification of plant materials

The collected specimens are taxonomically identified with the help of various published monographs, taxonomic revisions and floras (Gamble and Fischer, 1915- 1935; Nair and Henry, 1983; Henry *et al.*, 1987; Henry *et al.*, 1989; Matthew, 1993; Mohanan and Henry, 1994; Santapau and Henry, 1994; Kabeer and Nair, 2009) and by using the field keys devised by Subramanyam (1962). Authentication of the identity of plant species were confirmed by specimens deposited in Botanical Survey of India, Southern Circle, Coimbatore, Jawaharlal Nehru Tropical Botanical Garden and Research Institute (JNTBGRD) Palode, Trivandrum, Kerala and Botany Department of Scott Christian College, Nagercoil. APG IV system of classification (2016) was followed to clarify the species were verified with IPNI (International Plant Name Index). The voucher specimens collected from the field were prepared the herbarium and were deposited in the P.G. & Research Department of Botany, S.T. Hindu College, Nagercoil.

### III. RESULTS AND DISCUSSION

The present study documents a total of 319 taxa distributed in 241 genera, representing 84 families as per APG IV classification. These taxa are distributed in 8 clades/ grades and 37 orders Table 2. 39% of the

taxa are reported from Rosids (127 species), 36% from Asterids (116 species), 11% from Monocots (36 species), 8% from Superasterids (26 species) are the major clades/ groups (Fig. 2). Of the recorded species in the present study area, Dicotyledons (283 species) belonging from 212 genera and 70 families was the largest number of plant groups followed by Monocotyledons (36 species) belonging from 29 genera and 14 families Table 3.

Order Fabales and Lamiales (46 species each), Caryophyllales (25 species), Gentianales (24 species), Malpighiales (22 species), Asterales and Solanales (19 species each), Poales (15 species), Malvales (14 species), Myrtales (11 species each), Sapindales (10 species), Brassicales (9 species), account for about 81 % of the species in the villages of Agastheeswaram Taluk (Fig. 3).

The most diverse families in the Agastheeswaram taluk include Fabaceae (44 species), Apocynaceae (18 species), Asteraceae (17 species), Acanthaceae and Lamiaceae (15 species each), Euphorbiaceae (14 species), Malvaceae (13 species), Amaranthaceae and Convolvulaceae (12 species each), Poaceae (8 species), Solanaceae 7 species), Cyperaceae (6 species), Cucurbitaceae, Boraginaceae, Phyllanthaceae and Commelinaceae (5 species each), whereas four families represented by four species each, Seven families represented by three species, Twenty one families represented by two species, Thirty five families represented by a single species (Table 4 and Fig. 4). Of the 319 taxa most dominant plant species are herbs (150 species) followed by shrubs (75 species), trees (49 species) and climbers (45 species) (Fig. 5).

The genus *Ipomoea* tops the list with 7 species, followed by *Crotalaria*, *Senna*, *Euphorbia*, *Indigofera*, *Phyllanthus* and *Solanum* (4 species each), *Alternanthera*, *Clerodendrum*, *Commelina*, *Cyperus* and *Ludwigia* (3 species each) (Fig. 6)

In the study, ethnobotanically used plants were also identified and are grouped in to medicinal (319 species) followed by food (39 species), ornamental (12 species), fodder (4 species), craft (3 species), cosmetics, manure and timber (1 species each) (Fig. 7).

All the medicinal plants collected from the present study area are used in Ethnomedicinal preparations by local people. Out of 319 medicinal plants species, 248 medicinal plant species are used in Folk medicines. 234 species are used in Siddha medicines, 200 species are used in Ayurveda medicines, 94 species are used in Unani medicines and 42 species are used in Homeopathy medicines (Fig. 8). Indigenous knowledge of folk is the important source of locating bio-resources of that locality. However people of the modern generation learn from their ancestors on the basis of keen observation only. The people have been using plant remedies against various ailments from time immemorial without knowing their effective constituents (Sukumaran and Raj, 2010; Anbarashan and Padmavathy, 2010).

Among these 319 medicinal plant species, different plant parts were used indigenously. Maximum plant parts are reported in leaves (150 species) followed by whole plant (106 species), roots (58 species), fruits (40 species), seeds (37 species), bark (25 species), flowers (24 species), stem (19 species), rhizome (6 species), shoots (5 species), wood (4 species) latex, timber and tubers (3 species each), twigs, petiole (2 species each) nuts and gum (1 species each) (Fig. 9). Among the different plant parts used in the preparation of medicine leaves are predominantly used. It is evident by the recent ethnobotanical studies confirmed the leaves are the major portion of the plant used in the treatment of diseases (Sajem and Gosai, 2010; Jeyaprakash *et al.*, 2011; David and Sundarsanam, 2011; Sahu, 2011; Mali and Bhadane, 2011)

About three fourths of the biologically active plant derived compounds presently in use globally have

been discovered through research on folk and ethno-medicinal uses (Jain *et al.*, 2007). The study showed that a good number of the collected plants were used for the treatment of multiple diseases. It was observed that different plants are used as medicines. The medicines are consumed in various forms like paste, powder, decoction, juice etc. There are 18 species used to treat snake bites, 8 species viz., *Achyranthes aspera*, *Amaranthus viridis*, *Argemone mexicana*, *Cleome gynandra*, *Gloriosa superba*, *Heliotropium indicum*, *Mimosa pudica* and *Nymphoides hydrophylla* are used to treat scorpion sting, five species viz., *Achyranthes aspera*, *Mikania micrantha*, *Murraya koenigii*, *Rhinacanthus nasutus* and *Thespesia populnea* are used to treat insect bites and five species viz., *Azadirachta indica*, *Carica papaya*, *Datura metel*, *Ipomoea pes-tigridis* and *Murraya koenigii* are used to treat dog bites.

The herbal preparations made from the traditional medicinal plants were mostly used for the treatment of skin diseases (73 species), cold (56 species), fever (46 species), wounds (40 species), ulcer (38 species), dysentery (37 species), cold (32 species), diarrhea (31 species), diuretic (28 species), asthma and rheumatism (25 species each), cuts, diabetics and digestive problems (19 species each), jaundice and piles (18 species each), toothache (17 species), body pain (15 species), urinary infections (14 species), ear problems and leprosy (13 species each), bronchitis and hair problems (12 species each), constipation (11 species), eye diseases, ringworm and kidney problems (10 species each), vomiting (5 species), carminative (8 species), heart diseases (7 species) etc.

Ethnomedicinal studies have offered immense scope and opportunities for the development of new drugs (Balakumar *et al.*, 2011; Raja *et al.*, 2011 and Joselin *et al.*, 2012). The instinctive knowledge about the medicinal plants was preserved by the local communities throughout India. This indigenous knowledge was older than the Ayurveda. However,

India did not have any formal ethnobotanical education until last decade. Currently, there are no measures taken specifically to conserve the various species of medicinal plants (Johnson *et al.*, 2015). So there is an urgent need for conservation of these plant species as many of them are able to unknown cures for modern day diseases.

#### IV. CONCLUSION

The present survey indicated that, the study area has diversified medicinal plants to treat wide spectrum of human ailments and also points out that certain species of medicinal plants are being exploited by the local residents. It is concluded that even though the accessibility of western medicine for simple and complicated diseases is available, many people in the study area are still continue to depend on medicinal plants at least for the treatment of some simple diseases such as cold, cough, fever, headache, poison bites, skin diseases and stomach problems.

A large number of people in the developed and developing countries using plant remedies for various ailments due to the modern medicines with danger of over medication and many side effects. The increasing cost of sophisticated medical care is another factor. The health assembly of the WHO passed a number of resolutions in response to the resurgence of interest in the study and use of traditional medicines in health care and in recognition of the importance of medicinal plants to the health system of many developing countries. The ethnobotanical information serves as a base for new compounds with active principles for phytochemical, pharmacognostical, pharmacological and clinical research. Medicinal plants are at increasing risk from destruction of their habitats, bioprospecting for new sources, and overharvesting of known medicinal species. Therefore, it becomes necessary to acquire and preserve this traditional system of knowledge by proper documentation and identification of plant specimens.

#### V. ACKNOWLEDGEMENTS

The authors are thankful to the management and the Principal of S.T.Hindu College, Nagercoil for granting permission to undertake this study.

#### VI. REFERENCES

- [1]. Aadhan, K. and S. P. Anand. (2017). Survey of medicinal plants used for the treatment of diabetes by the Paliyars tribe in Sadhuragiri Hills, Tamilnadu, India. *International Journal of Herbal medicine.*, 5(3):17-35.
- [2]. Anbarashan, M., Padmavathy, A. (2010). Ethno-medicinal plants in five sacred groves in Cuddalore District, Tamilnadu, India. *Ethnobotanical leaflets.*, 14:774-780
- [3]. APG IV. (2016). An update of the Angiosperm Phylogeny Group Classification for the orders families of flowering plants. *Bot. J. Linn. Soc.*, 181:1-20.
- [4]. Balakumar, S., S. Rajan., T. Thirunalasundari and S Jeeva. (2011) Antifungal activity of *Aegle marmelos* (L.) Correa (Rutaceae) leaf extract on dermatophytes. *Asian Pac. J. Trop. Biomed.*, 1(4): 309-312.
- [5]. Chetna Bisht and Anoop Badoni (2009). Distribution and Indigenous Uses of Some Medicinal Plants in District Uttarkashi, Uttarakhand, India. *Distribution and Indigenous Uses*, 1(6): 38-40.
- [6]. David B.C. and Sudarsanam G. (2011). Ethnomedicinal plant knowledge and practice of people of Javadhu hills, Tamilnadu. *Asian Pac J Trop Biomed.*, 1(S1): S79-S81.
- [7]. Deori, M. (2015). Vascular hydrophytic medicinal plants of Morigaon district, Assam.

- International Journal of Humanities, Arts, Medicine and Sciences., 3(4): 17-22.
- [8]. Eddouks, M., M. Maghrani., A. Lemhadri., M. L. Quahidi and H. Joud. (2002). Ethnopharmacological survey of medicinal plants used for the treatment of diabetes mellitus, hypertension and cardiac diseases in the south- eastern region of Morocco. *J. Ethnopharmacol.*, 82:97-103.
- [9]. Farnsworth N, Akerele AO, Binge AS, Soerjarto DD, Guo Z. (1985). Medicinal plants in therapy. *Bull World Health Organ.*, 63: 965-981.
- [10]. Friedman, J., Z. Yaniv., A.Dafni, and D. Palevitch. (1986). A preliminary classification of the healing potential of medicinal plants, based on a rational analysis of an ethnopharmacological field survey among Bedouins in the Negev Desert, Israel., *J. Ethnopharmacol.* 16:275-278.
- [11]. Gamble, J.S and Fischer, C.E.C. (1915-1935). *Flora of the Presidency of Madras (Vol. 1-3)*, London: Adlord and Sons Ltd. pp 1389.
- [12]. Henry, A.N., Kumari, G.R. and V. Chitra. (1987). *Flora of Tamil Nadu, India. Series I: Analysis. Volume 2.* Coimbatore: Botanical Survey of India. p 258.
- [13]. Henry, A.N., Chitra, V. and N.P. Balakrishnan. (1989). *Flora of Tamil Nadu, India. Series II: Analysis. Volume 3.* Coimbatore: Botanical Survey of India. p171.
- [14]. Henry, A. N and M. S. Swaminathan. (1981). Observations on the vegetation of Kanniyakumari District. *Bull. Bot. Surv. India.*, 23(3&4):135-139.
- [15]. Ida Jespin, C. and A.Anami Augustus Arul. (2016). Ethnobotanical study of Kani tribes in Keeriparai of Kanyakumari district, South India. *International Education & Research Journal.*, 2(3):49-52.
- [16]. Jain, S.K, (1991). *Dictionary of Indian Folk medicine and Ethnobotany: A reference manual* f man-plant relationships, Ethnic groups and Ethnobotanists in India, Deep publications; 311p
- [17]. Jain, A., Roshnibala, SS., Kanjilal, P. B., Singh, R.S and Singh H.B. (2007). Aquatic / semi aquatic plants used in herbal remedies in the wetlands of Manipur, Northeastern India. *Indian J. Tradit. Knowle.*, 6:346.
- [18]. Jeyaprakash K, Ayyanar M, Geetha K.N., Sekar, T. (2011). Traditional uses of medicinal plants among the tribal people in Theni district (Western Ghats), Southern India. *Asian Pac J Trop Biomed* 1(S1): S20-S25.
- [19]. Johnson, M., M.Maharajan., N.Janakiraman. (2015). Floristic diversity and medicinal importance of South Vagaikulam region Tirunelveli, Tamilnadu, South India. *Journal of Medicinal Herbs and Ethnomedicine*, 1:125-129.
- [20]. Joselin , J., T.S.S .Brintha., A.R. Florence., S. Jeeva. (2012). Screening of select ornamental flowers of the family Apocynaceae for phytochemical constituents. *Asian Pac. J. Trop. Biomed.*, 2(S1): S260-S264.
- [21]. Joshi, A. R. and Edington, J. M. (1990). The use of medicinal plants by two village communities in the central development region of Nepal, *Ecobio.*, 44:71-83.
- [22]. Joud, H., M.Haloui., H. Rhiouani., J. Ehilay and M. Eddouks. (2001) Ethnobotanical survey of medicinal plants used for the treatment of diabetes, cardiac diseases in the noeth center region of Morocco. *J. Ethnopharmacol.*, 77:175-182.
- [23]. Jyothi, P.V. and Sureshkumar, S. (2014). Flora of medicinal significance in Kole wetlands of Ponnani, Kerala., *Journal of Aquatic Biology and fisheries.*, 2: 252- 259.
- [24]. Kabeer, K. A. A. and Nair, V.J. (2009): *Flora of Tamil Nadu-Grasses.* Coimbatore: Botanical Survey of India. pp 525.
- [25]. Kingston, C., S. Jeeva., G. M. Jeeva., S. Kiruba., B. P. Mishra and D. Kannan. (2009). *Indigenous Knowledge of Using Medicinal Plants in*

- Treating Skin Diseases in Kanyakumari District, Southern India. *Indian Journal of Traditional Knowledge.*, 8: 196-200.
- [26]. Krippner, S. (2003). Models of ethnomedicinal healing. *Ethnomedicine Conferences*, Munich, 26-27 April and 11-12 October, Germany
- [27]. Lohidas, J., V. B. Rathi Pappa and N. Simi (2014). Role of Holy Plants in Health Care System of the People in Kanyakumari District, Tamil Nadu, India. *Plant Archives.*, 14(1): 81-86.
- [28]. Mali, P.Y, Bhadane, V.V. (2011) Ethnomedicinal wisdom of tribals of Aurangabad district (M.S.), India. *Indian J Nat Prod Resour.*, 2(1): 102-109.
- [29]. Matthew, K. M. (1993). The flora of Tamilnadu Carnatic. Vol. I-III. The Rapinat Herbarium, Tiruchirappalli, Tamilnadu, India.
- [30]. Meena, R., R. Thirumal Thangam and H. Prabavathy. (2010). Indigenous medicinal usages of some meacrophytes of the wetlands in Agastheeswaram, kanyakumari district, TamilNadu. *Journal of Basic and Applied Biology.*, 4(3):117-122.
- [31]. Misra, K.M., Anima Panda and Deenabandhu Sahu. (2012). Survey of useful wetland plants of South Odisha, India. *Indian Journal of Traditional Knowledge.*, 11(4): 658-666.
- [32]. Mohanan, M. and Henry, A. N. (1994). Flora of Thiruvananthapuram, Trivandrum: Botanical Survey of India. 621pp.
- [33]. Muthu, C., A. Muniappan., N. Raja and S. Iganacimuthu. (2006). Medicinal plants used by traditional healers in Kancheepuram District of Tamilnadu, India. *J. Ethnobiology and Ethnomedicine.*, 2:43
- [34]. Muthukumar, K. and A. Selvin Samuel. (2010). Traditional herbal medicines of the coastal diversity in Tuticorin district, Tamilnadu, India. *Journal of Phytology.*, 2(8): 38-46.
- [35]. Nair, N.C. and Henry, A.N. (1983). Flora of Tamil Nadu, India. Series I: Analysis. Volume 1. Coimbatore: Botanical Survey of India.
- [36]. Planning Commission. (2000). Report of the Task Force on Conservation and Sustainable Use of Medicinal Plants. Government of India.
- [37]. Pushpangadan, P. (1995). *Ethnobiology in India –A Status Report*. All India Coordinated Research Project on Ethnobotany. MoEF, GoI, New Delhi,
- [38]. Raj, A.D.S. (2002). Profile of Kanyakumari District, <http://www.kanyakumari.tn.nic.in>.9-10.
- [39]. Raja, R.D.A., S. Jeeva., J.W. Prakash., M. Johnson and V. Irudayaraj. (2011). Antibacterial activity of selected ethnomedicinal plants from South India, *Asian Pac. J. Trop. Biomed.*, 4(5): 375-378.
- [40]. Renuga, F. Brisca and S. Mary Mettilda Bai. (2013). Natural Products Used by the Kanikkars of Kanyakumari District, Tamil Nadu, India. *J. of Pharmacognosy and Phytochemistry.*, 2(1): 255-261.
- [41]. Sajem A.L. and Gosai K. (2010). Ethnobotanical investigations among the Lushai tribes in North Cachar Hills districts of Assam, Northeast India. *Indian J Traditional Knowledge.*, 9(1): 108-113.
- [42]. Sahu, P.K. (2011). Plants used by Gond and Baiga women in ethnogynaecological disorders in Achanakmar wild life sanctuary, Bilaspur, C.G. *Int J Pharm Life Sci.*, 2(2): 559-561.
- [43]. Saleh AL- Qura'N. (2007). Ethnobotany of folk medicinal aquatic plants in Jordan. *The Botanical Review.*, 73(1): 51-65.
- [44]. Santapau, H. and Henry, A. N. (1994). A dictionary of the flowering plants in India. New Delhi: CSIR, pp 198.
- [45]. Sathya Geetha, V., M. Reginald Appavoo and S.Jeeva. (2010). Ecological status of Vadsery wetland, Kanyakumari district, Tamilnadu-India, *Journal of Basic & Applied Biology.*, 4(3):69-85.
- [46]. Schippmann, U., D. J. Leaman and A.D. Cunningham. (2002). Impact of cultivation and gathering of medicinal plants on Biodiversity: Global trends and issues. In (FAO). *Biodiversity and Ecosystem Approach in Agriculture*,

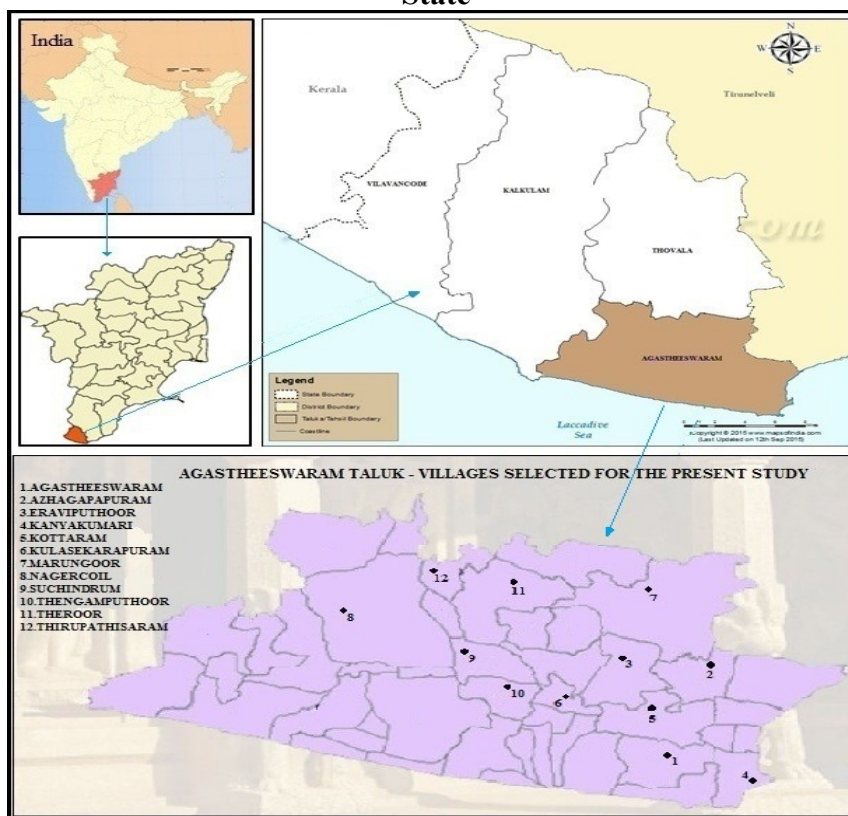
Forestry and Fisheries. Satellite Event on the Occasion of the Ninth Regular Session of the Commission on Genetic Resources for food and Agriculture. Rome.

- [47]. Singh, A., Manavendra Kumar Singh, Dharmendra Kumar Singh and Ritesh Singh. (2013). Ethnomedicinal studies on wetland plant diversity of district Buxar (Bihar, India). *Unique Journal of Pharmaceutical and Biological Sciences.*, 01(02):18-20.
- [48]. Spillett, J.J. (1968). A report on Wild Life Surveys in South and West India. *J. Bombay Nat. His. SOC.*, 65:661.
- [49]. Subramanyam K. (1962). Aquatic angiosperms. Council of Scientific and Industrial Research, New Delhi.
- [50]. Sukumaran S and Raj, A.D.S. (2010). Medicinal plants of sacred groves in Kanyakumari district

southern Western Ghats. *Indian Journal of Traditional Knowledge* ., 9:294-299.

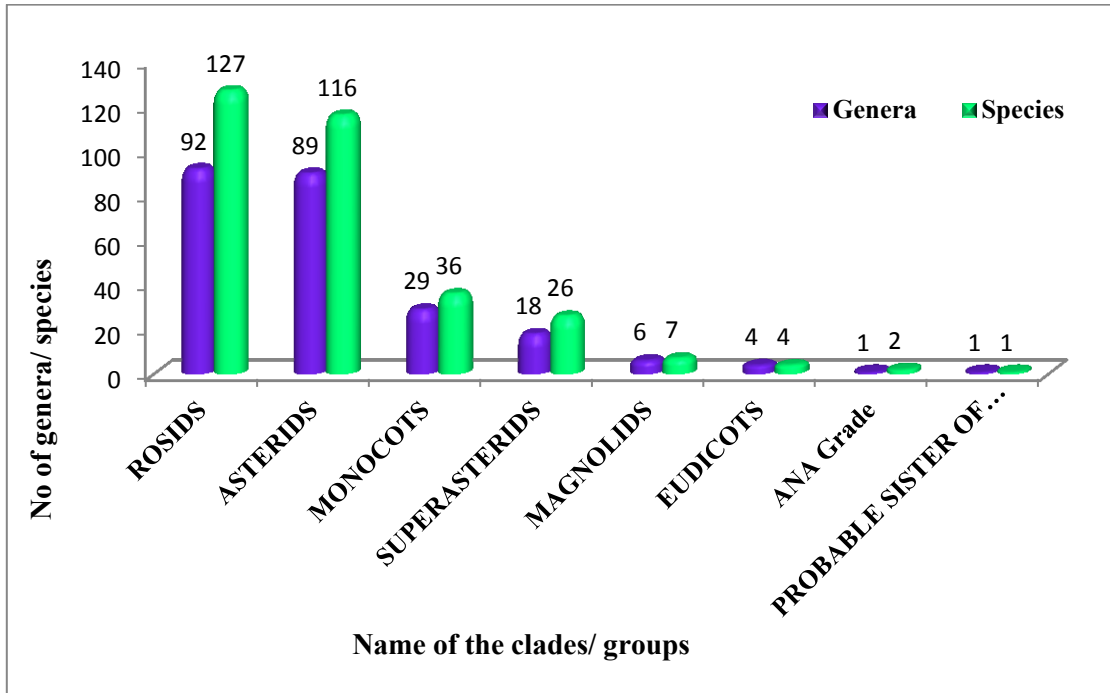
- [51]. Sukumaran, S., Thankappan Sarasabai Shynin Brintha., Paulraj Subitha, Yesuthangam Anlin Sheebha and Soloman Jeeva. (2014). Usage of medicinal plants by two cultural communities of Kanakumari district, TamilNadu, South India. *Journal of Chemical and Pharmaceutical Research.*, 6(8): 67-79.
- [52]. Uma, R and B.Parthipan. (2015). Survey on medico-botanical climbers in Pazhayaru river bank of Kanyakumari district, Tamilnadu. *Journal of Medicinal Plant studies.*, 3(1):33-36.
- [53]. Ved, D.K., Kinhal, G.A., Ravikumar K., Vijaya Shankar R., Haridasan K. (2005). Conservation assessment and management prioritization (CAMP) for the wild medicinal plants of North-East India. *Med Plant Conserv.*, 11: 40-44.

**Fig. 1. Location of the area studied in Agastheeswaram Taluk, Kanyakumari District, Tamilnadu State**

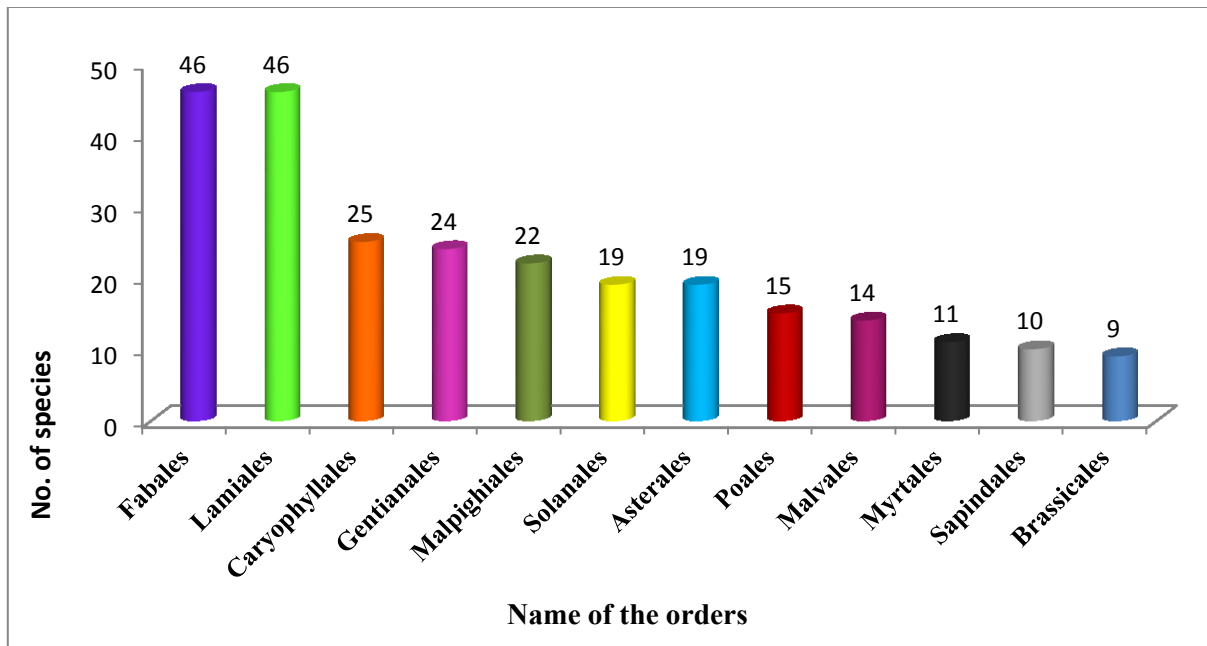




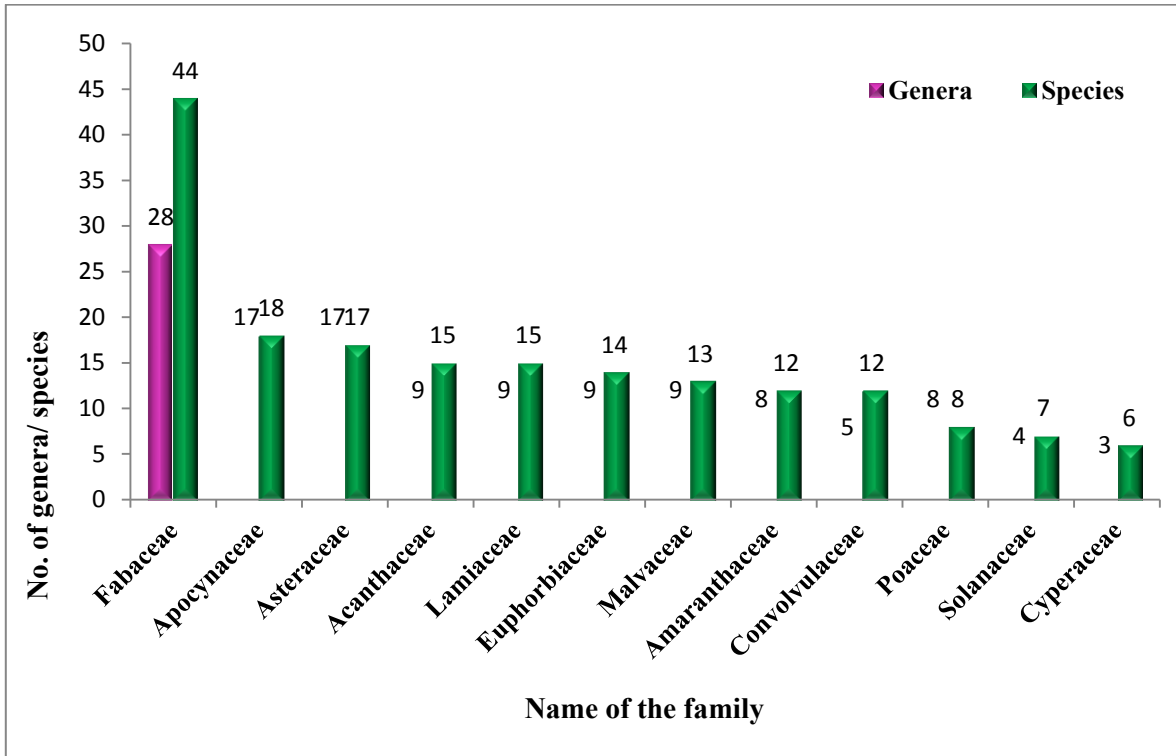
**Fig. 2. Distribution of species in clades / grades as per APG IV**



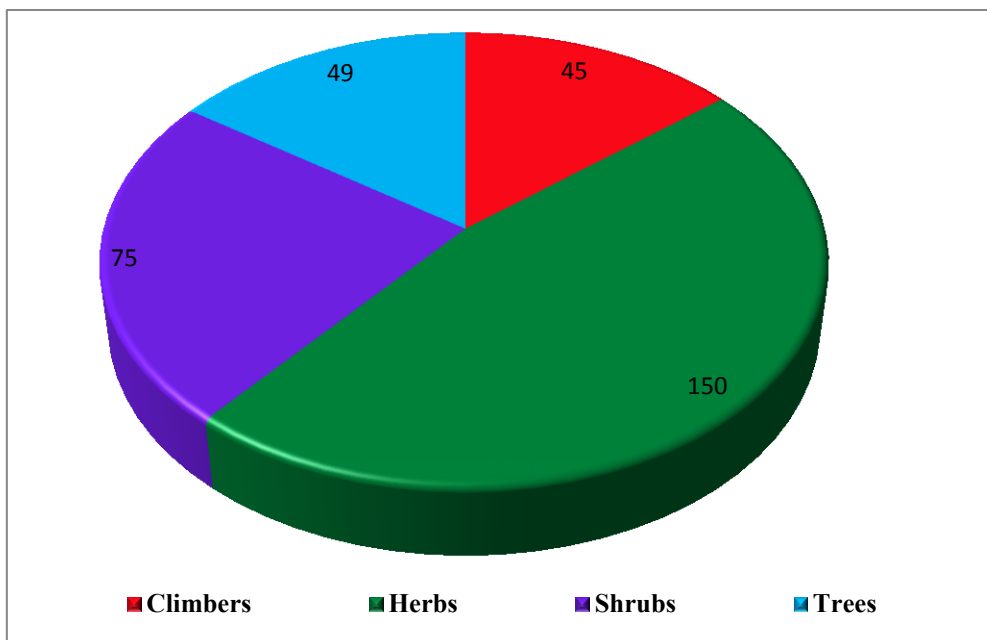
**Fig. 3. Distribution of species in dominant order as per APG IV**



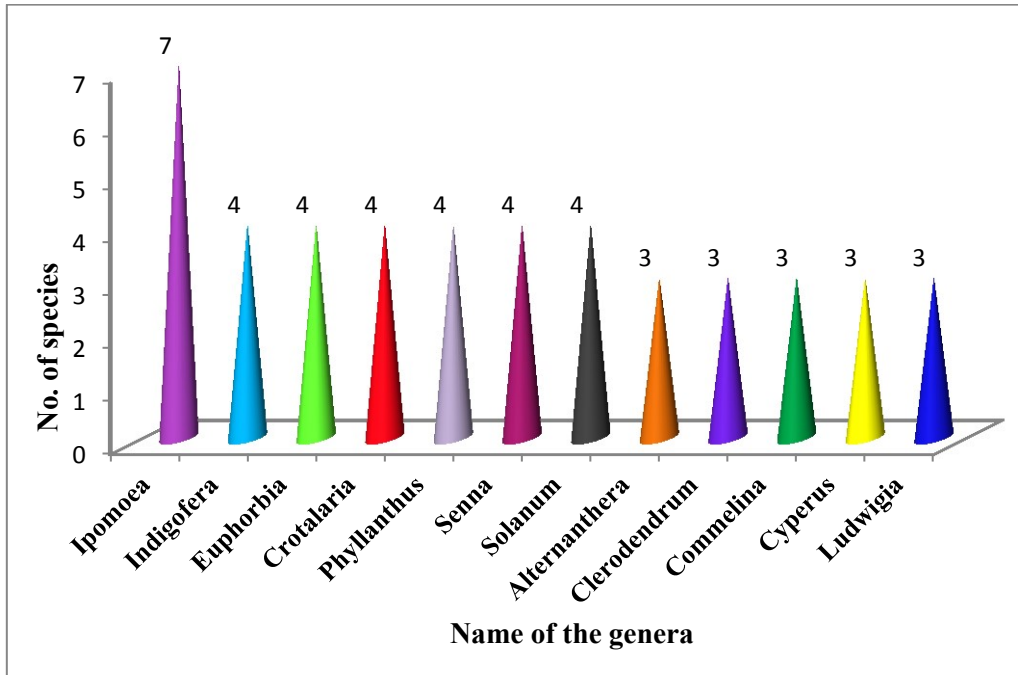
**Fig. 4. Dominant plant families in select areas of Agasheeswaram Taluk**



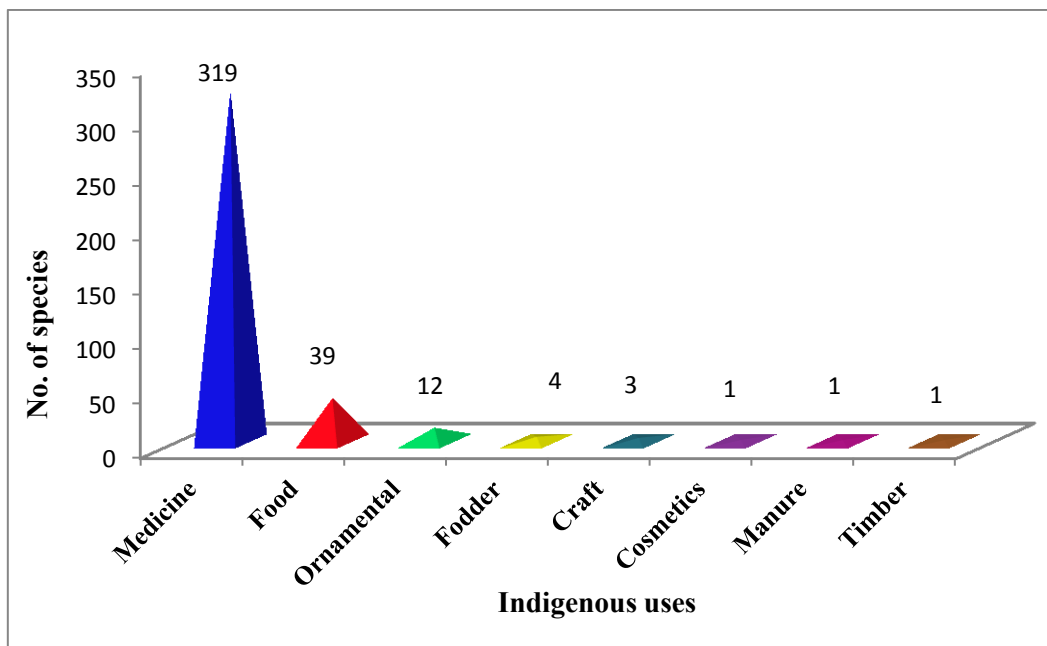
**Fig. 5. Habit wise distribution of Angiospermic plants in the study area**



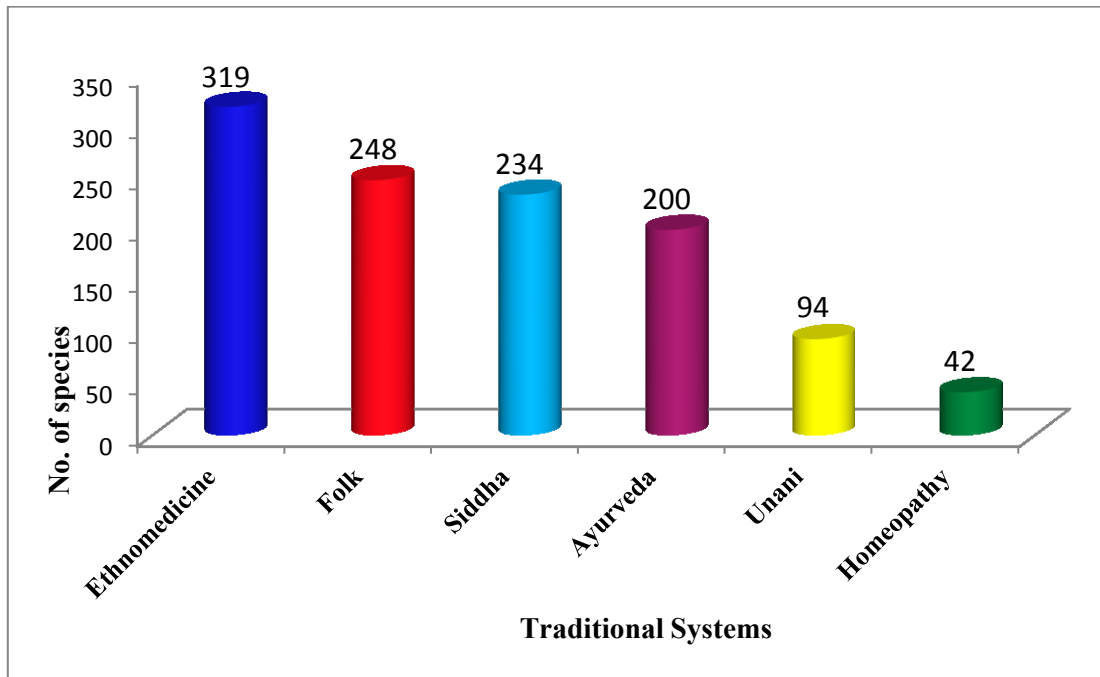
**Fig. 6. Dominant plant genera in select areas of Agastheeswaram Taluk**



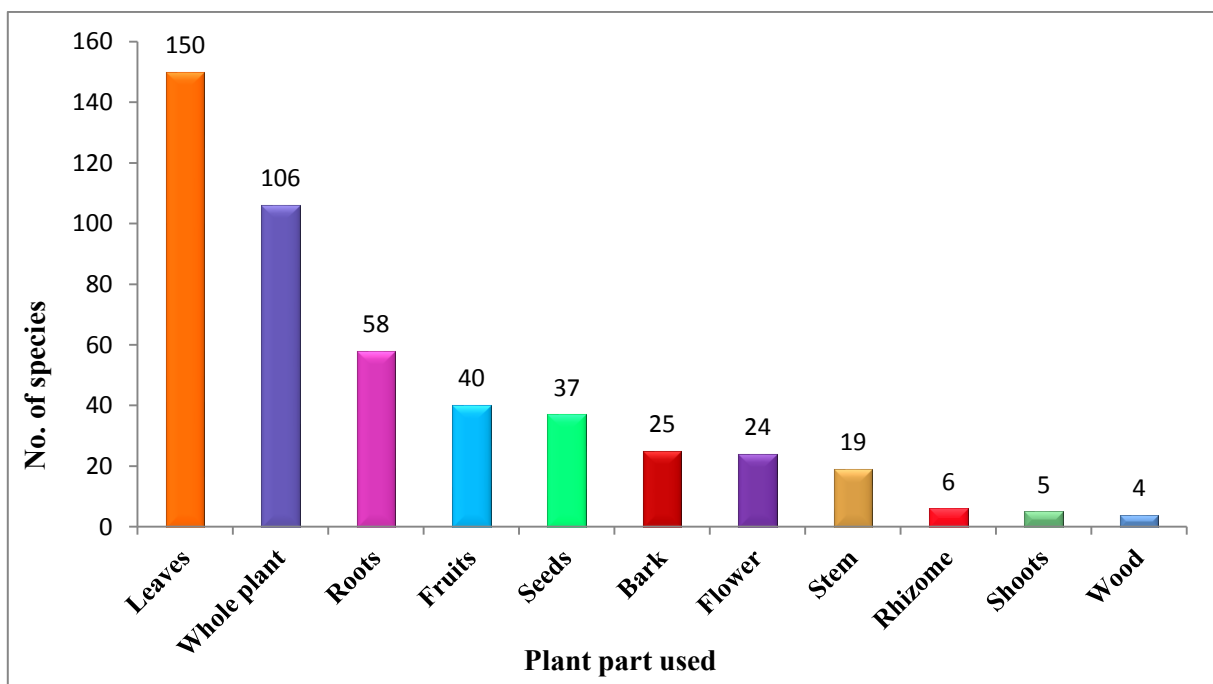
**Fig. 7. Economically important plants collected from the present study area**



**Fig. 8. Number of medicinal plants used in different traditional medicines**



**Fig. 9. Morphological useful parts of angiospermic plants used for traditional medicinal preparations**



**Table 1 Name of the areas and geo co-ordinates in Agastheeswaram Taluk, Kanyakumari District, Tamilnadu**

S.NO	Place & Name of the wetland	Geo- coordinates
1	Agastheeswaram	N 8° 5.290' - E 77° 30.979'
2	Azhagapapuram	N 8° 9.047' - E 77° 34.613'
3	Eraviputhoor	N 8° 10.224' - E 77° 29.791'
4	Kanyakumari	N 8° 6.619' - E 77° 32.397'
5	Kottaram	N 8° 7.167' - E 77° 30.644'
6	Kulasekarapuram	N 8° 8.694' - E 77° 29.880'
7	Marungoor	N 8° 11.709' - E 77° 30.044'
8	Nagercoil	N 8° 11.857' - E 77° 26.903'
9	Suchindrum	N 8° 8.852' - E 77° 27.435'
10	Thengamputhoor	N 8° 7.132' - E 77° 27.448'
11	Theroor	N 8° 10.922' - E 77° 27.406'
12	Thirupathisaram	N 8° 12.422' - E 77° 27.422'

**Table 2 List of traditionally important medicinal plants from select areas of Agastheeswaram Taluk in Kanyakumari District, Tamilnadu**

S.No	Class/ Clade/ Order	Family/ Botanical name	Habit	Uses in medicinal systems	Parts Used	Indigenous uses	Ailments
	<b>ANA Grade</b>						
	Nymphaeales	<b>Nymphaeaceae</b>					
1		<i>Nymphaea nouchali</i> Burm. f.	H	AY,SD,UN,FL,EM	R	M	Heart palpitation, dysentery
2		<i>N. pubescens</i> Willd.	H	AY,SD,UN,FL,EM	Rh, R	M	Blood dysentery, abortion, dyspepsia, menorrhagia, piles
	<b>MAGNOLIDS</b>						
	Piperales	<b>Piperaceae</b>					
3		<i>Peperomia pellucida</i> (L.) Kunth.	H	FL,EM	Wp	M	Wounds
4		<i>Piper longum</i> L.	S	AY,SD,UN,FL,EM	Fr, L, R	M, Fo	Cholera, stomach ache, cough, intestinal worms, snake bite, tuberculosis, tumours, spleen enlargement, rheumatism, cold
		<b>Aristolochiaceae</b>					
5		<i>Aristolochia indica</i> L.	C	SD,UN,FL,EM	L, R	M	Skin diseases, snake bite, fever, inflammation
	Magnoliales	<b>Magnoliaceae</b>					

6		<i>Michelia champaca</i> (L.) Baill.ex Pierre	T	AY,SD,FL,EM	B, Fl, S, R	M	Skin diseases, abscesses, headache, menstrual disorders, gonorrhoea
		<b>Annonaceae</b>					
7		<i>Annona reticulata</i> L.	T	AY,SD,FL,EM	B, L, Fr	M	Astringent, inflammation, tumours, astringent, diarrhea, dysentery, intestinal worms
8		<i>A. squamosa</i> L.	T	AY,SD,FL,EM	Wp	M, Fo	Indigestion,ulcer, purgative, dysentery, destroy maggots
	Laurales	<b>Lauraceae</b>					
9		<i>Cassytha filiformis</i> L.	C	AY,SD,FL,EM	Wp	M	Jaundice, ulcers, wounds, leucorrhoea
	<b>MONOCOTS</b>						
	Alismatales	<b>Araceae</b>					
10		<i>Colocasia esculenta</i> (L.) Schott.	H	AY,UN,FL,EM	L, R, P	M, O	Body heat, stimulent, anaemia, injuries, constipation
11		<i>Pistia stratiotes</i> L.	H	AY,SD,UN,FL,EM	Wp	M	Piles, dysentery, fever, eczema, constipation, asthma, cough, skin diseases, swelling, leprosy, irregular urination
12		<i>Lemna perpusilla</i> Torr.	H	EM	Wp	M, F	Scabies, wounds, cuts
		<b>Hydrocharitaceae</b>					
13		<i>Hydrilla verticillata</i> (L.f.) Royle	H	FL,EM	Wp	M, F	Inflammation, antidandruff, ulcer
14		<i>Ottelia alismoides</i> (L.) Pers.	H	SD,FL,EM	Fr, L	M	Diuretic, rubificent
		<b>Aponogetonaceae</b>					
15		<i>Aponogeton natans</i> (L.) Engl.&K.Krause	H	SD,FL,EM	L	M	Cuts, wounds
	Pandanales	<b>Pandanaceae</b>					
16		<i>Pandanus odorifer</i> (Forssk.)Kuntze.	S	AY,EM	L, Fl	M	Earache, cold, hepatitis, boils, asthma, cancer, hemorrhoids
	Liliales	<b>Colchicaceae</b>					
17		<i>Gloriosa superba</i> L.	C	SD,UN,FL,EM	Rh, L, Tu	M	Arthritis, gout, snakebite, digestion, stomachache, wounds, scorpion stings
	Asparagales	<b>Asparagaceae</b>					
18		<i>Asparagus gonoclados</i> Baker	C	FL,EM	Wp	M	Skin diseases
19		<i>A. racemosus</i> Willd.	C	AY,SD,FL,EM	R, Rh	M	Uterine tonic, hyperactivity, epilepsy, snake bite, lactation
	Arecales	<b>Areaceae</b>					
20		<i>Borassus flabellifer</i> L. (Palm)	T	AY,SD,UN,FL,EM	L	M, Fo	Cough, cooling agent, diuretic, stimulant,

							digestic problems
21		<i>Cocos nucifera</i> L. (Coconut)	T	AY,SD,UN,FL,EM	Sp, Fr	M, Fo	Diuretic, urinary disorders, inflammations, skin rashes, pimples, itching
	Commelinales	<b>Commelinaceae</b>					
22		<i>Commelina benghalensis</i> L.	H	AY,SD,FL,EM	Wp	M	Laxative, boils, itches, fever, stomach pain, bronchitis, cuts, cough, haemorrhage, wounds
23		<i>C. diffusa</i> Burm.f.	H	FL,EM	Wp	M	Wounds, itches, boils, injuries
24		<i>C. erecta</i> L.	H	EM	L	M	Rheumatic swellings, leprosy, constipation, skin inflammation
25		<i>Cyanotis axillaris</i> (L.) D.Don.ex Sweet	H	SD,FL,EM	Wp	M	Dropsy, whooping cough
26		<i>C. cristata</i> (L.) D.Don	H	FL,EM	R	M	swellings
		<b>Pontederiaceae</b>					
27		<i>Eichhornia crassipes</i> (Mart.) Solms.	H	SD,EM	L, R, Fl	M, F	Skin diseases, toothache, goiter, hairloss
28		<i>Monochoria vaginalis</i> (Burm.f.) C.Presl	H	SD,EM	Fl, L, R	M, Fo	Haematopathy, cough, cold, asthma, scurvy, boils, haemorrhages, toothache
	Zingiberales	<b>Cannaceae</b>					
29		<i>Canna indica</i> L.	H	AY,SD,FL,EM	R	M, O	Diuretic, digestion, ringworms
		<b>Zingiberaceae</b>					
30		<i>Alpinia calcarata</i> (Haw.) Roscoe.	H	AY,EM	Rh	M	Indigestion, cough, cold, fever, inflammation
	Poales	<b>Typhaceae</b>					
31		<i>Typha angustifolia</i> L.	H	AY,UN,EM	L, Fr	M, Ma, Cr	Wounds, ulcers
		<b>Cyperaceae</b>					
32		<i>Bulbostylis barbata</i> (Rottb.) C.B.Clarke	H	SD,EM	Wp	M	Dysentery
33		<i>Cyperus difformis</i> L	H	EM	R	M	Fever, cold, cough
34		<i>C. iria</i> L.	H	SD,FL,EM	Wp	M	Astringent, stomachache, stimulant, fever, cold, cough
35		<i>C. rotundus</i> L.	H	AY,SD,UN,EM	Wp	M	Nausea, fever, inflammation, leucorrhoea, diarrhea, vomiting, intestinal worms
36		<i>Kyllinga brevifolia</i> Rottb.	H	FL,EM	R	M	Liver disorders, diabetics
37		<i>K. nemoralis</i> (J.R.Forst& G.Forst.) Dandy ex Hutch.&Dalziel	H	AY,FL,EM	Tu	M	Dysentery
		<b>Poaceae</b>					

38		<i>Apluda mutica</i> L.	H	FL,EM	Wp	M	Diuretic, gonorrhoea
39		<i>Aristida setacea</i> Retz	H	SD,EM	Wp	M	Astringent, diarrhea, dysentery
40		<i>Cymbopogon citratus</i> (DC.) Stapf	H	AY,SD,UN,FL,EM	Wp	M	Cough, cold, fever, headache, gastric irritations, cholera, poisonous bites, arthritic pain, skin diseases
41		<i>Cynodon dactylon</i> (L.) Pers.	H	AY,UN,HP,FL,EM	Wp	M	Astringent, dysentery, piles, urinogenital troubles, blood pressure, diarrhea
42		<i>Dactyloctenium aegyptium</i> (L.) Willd.	H	AY,SD,FL,EM	S	M	Kidney stones
43		<i>Echinochloa colona</i> (L.) Link	H	EM	R	M	Burning pain on skin
44		<i>Heteropogon contortus</i> (L.) P.Beauv. ex Roem.& Schult	H	FL,EM	R	M	Stimulant, diuretic
45		<i>Oryza sativa</i> L.	H	SD,UN,FL,EM	St	M, Fo	Gall bladder stone, urinary disorder
<b>PROBABLE SISTER OF EUDICOTS</b>							
	Ceratophyllales	<b>Ceratophyllaceae</b>					
46		<i>Ceratophyllum demersum</i> L.	H	AY,EM	L	M	Vomiting, cooling agent
<b>EUDICOTS</b>							
	Ranunculales	<b>Papaveraceae</b>					
47		<i>Argemone mexicana</i> L.	H	AY,SD,UN,HP,EM	La,S	M	Scabies, ophthalmia, scorpion sting, ulcers, piles, wound healing, scabies
		<b>Menispermaceae</b>					
48		<i>Cissampelos pareira</i> L.	C	EM	Wp	M	Rheumatic pain, cooling agent, abscess, diuretic, chronic.
49		<i>Tinospora cordifolia</i> (Willd.) Miers.	C	AY,SD,UN,HP,FL,EM	Wp	M	Urinary disorder, fever, skin diseases, diuretic, diabetes, dysentery, antipyretic, dyspepsia
	Proteales	<b>Nelumbonaceae</b>					
50		<i>Nelumbo nucifera</i> Gaertn.	H	AY,SD,UN,FL,EM	Rh, Fl, Fr, L	M, Fo	Diarrhea, blood dysentery, headache, scabies, cardiac, liver ailments, foot crack, piles
<b>ROSIDS</b>							
	Vitales	<b>Vitaceae</b>					
51		<i>Cissus quadrangularis</i> L.	S	AY,SD,UN,FL,EM	Wp	M, Fo	Piles, worms, ear diseases, ulcers, leucorrhoea, skin diseases, bone fracture, digestion, appetite
52		<i>Cayratia pedata</i> (Lam.) Gagnep.	C	SD,FL,EM	Tu	M	Snake bite



	Zygophyllales	<b>Zygophyllaceae</b>					
53		<i>Tribulus terrestris</i> L.	H	AY,SD,UN,FL,EM	Wp	M	Heart diseases, respiratory problems, kidney stones, eczema, diuretic
	Fabales	<b>Fabaceae</b>					
54		<i>Abrus precatorius</i> L.	C	SD,UN,HP,EM	L, S, R	M	Digestion, aphrodisiac, chronic conjunctivitis, skin diseases, white discharge, aphrodisiac.
55		<i>A. pulchellus</i> Thwaites	C	AY, FL,EM	S	M	Skin diseases
56		<i>Acacia nilotica</i> (L.) Delile	T	AY,SD,UN,EM	St,L	M	Teeth inflammation, astringent, cooling agent
57		<i>Aeschynomene aspera</i> L.	S	AY,SD,EM	St, Sh	M, Cr	Cough, cold, fever
58		<i>A. indica</i> L.	H	SD,FL,EM	Wp	M, Cr	Skin diseases
59		<i>Albizia lebeck</i> (L.)Benth	T	AY,SD,UN,FL,EM	B, L, R	M	Night blindness, ulcerated gums, eczema, stomach trouble, dysentery
60		<i>Alysicarpus vaginalis</i> (L.) DC	H	FL,EM	L, St	M	Pulmonary troubles
61		<i>Bauhinia racemosa</i> Lam.	T	AY,SD,UN,EM	B, L	M	Dysentery, bone fracture, indigestion
62		<i>B. tomentosa</i> L.	S	AY,SD,FL,EM	L, S	M	Abscesses
63		<i>B. variegata</i> L.	T	AY,SD,EM	L	M	Blood pressure
64		<i>Caesalpinia bonduc</i> (L.) Roxb.	C	AY,SD,UN,HP,FL,EM	S, L	M	Fever, diabetics
65		<i>C. pulcherrima</i> (L.) Sw.	S	AY,SD,FL,EM	S	M	Toothache
66		<i>Cassia fistula</i> L.	T	AY,SD,UN,FL,EM	Fr, Fl, R	M	Purgative, laxative, vomiting, asthma, cough, stomach ache, fever
67		<i>Clitoria ternatea</i> L.	C	AY,UN,FL,EM	R, L	M	Gonorrhoea, cold, antidote snake bite, eye diseases, fever headache
68		<i>Crotalaria albida</i> Roth.	S	FL,EM	L	M	Cough, cold
69		<i>C. juncea</i> L.	S	AY,SD,UN,FL,EM	R, L, S	M	Fever, dysentery, blood disorders
70		<i>C. retusa</i> L.	S	AY,FL,EM	Wp	M	Skin diseases, scabies, astringent
71		<i>C. verrucosa</i> L.	H	AY,SD,FL,EM	Wp	M	Skin infestions, vomiting, fever, dysentery
72		<i>Dalbergia sissoo</i> DC.	T	AY,SD,UN,FL,EM	Wo, B	M	Skin diseases
73		<i>Delonix elata</i> (L.) Gamble.	T	SD,EM	L, S	M	Joint pains, flatulence reduce to the body
74		<i>Derris scandens</i> (Roxb.)Benth	C	SD,FL,EM	L	M	Anti inflammatory, gastropathy conditions
75		<i>Desmodium triflorum</i> (L.) DC	H	AY,SD,FL,EM	Wp	M	Asthma, stomachache, piles, cold, cough, diarrhea, dysentery
76		<i>Dichrostachys cinerea</i> (L.) Wight& Arn.	T	AY,SD,FL,EM	R, S	M	Astringent, digestion, constipation, ophthalmia,

							anti-inflammatory, astringent,
77		<i>Indigofera aspalathoides</i> DC.	S	SD,FL,EM	Fl, L, St	M	Leprosy, abscesses
78		<i>I. caerulea</i> Roxb.	S	EM	L	M	Jaundice
79		<i>I. linnaei</i> Ali	H	AY,SD,EM	Wp	M	Diuretic, venereal diseases
80		<i>I. trita</i> L.f.	H	SD,EM	S	M	Nutritive tonic
81		<i>Mimosa diplotricha</i> Sauvalle.	C	AY,SD,UN,FL,EM	L	M	Hemorrhoides, leprosy, diarrhea, arthritis, fever, intestinal worms, muscle pain
82		<i>M. pudica</i> L.	H	EM	R, L, St	M	Hemorrhoides, fever, cuts and wounds, cooling, diuretic, constipating, piles, fistula, scorpion sting
83		<i>Neptunia oleracea</i> Lour.	H	AY,SD,EM	Sh, L, St	M	Intestinal infestations, earache, astringent
84		<i>Parkinsonia aculeata</i> L.	S	SD,FL,EM	L	M	Arthritis, fever
85		<i>Pithecellobium dulce</i> (Roxb.) Benth.	T	SD,FL,EM	Fr	M	Stomach worms, fever
86		<i>Pongamia pinnata</i> (L.) Pierre.	T	AY,SD,UN,FL,EM	S, B	M	Skin diseases, scabies, ulcer, rheumatism, swellings
87		<i>Prosopis juliflora</i> (Sw.) DC.	T	SD,EM	Fr	M	Digestibility
88		<i>Rhynchosia minima</i> (L.) DC.	C	FL	L	M	Abortifacient
89		<i>Senna alata</i> (L.) Roxb.	S	SD,EM	L, S	M	Skin trouble, vermifuge
90		<i>S. auriculata</i> (L.) Roxb.	S	SD,FL,EM	L, Fl, R	M	Body heat, diabetes, urinary disorders, cleaning hair
91		<i>S. occidentalis</i> (L.) Link.	S	AY,FL,EM	L, Fr, S	M	Itching eruption, skin troubles, bodyache, swellings, antidote for poisons, stomach pains, pimples
92		<i>S. tora</i> (L.) Roxb.	S	AY,UN,FL,EM	L, S, R	M	Skin diseases, tumour, leprosy, purgative, ringworm
93		<i>Sesbania grandiflora</i> (L.) Pers.	T	AY,SD,UN,FL,EM	L	M, Fo	Skin diseases
94		<i>Tamarindus indica</i> L.	T	SD,UN,FL,EM	Fr, Fl, L, S	M	Inflammations, rheumatism, sunstroke, poisoning, ulcers, paralysis, kidney diseases, piles, swellings, scorpion bite
95		<i>Tephrosia purpurea</i> (L.) Pers.	H	AY,SD,UN,FL,EM	Wp	M	Stomach pain, eczema, diarrhea, skin diseases, elephantiasis
96		<i>T. villosa</i> (L.) Pers.	H	AY,EM	Wp	M	Skin diseases
97		<i>Teramnus labialis</i> (L.f.) Spreng	C	AY,SD,FL,EM	Fr, L	M	Rheumatism, tuberculosis, nervous

							affections
		<b>Polygalaceae</b>					
98		<i>Polygala arvensis</i> Willd.	H	SD,FL,EM	L	M	Skin diseases, asthma, catarrhal affection, bronchitis
99		<i>P. javana</i> DC.	H	EM	Wp	M	Snake bite, skin diseases
	Rosales	<b>Rhamnaceae</b>					
100		<i>Ziziphus jujuba</i> Mill.	T	AY,SD,UN,FL,EM	R, B, L	M, Fo	Diarrhea, carbuncles, ulcers, vomit, cough, tuberculosis, abscesses
101		<i>Z. oenoplia</i> (L.) Mill	S	AY,SD,FL,EM	B	M	Ulcers, healing wounds
		<b>Ulmaceae</b>					
102		<i>Holoptelea integrifolia</i> Planch	T	AY,SD,FL,EM	Fl	M	Anthelmintic
		<b>Cannabaceae</b>					
103		<i>Trema orientalis</i> (L.) Blume	T	FL,EM	Wp	M	Enhance sexual power, fever, muscular strength
		<b>Moraceae</b>					
104		<i>Ficus benghalensis</i> L.	T	AY,SD,UN,HP,FL,E M	La, R, Fr, B	M, Fo	Rheumatism, diabetics, piles, muscular pain, toothache, heel cracks
105		<i>F. religiosa</i> L.	T	AY,SD,UN,HP,FL,E M	Fr, B, L, St	M, Fo	Asthma, inflammation, piles, skin diseases, body pain
	Cucurbitales	<b>Cucurbitaceae</b>					
106		<i>Citrullus colocynthis</i> (L.) Schrad.	C	AY,SD,UN,HP,FL,E M	Fr, S	M	Jaundice, urinary diseases
107		<i>Coccinia grandis</i> (L.)Voigt	C	AY,UN,EM	Fr, L	M, Fo	Fever, bronchitis, skin diseases, eczema, pimples, diabetics, diarrhea, sores of tongue, burining of eyes, jaundice
108		<i>Diplocyclos palmatus</i> (L.) C.Jeffrey.	C	SD,FL,EM	Fr	M	Body pain
109		<i>Momordia charantia</i> L.	C	FL,EM	Fr	M, Fo	Diabetes, worms
110		<i>Mukia maderaspatana</i> (L.) M. Roem.	C	SD,UN,EM	Wp	M	Giddiness, respiratory problems, carminative, piles, refrigerant, blackening hair
	Oxalidales	<b>Oxalidaceae</b>					
111		<i>Biophytum sensitivum</i> (L.) DC.	H	AY,SD,FL,EM	Wp	M	Diarrhea, ulcer, cough, asthma, chest congestion, inflammations, diabetics, poisonous snake bite, wounds, diuretic
	Malpighiales	<b>Calophyllaceae</b>					
112		<i>Calophyllum inophyllum</i> L.	T	AY,SD,FL,EM	S, B, Fr	M	Rheumatism, bone fracture, purgative, pimples, ulcer

		<b>Violaceae</b>					
113		<i>Hybanthus enneaspermus</i> (L.) F.Muell.	H	SD,FL,EM	Wp	M	Urinary troubles, bowel complaints, leucorrhoea
		<b>Passifloraceae</b>					
114		<i>Passiflora foetida</i> L.	C	AY,SD,FL,EM	L, Fr	M	Headache, anxiety, hypertension, tranquilizer
		<b>Euphorbiaceae</b>					
115		<i>Acalypha fruticosa</i> Forssk.	S	SD,FL,EM	L	M	Diarrhea
116		<i>Acalypha indica</i> L.	H	AY,SD,HP,FL,EM	Wp	M, Fo	Asthma, bronchitis, cold, cough, skin infections, chest pain, rheumatism
117		<i>Chrozophora rotteri</i> (Geiseler) A.Juss.ex.Spreng	H	AY,EM	Wp	M	Emetic
118		<i>Croton bonplandianus</i> Baill.	H	FL,EM	L	M	Constipation, arthritis
119		<i>Euphorbia cyathophora</i> Murray.	S	EM	L	M	Lactation for mother, constipation
120		<i>E. hirta</i> L.	H	AY,SD,UN,FL,EM	Wp	M	Asthma, bowel complaints, snakebite, diarrhea, cough, dysentery, skin diseases
121		<i>E. thymifolia</i> L.	H	AY,UN,FL,EM	Wp	M	Ringworm, wounds, asthma, skin diseases
122		<i>E. tortilis</i> Rottler ex Ainslie	S	SD,EM	Wp	M	Poison
123		<i>Jatropha curcas</i> L.	S	AY,SD,UN,HP,FL,EM	St, P, S, La, Tw	M	Toothache, ulcers, scabies, wounds, cuts, tumours, skin diseases
124		<i>J. glandulifera</i> Roxb.	S	AY,SD,UN,FL,EM	Rh	M	Purgative, ulcer, swelling
125		<i>Manihot esculenta</i> Crantz.	S	AY,SD,HP,EM	Tu	M, Fo	Body metabolism
126		<i>Micrococca mercurialis</i> (L.) Benth.	H	AY,SD,FL,EM	L	M	Fever, headache, filariasis of eyes
127		<i>Ricinus communis</i> L.	S	AY,SD,UN,HP,FL,EM	S, R, L	M	Pimples, laxative, swelling, skin diseases, abortion, renal complaints, rheumatic pain,
128		<i>Tragia involucrata</i> L.	H	AY,SD,FL,EM	L	M	Cuts, wounds
		<b>Phyllanthaceae</b>					
129		<i>Breynia retusa</i> (Dennst.) Alston.	S	AY,SD,EM	L, R	M	Headache, skin inflammation
130		<i>Phyllanthus emblica</i> L.	T	AY,SD,UN,FL,EM	Fr, L, S	M, Fo	Tuberculosis, eye complaints, laxative, stomachic, diuretic, antioxidant, body temperature
131		<i>P. maderaspatensis</i> L.	H	AY,SD,UN,EM	Wp	M	Menstrual problems, skin eruptions
132		<i>P. niruri</i> L.	H	AY,SD,FL,EM	Wp	M	Antiviral,antimalarial, jaundice,antimicrobial,

							dysentery
133		<i>P. reticulatus</i> Poir.	S	AY,SD,FL,EM	L, Fr, St	M, Fo	Diarrhea, diuretic
	Myrtales	<b>Combretaceae</b>					
134		<i>Quisqualis indica</i> L.	C	SD,FL,EM	S, R	M	Anthelmintic, worms
135		<i>Terminalia catappa</i> L.	T	AY,SD,UN,FL,EM	L, B	M, Fo	leprosy, scabies, skin diseases, astringent, diuretic
		<b>Lythraceae</b>					
136		<i>Ammannia baccifera</i> L.	H	AY,SD,EM	Wp	M	Swellings, dyspepsia, rheumatism, fever, scabies, ringworm, skin itching, typhoid
137		<i>Lawsonia inermis</i> L.	S	AY,SD,UN,FL,EM	L, B	M	Inflammations, burns, ulcer, jaundice, astringent, body heat, gonorrhoea, headache, rheumatism, skin disorders, hair treatment
138		<i>Trapa natans</i> L.	H	AY,SD,UN,FL,EM	Fr, L, P, S	M, Fo	Bone fracture, conjunctivitis, diarrhea, dyspepsia, blood circulation
		<b>Onagraceae</b>					
139		<i>Ludwigia adscendens</i> (L.) H.Hara.	H	FL,EM	Wp	M, O	Skin diseases, ulcers
140		<i>L. octavalis</i> (Jacq.) P.H.Raven	H	AY,FL,EM	L	M	Expel worms, dysentery, fever
141		<i>L. perennis</i> L.	H	SD,FL,EM	L	M	Fever, cuts, wounds, sores
		<b>Myrtaceae</b>					
142		<i>Eucalyptus globulus</i> Labill.	T	AY,SD,FL,EM	L	M	Cough, cold, headache, anesthetic, antiseptic, hernia, insect repellent
143		<i>Psidium guajava</i> L.	T	AY,SD,UN,FL,EM	L, Fr	M, Fo	Digestion, diabetics, ulcer, diarrhea, oedema, uterine haemorrhoea, renal diseases
144		<i>Syzygium cumini</i> (L.)Skeels.	T	AY,SD,UN,HP,FL,EM	L, S, Fr, St	M, Fo	Dysentery, diabetics, kidney stone, bleeding gums, toothache, rashes in mouth, throat and intestine
	Sapindales	<b>Anacardiaceae</b>					
145		<i>Anacardium occidentale</i> L.	T	AY,SD,HP,EM	B, L, Fr	M, Fo	Inflammation, urinary disorder, leprosy, ulcers, blood bleeding, rheumatic pericarditis.
146		<i>Mangifera indica</i> L.	T	AY,SD,UN,HP,FL,EM	B, S, L, Fr, G	M, Fo	Jaundice, itching, astringent, diarrhea, diabetics, toothache
		<b>Sapindaceae</b>					
147		<i>Cardiospermum halicacabum</i> L.	C	AY,SD,HP,FL,EM	Wp	M	Stomachache, body pain, diabetes,

							rheumatic pain
148		<i>Dodonaea viscosa</i> (L.)Jacq.	S	AY,FL,EM	B, L, Fl, Fr	M	Astringent, healing wounds, chronic sore, febrifuge, swellings
		<b>Rutaceae</b>					
149		<i>Glycosmis pentaphylla</i> (Retz.) DC	S	SD,HP,FL,EM	L	M	Snakebite, cough, cold, rheumatism, anemia, eczema, jaundice, skin diseases
150		<i>Murraya koenigii</i> (L.) Spreng	T	AY,SD,FL,EM	L, Fr	M, Fo	Insect bites, dog bite, snake bite, cooling carminative, antiseptic, anti-inflammatory, skin diseases, leprosy, leucoderma, dysentery, diarrhea
151		<i>M. paniculata</i> (L.) Jack.	T	AY,SD,EM	L, B	M	Diuretic, carminative
152		<i>Toddalia asiatica</i> (L.) Lam.	S	AY,SD,FL,EM	L	M	Scabies, rheumatism, stomach problem, food poisoning, cold, cough
		<b>Meliaceae</b>					
153		<i>Azadirachta indica</i> A.Juss	T	AY,SD,UN,HP,FL,EM	Wp	M, Fo	Helminthic, antifungal, fever, antidiabetic, eczema, chicken pox, rheumatism, mumps, antimicrobial, jaundice, skin diseases, dog bite, small pox
154		<i>Melia azedarach</i> L	T	AY,SD,UN,HP,FL,EM	B, L, Fr	M	Headache, skin diseases, worm, wounds, ulcers, cough, diabetes, amenorrhoea, rheumatism, stomach pain
	Malvales	<b>Muntingiaceae</b>					
155		<i>Muntingia calabura</i> L.	T	EM	Fl, Fr	M, Fo	Headache, incipient cold
		<b>Malvaceae</b>					
156		<i>Abutilon indicum</i> (L.) Sweet	S	AY,SD,UN,FL,EM	Wp	M	Urinary disorders, demulent, headache, toothache, tender gums, diuretic, astringent
157		<i>Corchorus aestuans</i> L.	H	AY,EM	L	M	Leprosy, itching
158		<i>Hibiscus micranthus</i> L.f.	S	FL,EM	R, F	M, Fo	Cough
159		<i>H. surattensis</i> L.	S	AY,SD,FL,EM	Wp	M	Cough
160		<i>H. vitifolius</i> L.	S	AY,SD,FL,EM	R, L	M	Diarrhea, jaundice, fractured bones, sprained muscles.
161		<i>Melochia corchorifolia</i> L.	H	AY,SD,FL,EM	L	M	Laxative
162		<i>Pavonia odorata</i> Willd.	H	AY,SD,UN,FL,EM	L, R, St	M	Rheumatism, dysentery, intestinal haemorrhage, febrifuge
163		<i>Sida acuta</i> Burm.f.	H	AY,SD,FL,EM	R, L	M	Astringent, diaphoretic,

							antipyretic, chronic bowel complaints, diuretic, intestinal worms, rheumatic and demulcent gonorrhoea, anthelmintic, burn wounds, boils, asthma, fever.
164		<i>S. cordata</i> (Burm.f.) Borss.Waalk.	H	AY,SD,FL,EM	L	M	Cuts, wounds, diarrhea, bruises
165		<i>S. spinosa</i> L.	S	AY,SD,UN,FL,EM	R, L	M	Coronary heart diseases, fever, blood pressure, gleet,demulcent, gonorrhea,scaling urine, asthma
166		<i>Thespesia populnea</i> (L.) Sol.ex Correa	T	SD,FL,EM	B, R, Fl, Fr	M	Skin diseases, insect bite, ring worm, purgative, eye diseases
167		<i>Urena lobata</i> L.	S	AY,SD,FL,EM	St, R, Fl	M	Flatulent colic, sore throat, rheumatism
168		<i>Waltheria indica</i> L.	H	EM	Wp	M	Cough, fever, skin diseases, purgative
	Brassicales	<b>Moringaceae</b>					
169		<i>Moringa oleifera</i> Lam.	T	SD,FL,EM	Wp	M, Fo	Urinary problems, diuretic, antilithic, digestion, asthma, gut, rheumatism
		<b>Caricaceae</b>					
170		<i>Carica papaya</i> L.	S	AY,SD,HP,FL,EM	R, La, L, Fl, Fr	M, Fo	Dog bite, earache, malaria, laxatives, anti-fertility drug, intestinal worms
		<b>Salvadoraceae</b>					
171		<i>Azima tetraantha</i> Lam.	S	AY,SD,FL,EM	L	M	Snake bite, stomach pain, earache
		<b>Capparaceae</b>					
172		<i>Cadaba fructicosa</i> (L.) Druce	S	SD,FL,EM	L	M	Cure gonorrhea
173		<i>Capparis sepiaria</i> L.	S	AY,SD,FL,EM	R, L	M	Swellings
174		<i>Crateva religiosa</i> G. Forst.	T	AY,SD,UN,FL,EM	B, Wo	M, O	Antifertility hydrocele, guinea worms
		<b>Cleomaceae</b>					
175		<i>Cleome gynandra</i> L.	H	AY,SD,FL,EM	L, S	M	Earache, snakebite, scorpion sting, headache, neuralgia
176		<i>C. viscosa</i> L.	H	AY,SD,UN,FL,EM	L, S	M	Earache, skindiseases, inflammations, carminative, arthritis, loss of appetite, constipation, diarrhea
		<b>Brassicaceae</b>					
177		<i>Brassica juncea</i> (L.) Czern.	H	AY,SD,UN,FL,EM	S	M, Fo	Body massage, culinary preparations
	<b>SUPERASTERI DS</b>						
	Santalales	<b>Santalaceae</b>					

178		<i>Santalum album</i> L.	T	UN,HP,FL,EM	Wo, S	M, T	Headache, skin diseases, gonorrhoea, diarrhea
	Caryophyllales	<b>Plumbaginaceae</b>					
179		<i>Plumbago zeylanica</i> L.	S	AY,SD,UN,FL,EM	R	M	Diuretic, piles, dyspepsia, fever, influenza, skin diseases, leprosy, snake bite, scraping the corns, cancer, rheumatism
		<b>Polygonaceae</b>					
180		<i>Persicaria barbata</i> (L.) H.Hara	H	SD,UN,FL,EM	L, R	M	Ulcers, cooling agent, Conjunctives
181		<i>P. glabra</i> (Willd.) M.Gomez.	H	SD,UN,FL,EM	Wp	M	Cuts, wounds, fever, coclic pain
182		<i>Polygonum plebeium</i> R.Br.	H	EM	R, L	M	Pneumonia, bowel complaints, injuries
		<b>Amaranthaceae</b>					
183		<i>Achyranthes aspera</i> L.	H	AY,SD,UN,HP,FL,EM	Wp	M	Blood bleeding, snake bite, scorpion sting, insect bites, cold, cough, fever
184		<i>Aerva lanata</i> (L.) Juss	H	SD,FL,EM	Wp	M	Kidney stone, diarrhea, haemorrhage, diuretic, inflammation, diabetes
185		<i>Allmania nodiflora</i> (L.) R.Br. ex Wight	H	SD,EM	Fr, L	M	Constipation, dysentery, febrifuge
186		<i>Alternanthera philoxeroides</i> (Mart.) Griseb.	H	FL,EM	Sh, L	M, Fo	Cough, intestinal worms
187		<i>A. pungens</i> Kunth	H	FL,EM	Wp	M	Night blindness, antiseptic
188		<i>A. sessilis</i> (L.) R.Br. ex DC.	H	AY,SD,FL,EM	Sh, L	M	Piles, snake bite, headache, stimulate lactation for mothers, leucorrhoea
189		<i>Amaranthus spinosus</i> L.	H	AY,SD,FL,EM	L, R	M	Snake bite, sun stroke, digestion, diuretic
190		<i>A. viridis</i> L.	H	AY,SD,FL,EM	Wp	M, Fo	Scorpion sting, toothache, dropsy
191		<i>Celosia argentea</i> L.	H	AY,SD,FL,EM	Wp	M	Antiprotozoal, spasmolytic, blood diseases, mouth sores
192		<i>Digera muricata</i> (L.) Mart.	H	AY,SD,EM	Fl, L, S	M	Urinary troubles, laxative, stomacic, ulcer, fever
193		<i>Gomphrena celosioides</i> Mart.	H	FL,EM	Wp	M	Leucorrhea
194		<i>G. globosa</i> L.	H	SD,FL,EM	R	M, O	Cough
		<b>Nyctaginaceae</b>					
195		<i>Boerhavia diffusa</i> L.	H	AY,SD,UN,HP,EM	Wp	M	Diabetics, rheumatism, leucoderma, jaundice, eye problems
196		<i>B. erecta</i> L.	H	AY,EM	L	M	Asthma
197		<i>Mirabilis jalapa</i> L.	H	FL,EM	L, Fl	M	Wounds, inflammations, burns,



		<b>Molluginaceae</b>					
198		<i>Glinus lotoides</i> L.	H	AY,SD,FL,EM	St	M	Abdominal disorders
199		<i>G. oppositifolius</i> (L.) Aug DC	H	AY,SD,FL,EM	Wp	M	Skin diseases, scabiess, itches
200		<i>Mollugo nudicaulis</i> Lam.	H	FL,EM	Wp	M	Antispetic, diaphoretic, antifungal, wounds, cure boils
201		<i>M. pentaphylla</i> L.	H	FL,EM	Wp	M	Giddiness, antiseptic, sores
		<b>Basellaceae</b>					
202		<i>Basella alba</i> L.	C	AY,SD,FL,EM	L	M, Fo	Piles, inflammation, constipation, skin diseases
		<b>Portulacaceae</b>					
203		<i>Portulaca oleracea</i> L.	H	AY,SD,FL,EM	L	M, Fo	Earache, liver and kidney stones
	<b>ASTERIDS</b>						
	Cornales	<b>Cornaceae</b>					
204		<i>Alangium salviifolium</i> (L.f.) Wangerin	T	AY,SD,FL,EM	Fr, R, B	M	Blood sugar, hepatitis, loosens bowels, cure flatulence
	Ericales	<b>Sapotaceae</b>					
205		<i>Mimusops elengi</i> L.	T	EM	B, Fl, Fr, S	M	Astringent, anthelmintic, febrifuge, bleeding gums, leucorrhoea, menorrhagia, protect gums,
	Gentianales	<b>Rubiaceae</b>					
206		<i>Canthium coromandelicum</i> (Burm.f.) Alston	S	AY,SD,EM	R, L	M	Diuretic, rheumatism, dysentery, haemorrhage, diarrhea, abdominal disorders
207		<i>Oldenlandia corymbosa</i> L.	H	AY,SD,FL,EM	Wp	M	Fever, jaundice, liver troubles, skin diseases
208		<i>O. herbacea</i> (L.) Roxb.	H	AY,SD,HP,FL,EM	L	M	expectorant
209		<i>Spermacoce hispida</i> L.	H	AY,SD,FL,EM	Wp	M	Asthma, bronchitis, cough, common cold, cuts, wounds
210		<i>Morinda pubescens</i> J.E. Smith	T	SD,FL,EM	L, Fr	M, F	Heal sores, emmenagogue
		<b>Gentianaceae</b>					
211		<i>Enicostema axillare</i> (Poir.ex Lam.) A.Raynal.	H	SD,FL,EM	Wp	M	Digestive, carminative, anti-inflammatory, stoamchache
		<b>Apocynaceae</b>					
212		<i>Alstonia scholaris</i> (L.) R.Br.	T	AY,SD,UN,HP,FL,E M	La, B, L	M	Rheumatism, earache, ulcers, cold, wounds, hair tonic, headache, dizziness
213		<i>Calotropis gigantea</i> (L.) Dryand.	S	AY,SD,HP,FL,EM	Wp	M	Wounds, diaphoretic, emetic, cold, cough, stomachache, fever, indigestion
214		<i>Carissa spinarum</i> L.	S	SD,FL,EM	L, R	M	Rhematism, purgative.

215		<i>Catharanthus roseus</i> (L.)G.Don.	S	AY,EM	Wp	M	Stomach disorders, diabetes, pimples, leucorrhoea
216		<i>Ceropegia candelabrum</i> L.	C	EM	L	M	Stomach disorders
217		<i>C. juncea</i> Roxb.	C	FL,EM	St	M	Digestion, stomach problems
218		<i>Hemidesmus indicus</i> (L.) R.Br. ex schult	C	SD,FL,EM	R, L	M	Diuretic, diaphoretic, asthma, bronchitis, gonorrhoeal, cough, syphilis, nephritic complaints, ulcer, leucorrhoea, bronchitis
219		<i>Ichnocarpus frutescens</i> (L.) W.T.Aiton	C	EM	L, R, St, La	M	Cooling effect, tumours
220		<i>Leptadenia reticulata</i> (Retz.) Wight & Arn.	C	AY,SD,FL,EM	R	M	Skin diseases, inflammation
221		<i>Nerium oleander</i> L.	S	AY,SD,UN,HP,FL,EM	R, L	M	Cancer, ulcer, leprosy, skin diseases, edema, febrifuge, scabies, astringent, diuretic, stomachache, scorpion bite
222		<i>Oxystelma esculentum</i> (L.f.) Sm.	C	AY,SD,FL,EM	Fl	M	Ulcer
223		<i>Pentatropis capensis</i> (L.f.) Bullock	C	AY,SD,FL,EM	L	M	Urine, kidney problems
224		<i>Pergularia daemia</i> (Forssk.) Chiov.	C	SD,FL,EM	Wp	M	Snake bite, emetic, laxative, itching, arthritic pain, worms
225		<i>Rauwolfia tetraphylla</i> L.	S	FL,EM	Wp	M	Skin diseases, snake bite
226		<i>Sarcostemma acidum</i> (Roxb.) Voigt	C	SD,FL,EM	St	M	Earache
227		<i>Tabernaemontana divaricata</i> (L.) R.Br.ex Roem.&Schult.	S	AY,SD,FL,EM			
228		<i>Tylophora indica</i> (Burm.f.) Merr.	C	AY,SD,HP,EM	Wp	M	Dysentery, antidote snake bite, cough, asthma, branchitis
229		<i>Wrightia tinctoria</i> R.Br.	T	AY,SD,UN,HP,FL,EM	L, B	M	Toothache, stomach diseases, swellings, soriasis
	Boraginales	<b>Boraginaceae</b>					
230		<i>Coldenia procumbens</i> L.	H	AY,FL,EM	Wp	M	Rheumatism, epilepsy, swellings
231		<i>Cordia obliqua</i> Willd.	T	AY,SD,FL,EM	S,Fr	M	Anti-inflammatory, astringent, ringworm,
232		<i>Ehretia microphylla</i> Lam.	S	SD,FL,EM	Wp	M	Cough, colic
233		<i>Heliotropium indicum</i> L.	H	AY,SD,UN,FL,EM	Wp	M	Ulcers, anemia, scorpion sting, cataract, redness, cuts, wounds, conjunctives,
234		<i>Trichodesma indicum</i> (L.) Lehm.	H	AY,SD,FL,EM	Wp	M	Carminative, anti-inflammatory, skin diseases
	Solanales	<b>Convolvulaceae</b>					

235		<i>Cuscuta reflexa</i> Roxb.	C	AY,SD,UN,FL,EM	Wp	M	Jaundice, headache, bodyaches, constipation
236		<i>Evolvulus alsinoides</i> (L.) L.	H	AY,SD,UN,EM	Wp	M	Dysentery, indigestion, cuts, asthma, hair growth, amentia, bleeding, wounds, forgetfulness, diarrhea,
237		<i>E. nummularius</i> (L.) L.	H	AY,EM	Wp	M	Fever, cold, body heat
238		<i>Ipomoea aquatica</i> Forssk.	H	AY,SD,FL,EM	L	M	Laxative, pileous problems, jaundice, eye diseases, blood purifier, gonorrhoea
239		<i>I. cairica</i> (L.) Sweet.	C	FL,EM	L	M	Cutaneous infection
240		<i>I. carnea</i> Jacq	S	FL,EM	L	M	Purgative, cuts, wounds, ulcer, sprain
241		<i>I. nil</i> (L.) Roth.	C	AY,SD,UN,FL,EM	Wp	M, O	Ulcer
242		<i>I. obscura</i> (L.) Ker Gawl.	C	AY,SD,FL,EM	L	M	Ulcers, eye diseases
243		<i>I. pes- tigridis</i> L.	C	AY,SD,FL,EM	L	M	Antidote to dog bite, boils, intestinal worms
244		<i>I. quamoclit</i> L.	C	AY,SD,FL,EM	L	M, O	Blood purifier, stomachache, Jaundice
245		<i>Merremia tridentata</i> (L.) Hallier f.	H	AY,SD,FL,EM	Wp	M	Rhematism, piles, urinary disorders, skin eruption, astringent, laxative
246		<i>Rivea hypocrateriformis</i> Choisy	C	SD,FL,EM	L	M	Diarrhea, parturition
		<b>Solanaceae</b>					
247		<i>Capsicum annum</i> L.	H	AY,SD,UN,HP,FL,EM	Fr	M, Fo	Cuts, wounds
248		<i>Datura metel</i> L.	S	AY,SD,UN,HP,FL,EM	L, S	M	Anti-plasmodic, asthma, skin diseases, cough, bronchitis, head dandruff, dog bites, earache
249		<i>Physalis angulata</i> L.	H	AY,SD,FL,EM	Wp	M	Earache, constipation, ulcers, cough
250		<i>Solanum americanum</i> Mill.	S	AY,SD,UN,HP,FL,EM	Wp	M	Ulcers, cuts, wounds, dysentery, worm infections
251		<i>S. surattense</i> Burm.f.	H	AY,SD,UN,HP,FL,EM	Wp	M	Cough, diarrhea, skin diseases
252		<i>S. torvum</i> Sw.	S	AY,SD,FL,EM	L, Fr	M	Cough, asthma, cold, worm infestions, vermifuge, spleen enlargement
253		<i>S. trilobatum</i> L.	S	AY,SD,FL,EM	Wp	M	Bronchitis, cough, cold, asthma, ear pain
	Lamiales	<b>Oleaceae</b>					
254		<i>Jasminum grandiflorum</i> L.	S	AY,SD,UN,FL,EM	R, L	M, O	Skin diseases, pimples
255		<i>Nyctanthes arbor-tristis</i> L.	S	AY,SD,HP,FL,EM	L, B	M, O	Purgative, cough, fever, expectorant
		<b>Plantaginaceae</b>					

256		<i>Bacopa monnieri</i> (L.)Wettst.	H	AY,SD,UN,HP,FL,EM	Wp	M	Epilepsy, asthma, ulcer, tumours, enlarged spleen, indigestion, inflammations, leprosy, anaemia, improve memory, epilepsy, astringent, antiseptic
257		<i>Limnophila heterophylla</i> (Roxb.) Benth.	H	EM	Tw	M	Hair nurishment
258		<i>L. indica</i> (L.) Druce.	H	AY,FL,EM	Wp	M	Dysentery, antiseptic, wounds
259		<i>Scoparia dulcis</i> L.	H	FL,EM	Wp	M	Antipyretic, diuretic, antifungal, anti-inflammatory, antibacterial, diabetics, fever, dysentery, kidney stone, cough, bronchitis, toothache, gonorrhoea
		<b>Linderniaceae</b>					
260		<i>Lindernia anagallis</i> (Burm.f.) Pennell	H	EM	Wp	M	Gonorrhoea
261		<i>L. crustacea</i> (L.) F.Muell	H	FL,EM	Wp	M	Ringworm, boils, bile
		<b>Martyniaceae</b>					
262		<i>Martynia annua</i> L.	S	AY,SD,FL,EM	L	M	Epilepsy
		<b>Pedaliaceae</b>					
263		<i>Pedaliium murex</i> L.	H	FL,EM	Wp	M	Rheumatism kidney stone, scorpion bite, gonorrhoea, ulcer, anti-inflammatory, carminative
264		<i>Sesamum indicum</i> L.	H	AY,SD,UN,FL,EM	L, Fr, S	M, Fo	Body strength, dysentery
		<b>Acanthaceae</b>					
265		<i>Andrographis echioides</i> (L.) Nees	H	SD,FL,EM	Wp	M	Fever, antibacterial, antifungal activity, tooth pain
266		<i>A. paniculata</i> (Burm.f.)Nees.	H	AY,SD,UN,HP,FL,EM	Wp	M	Fever, dysentery, diabetes, itches, piles, jaundice, snake bites, cough
267		<i>Asystasia gangetica</i> (L.) T.Anderson	H	SD,EM	L	M	Fever, skin diseases, antibacterial activity
268		<i>Barleria buxifolia</i> L.	S	AY,SD,EM	L, R	M	Cough, inflammations, stomachache, fubrifuge
269		<i>B. cristata</i> L.	S	AY,SD,EM	L, R	M	Swellings, cough, cold
270		<i>B. cuspidata</i> F.Heyne ex Nees	S	FL,EM	N	M	Masticator, intoxicating
271		<i>B. prionitis</i> L.	S	AY,SD,FL,EM	L	M	Urinary infection, leucoderma, toothache, gum ailments, swellings
272		<i>Blepharis maderaspatensis</i> (L.) B.Heyne ex Roth	H	FL,EM	L	M	Cuts, wounds

273		<i>Crossandra infundibuliformis</i> (L.) Nees.	S	FL,EM	S	M, O	Astringent
274		<i>Hygrophila auriculata</i> (Schumach.) Heine	H	SD,UN,HP,FL,EM	R, L, S	M	Gonorrhoea, spermatorrhoea, urinary disorders, anemia
275		<i>Justicia adhatoda</i> L.	S	AY,SD,UN,FL,EM	L	M	Rheumatism, asthma, pathosis, swellings, Cold, fever, skin diseases
276		<i>J. gendarussa</i> Burm.f.	S	SD,UN,EM	Wp	M	Cough, throat infection, sprain
277		<i>J. tranquebariensis</i> L f.	H	AY,SD,FL,EM	L	M	Cooling agent, small pox
278		<i>Rhinacanthus nasutus</i> (L.) Kurz.	S	SD,FL,EM	Wp	M	Snake bite, insect bites, ringworms, blood disorders
279		<i>Thunbergia fragrans</i> Roxb.	C	SD,FL,EM	L	M	Treating wounds
		<b>Bignoniaceae</b>					
280		<i>Tecoma stans</i> (L.) Juss. ex Kunth	S	SD,FL,EM	Fl, S	M, O	Bronchitis, congestion, hair growth, scabies, ringworm
		<b>Lentibulariaceae</b>					
281		<i>Utricularia aurea</i> Lour.	H	EM	Wp	M	Prevention the mosquito disease
		<b>Verbenaceae</b>					
282		<i>Lantana camara</i> L.	S	AY,FL,EM	L, R	M	Rheumatism, tetanus, malaria, abdominal vicera, cough, cuts, wounds, congestion
283		<i>Phyla nodiflora</i> (L.) Greene	H	AY,SD,UN,EM	L, St, Fr	M, Co	Anti dandruff, indigestion
284		<i>Stachtarpheta urticifolia</i> (Salisb.) Sims.	S	EM	L	M	Stomach ailments, ulcer, rheumatism, dysentery, worms
		<b>Lamiaceae</b>					
285		<i>Anisomeles indica</i> (L.) Kuntze.	S	SD,FL,EM	Wp	M	Cough, cold, fever, bowels,
286		<i>A. malabarica</i> (L.)R.Br.ex Sims	H	SD,FL,EM	L	M	Teeth formation, fever, cough, cold
287		<i>Clerodendrum inerme</i> (L.) Gaertn	S	AY,SD,FL,EM	L, R	M	Headache, heart burn, swellings, skin diseases
288		<i>C. infortunatum</i> L.	S	AY,SD,HP,FL,EM	L	M	Asthma, cough, diarrhea, gastroenteritis, skin diseases
289		<i>C. phlomidis</i> L.	S	AY,SD,UN,FL,EM	L, R	M	Arthritic pain, body pain
290		<i>Gmelina asiatica</i> L.	C	AY,SD,FL,EM	L, R, Wo	M	Septic wounds, blood purifier
291		<i>Hyptis suaveolens</i> (L.) Poit.	S	AY,FL,EM	Wp	M	Ulcer, wounds, cuts, cough, chest pain, stomachache
292		<i>Leucas aspera</i> (Willd.) Link	H	AY,SD,HP,FL,EM	Wp	M	Antifungal, antimicrobial,

							antinocipitive, antipyretic, cytotoxic, headache, intestinal worms,swellings,skin allergy
293		<i>L. biflora</i> (Vahl) R.Br. ex Sm.	H	EM	L	M	Cough
294		<i>Ocimum americanum</i> L.	H	AY,SD,HP,FL,EM	Wp	M	Fever, acne, cardio tonic, dysentery, stomach upset
295		<i>O. gratissimum</i> L.	S	AY,SD,UN,HP,FL,EM	Wp	M	Cough, cold, stimulent, antiseptic, headache, dysentery
296		<i>O.tenuiflorum</i> L.	H	AY,SD,UN,FL,EM	L	M	Stomach ache, fever, cough cold,
297		<i>Orthosiphon aristatus</i> (Blume) Miq.	H	FL,EM	L	M	Kidney ailments
298		<i>Tectona grandis</i> L.f.	T	AY,SD,UN,FL,EM	L, B, Fl	M	Bone fracture, skin diseases, hair growth, scabies
299		<i>Vitex negundo</i> L.	T	AY,SD,FL,EM	R, L	M	Eczema, ringworm, skin diseases, headache, dysentery, arthritis
	Asterales	<b>Menyanthaceae</b>					
300		<i>Nymphoides hydrophylla</i> (Lour.) Kuntze	H	AY,SD,EM	L, S	M	Eye diseases, scorpion sting, snake bite, anthelmintic
301		<i>N. indica</i> (L.) Kuntze	H	FL,EM	Wp	M	Skin rashes, heeadaches, jaundice, laceration, headache, scabies, swellings
		<b>Asteraceae</b>					
302		<i>Acanthospermum hispidum</i> DC.	H	FL,EM	St, L	M	Dermatological affections
303		<i>Acmella paniculata</i> (Wall.ex.DC.) R.K.Jansen	H	EM	L, Fl	M	Toothache, skin diseases, diuretic, cough, cold, jaundice, sore throat.
304		<i>Ageratum conyzoides</i> (L.) L.	H	AY,SD,FL,EM	Wp	M	Diarrhea, dysentery, cough, purgative, skin diseases, carminative, asthma, leprosy, bronchitis, ringworm
305		<i>Artemisia japonica</i> Thunb.	H	EM	Wp	M	Asthma, anti-inflammatory, cold, cough
306		<i>Bidens pilosa</i> L.	H	FL,EM	Fl	M	Skin diseases
307		<i>Chromolaena odorata</i> (L.)R.M.King& H.Rob.	S	EM	L	M	Wounds
308		<i>Eclipta prostrata</i> (L.) L.	H	AY,SD,UN,FL,EM	Wp	M	Hair growth, antiseptic, elephantiasis, blackening hair, dandruff
309		<i>Emilia sonchifolia</i> (L.) DC. ex. DC.	H	AY,SD,FL,EM	Wp	M, Fo	Conjunctivitis, ulcer, allergy, score ears, wounds, night

							blindness, bowel complaints
310		<i>Kleinia grandiflora</i> (Wallich ex DC.) N.Rani	H	SD,EM	Wp	M	Pimples, scorpion bite
311		<i>Mikania micrantha</i> Kunth	C	AY,SD,UN,FL,EM	L	M	Insect bite, wounds
312		<i>Parthenium hysterophorus</i> L.	H	FL,EM	Wp	M	Dysentery
313		<i>Sphaeranthus indicus</i> L.	H	AY,SD,UN,EM	Wp	M	Skin diseases, anthelmintic, toothache, diuretic, laxative
314		<i>Synedrella nodiflora</i> (L.) Gaertn.	H	FL,EM	L	M	Diarrhea
315		<i>Tridax procumbens</i> (L.) L.	H	AY,SD,FL,EM	L	M	Cuts, wounds, headache, snake bites
316		<i>Vernonia cinerea</i> (L.) Lees	H	AY,SD,UN,FL,EM	Wp	M	Cold, cough, rheumatism, skin diseases, diarrhea, urinary disorder
317		<i>Wedelia chinensis</i> (Osbeck) Merr.	H	AY,SD,FL,EM	L	M	Hair blackening
318		<i>Xanthium strumarium</i> L.	H	AY,SD,FL,EM	S	M	Veneral diseases
	Apiales	<b>Apiaceae</b>					
319		<i>Centella asiatica</i> (L.) Urb.	T	AY,SD,HP,FL,EM	Wp	M, Fo	Enhance memory power, ulcer, skin diseases, mouth freshness, throat disorders, piles

**Habit:** C- Climber, H- Herb, S-Shrub, T- Tree; **Traditional medicines:** AY-Ayurveda; EM-Ethnomedicine; FL- Folklore; HP- Homeopathy; SD- Siddha; UN-Unani; **Plant parts used:** B- Bark, FL- Flowers, Fr- Fruits, G- Gum, L- Leaves, La- Latex, P- Petiole, Rh- Rhizome, R- Roots, S- Seeds, St- Stem, Tu- Tubers, WP- Whole plant; **Indigenous Uses:** Co- Cosmetics, Cr-Craft, M- Medicine, Ma- Manure, Fo- Food, F- Fodder, O- Ornamental, T- Timber

**Table 3. Details of angiospermic plants collected from the of present study area**

Class	Sub class	No. of family	No. of genera	No. of species
Dicots	Polypetalae	35	89	119
	Gamopetalae	21	90	116
	Monochlamydeae	14	33	48
<b>Total</b>		<b>70</b>	<b>212</b>	<b>283</b>
Monocots	-	14	29	36
<b>Total</b>		<b>84</b>	<b>241</b>	<b>319</b>

**Table 4. List of families with number of genera and species**

Family Rank	Family	Genera	Species
1	Fabaceae	28	44
2	Apocynaceae	17	18
3	Asteraceae	17	17

4	Acanthaceae	9	15
5	Euphorbiaceae	9	14
6	Lamiaceae	9	15
7	Malvaceae	9	13
8	Amaranthaceae	8	12
9	Convolvulaceae	5	12
10	Poaceae	8	8
11	Solanaceae	4	7
12	Cyperaceae	3	6
13	Boraginaceae	5	5
14	Commelinaceae	2	5
15	Cucurbitaceae	5	5
16	Phyllanthaceae	2	5
17	Rubiaceae	4	5
18	Molluginaceae	2	4
19	Plantaginaceae	3	4
20	Rutaceae	3	4
21	Verbenaceae	3	3
22	Araceae	3	3
23	Capparaceae	3	3
24	Lythraceae	3	3
25	Myrtaceae	3	3
26	Nyctaginaceae	2	3
27	Onagraceae	1	3
28	Polygonaceae	2	3
29	Anacardiaceae	2	2
30	Annonaceae	1	2
31	Arecaceae	2	2
32	Asparagaceae	1	2
33	Cleomaceae	1	2
34	Combretaceae	2	2
35	Hydrocharitaceae	2	2
36	Linderniaceae	1	2
37	Meliaceae	2	2
38	Menispermaceae	2	2
39	Menyanthaceae	1	2
40	Moraceae	1	2
41	Nymphaeaceae	1	2
42	Oleaceae	2	2
43	Pedaliaceae	2	2
44	Piperaceae	2	2
45	Polygalaceae	1	2
46	Pontederiaceae	2	2



47	Rhamnaceae	1	2
48	Sapindaceae	2	2
49	Vitaceae	2	2
50	Apiaceae	1	1
51	Aponogetonaceae	1	1
52	Aristolochiaceae	1	1
53	Basellaceae	1	1
54	Bignoniaceae	1	1
55	Brassicaceae/Cruciferae	1	1
56	Calophyllaceae	1	1
57	Cannabaceae	1	1
58	Cannaceae	1	1
59	Caricaceae	1	1
60	Ceratophyllaceae	1	1
61	Colchicaceae	1	1
62	Cornaceae	1	1
63	Gentianaceae	1	1
64	Lauraceae	1	1
65	Lentibulariaceae	1	1
66	Magnoliaceae	1	1
67	Martyniaceae	1	1
68	Moringaceae	1	1
69	Muntingiaceae	1	1
70	Nelumbonaceae	1	1
71	Oxalidaceae	1	1
72	Pandanaceae	1	1
73	Papaveraceae	1	1
74	Passifloraceae	1	1
75	Plumbaginaceae	1	1
76	Portulacaceae	1	1
77	Salvadoraceae	1	1
78	Santalaceae	1	1
79	Sapotaceae	1	1
80	Typhaceae	1	1
81	Ulmaceae	1	1
82	Violaceae	1	1
83	Zingiberaceae	1	1
84	Zygophyllaceae	1	1
	<b>Total</b>	<b>241</b>	<b>319</b>