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Flora of Sathyam International School Campus, Vellakovil, Tiruppur District, Tamil Nadu, India

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ABSTRACT: Flora is a collective name for the systematic account of the plants of any designated geographical area or geographical epoch. Taxonomy is an integrated and, perhaps, intuitive science of identifying, naming and classifying plants. Our knowledge about the diversity and distribution of plant species is very poor and inadequate that we still do not know exactly how many species exist on our earth. Documentation due to escalating domicile in rural areas green space and trees become increasingly important in developing villages Sathyam international school is one of the exclusive CBSE school belongs to Kangeyam Taluk, Tiruppur District of Tamil Nadu. In the present study, totally 55 plants belonging to Angiosperms have been surveyed. Among which 49 plants belong to Dicotyledons and 06 plants belong to Monocotyledons. These 55 plants belong to 29 families.

KEYWORDS: Flora, Taxonomy, Ecosystem, Biodiversity, Herbarium, Invasive, Medicinal.

I. INTRODUCTION

The word flora means the Goddess of flowers in Latin Mythology. Flora is a collective name for the systematic account of the plants of any designated geographical area or geographical epoch [1]. A flora is differed from vegetational account and the latter describes the general physiognomy and chief constituents of vegetational cover and usually does not mean the survey of plants in the area. Thus the flora should have taxonomical importance and synecological significance [2].

Floristic explorations and taxonomic studies can provide efficient and convenient information about the nomenclature, distribution, ecology, utility of various plant species, and thus about an ecosystem. Taxonomy is an integrated and, perhaps, intuitive science of identifying, naming and classifying plants [3]. Now there is great revival for this subject in view of the alarming erosion of species and ecosystems. The realisation of the economic potential of the biodiversity and the necessity for its preservation for the future welfare of mankind has suddenly boosted the stock of the subject of Taxonomy [4]. But unfortunately the number of systematic botanists is shrinking, with the result that the extent of ignorance of the number of species of organisms on earth is becoming vast [5]. Our knowledge about the diversity and distribution of plant species is very poor and inadequate that we still do not know exactly how many species exist on our earth.

Documentation due to escalating domicile in rural areas green space and trees become increasingly important in developing villages [6]. Documentation of existing green spaces of the rural environment is also important to determine existing resources and to set target for future improvements [7]. Generally, the floristic survey helps in documenting flowering plants and their present status pertaining to conservation. Further the floristic survey of regional areas will become part and parcel of the District Flora in turn the State Flora.

II. RELATED WORK

Flora of British India of Hooker [8] served as a standard reference till recently. Flora of Madras Presidency [9], Flora of Bombay [10], are notable regional floras. Among the recent state floras, Karnataka [11; 12], Himachal Pradesh [13]

Rajasthan [14], Madhya Pradesh [15] Arunachal Pradesh [16], Andhra Pradesh [17] and Tamil Nadu [18]. Recently, Flora of Eastern Ghats (Hill Ranges of South East India) has been extensively surveyed by Pullaiah and Sri Ramamurthy [19]; Pullaiah and Rao [20]; Pullaiah *et al.* [21].

III. METHODOLOGY

The specimens for the present study were collected through extensive field studies in different parts of Sathyam International School (10°88'3068"N, 77°72'2976"E) is situated 8 km, from vellakovil along Vellakovil to Mulanur road. Sathyam international school is one of the exclusive CBSE school belongs to Kangeyam Taluk, Tiruppur District of Tamil Nadu and comprises about 12 acres of land. The altitude of the study area is of 192 m + MSL. The temperature varies from 26.4° C to 34.9° C. The study area falls within the average rainfall area of Tiruppur District of Tamil Nadu. The mean annual rainfall of Vellakovil is 25.4 mm.

Intensive exploration trips were undertaken from June 2023 to July 2023. Field trips were made thrice in a week to obtain a thorough collection of plants. Through well planned field visits, 49 Dicotyledons and 6 Monocotyledons belonging to Angiosperms were collected. Special attention was provided to document the data relating to habit, habitat, association with other plants, frequency, ecological features, height of the plants, colour of the flower, local name *etc.*,

After the collections, the plants were treated with formaldehyde and 0.1% HgCl₂ in order to kill the germs present in the plants. Then they were dried and pressed with the help of wooden press. The dried specimens were mounted on herbarium sheets. The herbarium techniques were followed as mentioned by Jain and Rao [22] and Matthew [23].

IV. EXPERIMENTAL RESULTS

In the present study, totally 55 plants belonging to Angiosperms have been surveyed. Their binomial of the 55 plants along with their families are listed in the table.1. There are 09 plants documented which comes under the invasive list (fig.1) and their native [24] and 09 plants used as medicinal plants (fig.2) by the local peoples are listed in the table. 2 and table. 3 respectively.

Table. 1 Botanical name of the documented plants, family and habit.

S.No	Botanical Name of the Plant	Family	Habit
1.	<i>Achyranthes aspera</i> L.	<i>Amaranthaceae</i>	Herb
2.	<i>Amaranthus viridis</i> L.	<i>Amaranthaceae</i>	Herb
3.	<i>Alstonia scholaris</i> (L.)R.Br.	<i>Apocynaceae</i>	Tree
4.	<i>Nerium oleander</i> L.	<i>Apocynaceae</i>	Shrub
5.	<i>Pergularia daemia</i> (Forssk.) Chiov.	<i>Asclepiadaceae</i>	Climber
6.	<i>Tridax procumbens</i> L.	<i>Asteraceae</i>	Herb
7.	<i>Vicoa indica</i> Cass	<i>Asteraceae</i>	Herb
8.	<i>Heliotropium indicum</i> L.	<i>Boraginaceae</i>	Herb
9.	<i>Trichodesma indicum</i> (L.)R.Br	<i>Boraginaceae</i>	Herb
10.	<i>Peltophorum pterocarpum</i> (DC.)K.Heyne	<i>Caesalpinioidaeae</i>	Tree
11.	<i>Delonix regia</i> (Boj.ex Hook.)Raf.	<i>Caesalpinioidaeae</i>	Tree
12.	<i>Cleome felina</i> L.f	<i>Capparidaceae</i>	Herb
13.	<i>Cleome viscosa</i> L.	<i>Capparidaceae</i>	Herb
14.	<i>Commelina benghalensis</i> L.	<i>Commelinaceae</i>	Herb
15.	<i>Evolvulus alsinoides</i> (L.)L	<i>Convolvulaceae</i>	Herb
16.	<i>Merremia tridentata</i> (L.)Hallier f.	<i>Convolvulaceae</i>	Herb
17.	<i>Coccinia indica</i> Wight and Arn	<i>Cucurbitaceae</i>	Climber
18.	<i>Citrullus lanatus</i> (Thumb.)Matsum & Nakan.	<i>Cucurbitaceae</i>	Climber
19.	<i>Acalypha indica</i> L.	<i>Euphorbiaceae</i>	Herb
20.	<i>Croton bonplandianus</i> Baill	<i>Euphorbiaceae</i>	Herb
21.	<i>Euphorbia hirta</i> L.	<i>Euphorbiaceae</i>	Herb
22.	<i>Alysicarpus ovalifolius</i> (Schumach. & Thonn.) J.Leonard	<i>Faboideae</i>	Herb
23.	<i>Indigofera linnaei</i> L.	<i>Faboideae</i>	Herb
24.	<i>Indigofera viscosa</i> L.	<i>Faboideae</i>	Herb

25.	<i>Tamarindus indica</i> L.	<i>Faboideae</i>	Tree
26.	<i>Pongamia pinnata</i> (L.)panigrahi	<i>Faboideae</i>	Tree
27.	<i>Ocimum tenuiflorum</i> L.	<i>Lamiaceae</i>	Herb
28.	<i>Hibiscus rosa-sinensis</i> L.	<i>Malvaceae</i>	Shrub
29.	<i>Pavonia zeylanica</i> L.	<i>Malvaceae</i>	Herb
30.	<i>Azadirachta indica</i> A. Juss.	<i>Meliaceae</i>	Tree
31.	<i>Mollugo nudicaulis</i> Lam.	<i>Molluginaceae</i>	Herb
32.	<i>Mollugo oppositifolia</i> L.	<i>Molluginaceae</i>	Herb
33.	<i>Ficus cordata</i> Thunb.	<i>Moraceae</i>	Tree
34.	<i>Tephrosia purpurea</i> (L.)	<i>Papilionoideae</i>	Herb
35.	<i>Pedaliium murex</i> L.	<i>Pedaliaceae</i>	Herb
36.	<i>Sesamum radiatum</i> Schumach and Thonn.	<i>Pedaliaceae</i>	Herb
37.	<i>Phyllanthus acidus</i> (L.) Skeels.	<i>Phyllanthaceae</i>	Tree
38.	<i>Phyllanthus madraspatensis</i> L.	<i>Phyllanthaceae</i>	Herb
39.	<i>Phyllanthus niruri</i> Schumach. & Thonn	<i>Phyllanthaceae</i>	Herb
40.	<i>Cenchrus biflorus</i> L.	<i>Poaceae</i>	Herb
41.	<i>Chloris barbata</i> Sw.	<i>Poaceae</i>	Herb
42.	<i>Dactyloctenium aegyptium</i> (L.)Willd.	<i>Poaceae</i>	Herb
43.	<i>Eragostis tenella</i> (L.)P.B.	<i>Poaceae</i>	Herb
44.	<i>Perotis indica</i> Aiton.	<i>Poaceae</i>	Herb
45.	<i>Portulaca oleraceae</i> L.	<i>Portulacaceae</i>	Herb
46.	<i>oldenlandia diffusa</i> (Willd.)Roxb.	<i>Rubiaceae</i>	Herb
47.	<i>Salvadora angustifolia</i> Turril	<i>Salvadoraceae</i>	Herb
48.	<i>Capsicum frutescense</i> L.	<i>Solanaceae</i>	Herb
49.	<i>Datura metel</i> L.	<i>Solanaceae</i>	Herb
50.	<i>Solanum nigrum</i> L.	<i>Solanaceae</i>	Herb
51.	<i>Lycopersicon esculentum</i> Mill. Gard	<i>Solanaceae</i>	Herb
52.	<i>Corchorus tridens</i> L.	<i>Tiliaceae</i>	Herb
53.	<i>Cissus quadrangularis</i> L.	<i>Vitaceae</i>	Twinner
54.	<i>Tribulus terrestris</i> L.	<i>Zygophyllaceae</i>	Herb
55.	<i>Asparagus racemosus</i> Willd.	<i>Liliaceae</i>	Herb

Table. 2 Medicinal plants recorded in the study area and their medicinal uses

S.No	Name of the Medicinal plant	Family	Medicinal Uses
1.	<i>Achyranthes aspera</i>	<i>Amaranthaceae</i>	Treatment of Cough, Bronchitis, Rheumatism, Mlalarial fever, dysentery, Asthuma, Hypertension and Diabetes.
2.	<i>Acalypha indica</i>	<i>Euphorbiaceae</i>	To serve as a anthelmintic, anti-inflammation, anti-bacterial, anti-cancer, anti-diabetes, anti-hyperlipidemic, anti-venom, hypatoprotective and hypoxia.
3.	<i>Euphorbia hirta</i>	<i>Euphorbiaceae</i>	Used traditionally for female disorders, respiratory ailments (cough, coryza, bronchitis and asthma), worm infections in children's, dysentery and jaundice
4.	<i>Pongamia pinnata</i>	<i>Faboideae</i>	Treatment of tumors, piles, skin diseases and ulcers.
5.	<i>Ocimum tenuiflorum</i>	<i>Lamiaceae</i>	Treatment of bronchitis, bronchial asthma, malaria, diarrhea, dysentery and skin diseases
6.	<i>Azadirachta indica</i>	<i>Meliaceae</i>	Anti-inflammatory, anti-arthritis, antipyretic, hypoglycemic, antigastric ulcer, antifungal, antibacterial, and anti-tumour.
7.	<i>Pedaliium murex</i>	<i>Pedaliaceae</i>	Used for the dissolution and prevention of kidney stone formation, incontinence of urine, gonorrhoea, promote lochial discharge and antibilious agent.
8.	<i>Phyllanthus niruri</i>	<i>Phyllanthaceae</i>	Internal use of jaundice, gonorrhoea, frequent menstruation and diabetes

9.	<i>Solanum nigrum</i>	<i>Solanaceae</i>	To treat pneumonia, aching teeth, stomach ache, tonsillitis, wing worms, inflammation and diuretic.
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Table. 3 Invasive Plants recorded in the study area:

S.No	Name of the Medicinal plant	Family	Native of the Plants
1.	<i>Cleome viscosa</i>	Capparidaceae	Tropical America
2.	<i>Corchorus tridens</i>	Tiliaceae	Tropical America
3.	<i>Croton bonplandianus</i>	Euphorbiaceae	Temperate South America
4.	<i>Datura metel</i>	Solanaceae	Tropical America
5.	<i>Euphorbia hirta</i>	Euphorbiaceae	Tropical America
6.	<i>Indigofera linnaei</i>	Faboideae	Tropical America
7.	<i>Portulaca oleraceae</i>	Portulacaceae	Tropical central America
8.	<i>Tribulus terrestris</i>	Zygophyllaceae	Tropical America
9.	<i>Tridox procumbens</i>	Asteraceae	Tropical America

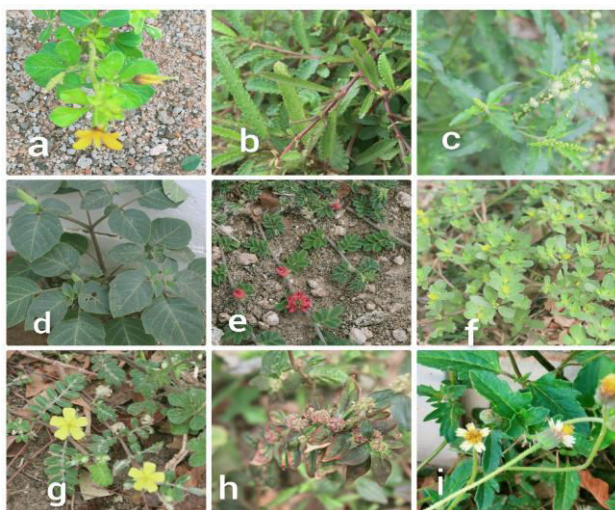


Fig. 1 Invasive Plants surveyed in the study area
 (a) *Cleome viscosa* (b) *Corchorus tridens* (c) *Croton bonplandianus*
 (d) *Datura metel* (e) *Indigofera linnaei* (f) *Portulaca oleraceae*
 (g) *Tribulus terrestris* (h) *Euphorbia hirta* (i) *Tridox procumbens*

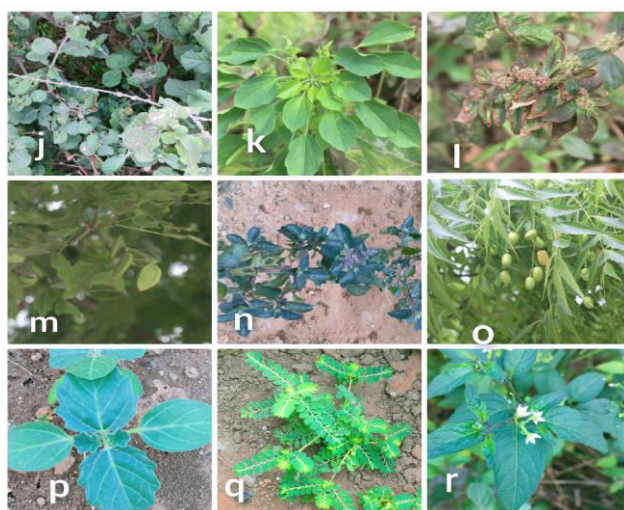


Fig.2 Medicinal plants surveyed in the study area
 (j) *Achyranthus aspera* (k) *Acalypha indica* (l) *Euphorbia hirta*
 (m) *Pongamia pinnata* (n) *Ocimum tenuiflorum* (o) *Azadirachta indica*
 (p) *Pedaliium murex* (q) *Phyllanthus niruri* (r) *Solanum nigrum*

V. CONCLUSION

The present study is an attempt to survey of the Flora of Sathyam International School Campus, Vellakovil, Tiruppur District of Tamil Nadu, India. Totally 55 plants were surveyed. Among which 49 plants belong to Dicotyledons and 06 plants belong to Monocotyledons. These 55 plants belong to 29 families. The Family *Poaceae* has representatives with a maximum 5 members in the present study area. There are 13 families have single representatives with one species. In the present study there are 09 plants are under the invasive category and 09 plants are used for medicinal purposes by the local peoples.

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