



FLORISTIC DIVERSITY OF FAMILY EUPHORBIACEAE IN MULAGUMOODU, KALKULAM TALUK, KANYAKUMARI DISTRICT, TAMILNADU, S. INDIA

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ABSTRACT Biodiversity conservation is a major concern in now a day. Floristic survey of the area is the best way of to understand establishment of natural habitat. The Euphorbiaceae is the one of the largest family of dicotyledons, and also has significant economic importance. The family has a cosmopolitan distribution. The survey was conducted from September 2013 to February 2014. A total of 37 species under 14 genera belonging to the family Euphorbiaceae were collected and identified. The area shows a high diversity in its terrestrial flora and has an important role in the conservation of biodiversity of the region.

KEYWORDS :

INTRODUCTION

Euphorbiaceae is one of the families of cosmopolitan distribution with 322 genera and 8910 species of plants including annuals, biennials and perennials (Sinnott, 2004) and commonly known as spurge family. It is the fourth largest of all angiosperm families and most of the species are abundant in tropical and temperate regions and not well represented in arctic regions. The genus *Euphorbia* contains 1836 species and distributed worldwide.

The most important part of any floristic survey is the correct scientific identification of the plant wealth found in that particular area (Jasrai *et al.*, 2014). Floristic studies have acquired increasing importance in recent years in response to the need of developing and under developing countries to assess their plant wealth. Euphorbiaceae is composed of 334 genera (Webster, 1994) and over 8,000 species (Radcliffe Smith, 2001) as shown in some previous work worldwide (Govaerts *et al.*, 2000; Balakrishnan and Chakrabarty, 2007).

The earliest floristic exploration of the Tirunelveli and Kanyakumari region floras was undertaken in the last century (Beddome, 1877; Lawson, 1894). Most of the existing studies in the Agastiyamalai region pertain to the floristic enumerations from the Kanniyakumari, Tirunelveli (Lawrence, 1959; Nayar, 1959; Subramanyam and Henry, 1973; Rao *et al.*, 1974; Sharma *et al.*, 1973). Vanila (2003) collected 793 species from 416 genera belonging to 102 families. Uthayakumari Kalavathy (2004) recorded 412 species of monocotyledons belonging to 185 genera and 26 families from Tirunelveli hills and Jothi (2001) described the Euphorbiaceae floristic enumerations from the Tirunelveli hills.

Biological diversity is now increasingly recognized as a vital parameter to assess the global and local environmental changes and sustainability of developmental activities. Summarily, the study aims to provide the taxonomic diversity of Euphorbiaceae as part of the environment impact assessment studies under-taken on biodiversity around Mulagumoodu, Kalkulam taluk, Kanyakumari district, Tamilnadu, S. India

MATERIALS AND METHODS

An extensive field study was conducted from September 2013 to February 2014. A general survey of the vegetation was made and different plants such as herbs, shrubs, grasses, climbers and trees along with present their status. Complete documentation with photographs and herbarium was prepared for future record and reference. The collected plants were preserved and maintained in the form of herbarium for future studies. All the plants collected in the study were identified with in the collecting place. The identified plant species were confirmed by using standard taxonomic floras proposed by Mathew (1991) and Gamble (1936). The collected materials are deposited in the S.T. Hindu College, Nagercoil, K.K.DT, Tamilnadu.

RESULTS AND DISCUSSION

Total 37 plant species with 14 genera were recorded from the study site (Table 1). *Euphorbia* is the dominant genera with 10 species followed by the genera *Acalypha* and *Jatropha* with 6 species, genera *Phyllanthus* with 5 species and *Mallotus* with 4 species (Table-2). Plants found throughout the study period are *Acalypha racemosa*,

Breynia retusa, *Codiaeum variegatum*, *Acalypha indica*, *Euphorbia hirta* and *Phyllanthus amarus*.

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CONCLUSION

Biodiversity has great important for ecological, economic and for the ecosystem stability. Study highlight a rich status of plants compares to other findings but it till required to manage and conserve the biodiversity of this area. Hence, efforts must be taken to protect the biodiversity in this area by involving the local communities in preservation and conservation aspects.

Table 1. Diversity of Euphorbiaceae plants in Mulagumoodu, Kalkulam Taluk, Kanyakumari district, Tamilnadu, S. India

S.NO.	NAME OF THE PLANTS
1	<i>Acalypha amentacea</i> Roxb.
2	<i>Acalypha fruticosa</i> Forssk.
3	<i>Acalypha hispida</i> Burm.f.
4	<i>Acalypha indica</i> L.
5	<i>Acalypha paniculata</i> Miq.
6	<i>Acalypha racemosa</i> Baill.
7	<i>Breynia retusa</i> (L.) Spreng.
8	<i>Codiaeum variegatum</i> (L.) Juss.
9	<i>Croton bonplandianus</i> Baill.
	<i>Croton malabaricus</i> Bedd.
10	<i>Euphorbia antiquorum</i> L.
11	<i>Euphorbia antiquorum</i> L.
12	<i>Euphorbia cyathophora</i> Murr.
13	<i>Euphorbia cyathophora</i> Murray.
14	<i>Euphorbia heterophylla</i> L.
15	<i>Euphorbia hirta</i> L.
16	<i>Euphorbia milli</i> Des. Moul.

17	<i>Euphorbia procera</i> L.
18	<i>Euphorbia thymifolia</i> L.
19	<i>Euphorbia tirucalli</i> L.
20	<i>Jatropha curcas</i> L.
21	<i>Jatropha gossypifolia</i> L.
22	<i>Jatropha gossypifolia</i> L.
23	<i>Jatropha integerrima</i> Jacq.
24	<i>Jatropha maheswaraii</i> Subram. & Nayar
25	<i>Jatropha multifida</i> L.
26	<i>Mallotus philippinensis</i> (Lam.) Muell-Arg.
27	<i>Mallotus rhamnifolius</i> (Willd.) Muell.- Arg.
28	<i>Mallotus aureo-punctatus</i> M.Arg.
29	<i>Mallotus beddomei</i> Hook.f.
30	<i>Manihot esculenta</i> Crantz.
31	<i>Phyllanthus amarus</i> Schumach & Thonn.
32	<i>Phyllanthus emblica</i> L.
33	<i>Phyllanthus maderaspatensis</i> L.
34	<i>Phyllanthus polyphyllus</i> Willd.
35	<i>Phyllanthus virgatus</i> G. Forst.
36	<i>Ricinus communis</i> L.
37	<i>Tragia involucrata</i> L.

Table- 2. Dominant genera of Euphorbiaceae with number of species

S.No	Genera	No. of Species
1	<i>Acalypha</i>	6
2	<i>Euphorbia</i>	10
3	<i>Jatropha</i>	6
4	<i>Phyllanthus</i>	5
5	<i>Mallotus</i>	4

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