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Insects Population in Sacred Heart Arts And Science College Campus, Perani

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Abstract. Insects are the largest group of organism in world, most are beneficial to human beings and plants. Some insects are acts as a predators and parasites. Sacred Heart Arts and Science College is a branch of CSST Educational Institution across the globe. It was established in the academic year of 2017-2018 at Perani, Tindivanam, Villupuram, Tamilnadu-India. In this campus is well known for its biodiversity in which different kinds of flora and fauna species are survived here. The present study to investigate the types of insects living in our college campus during the period of January to July 2022. The results of the present research work revealed that among the insects population in the Sacred College Campus, Honey Bee, Ants, Butterfly Damsselfly, Termites and Spider is very high range.

Keywords: Insects, Population, Honey Bee, Butterfly, Damsselfly, Termite.

1. INTRODUCTION

Sacred Heart Arts and Science College is a branch of CSST Educational Institutions across the globe. It is established in the Academic year 2017- 18 at Perani, Tindivanam (Tk), Villupuram (Dt), Tamil Nadu, India. This campus is well known for its biodiversity in which variety of plant species and animal are found. Insects are most important organism used in the agricultural field for the production of high yield. Insects are social being animals because they perform the pollination in all plants. Insects are essential to the functioning of all ecosystems. Insects are important to everyone, they are found almost in every place and in everything. As you become more familiar with insects, you will be fascinated with the wide variety of forms and their ways of life. Biological diversity refers to the variety of life on earth which could be defined by the United Nation Convention on biological Diversity. It includes diversity of species, genus and ecosystem and the ecological processes that support them Rabosky and Daniel., 2009. In ecological studies, populations are usually described in terms of the population density or population size (Begon et al., 1986; Cain et al., 2011). Having these values known over a period of time, conclusions can be made about a given species, community, or ecosystem as a whole (Royama, 1982; Kot, 2001). In their turn, conclusions often lead to decision-making about, for instance, controlling or protective measures. In particular, in pest management, the information gained about pest abundance in a given field or area is then used to make a decision about pesticide application (Stern, 1973). Activities such as this can be costly and may have drastic consequences for the ecosystems. To avoid unjustified decisions and unnecessary losses, the quality of the information about the population density is therefore a matter of primary Importance. Many people have made the collection and identification of insects is useful hobbies; others have made this science of insect to study their life and to do the research. Many people begin to study insects simply because they are so abundant and unusual. They are the most diversified kind of animal life in existence, and, except for microbes, insects are numerous. Scientists have identified nearly a million different species of insects and expect that there may be many more left to be discovered. Genetic differences can now be measured using increasingly sophisticated techniques. These differences are the raw materials for evolution (Butler., 1994). Srinivasan., 2022., investigated the biodiversity of some insect fauna in different coastal habitat of Tamilnadu, Southeast coast India and also tried to clarify the relationship between surrounding coastal environmental ecosystem. The aim of the present study is to identify the beneficial and harmful population in our college campus.

2. MATERIAL AND METHODS

The insect population count reach were conducted on January to July-2022. For data collection, Note book, Note Cam, Insect collection net was used. Websites are excellent source for information we used the Google lens for identification of insects name. Hand lens also used for the observation of small insects which was occur in trees, ground, fall down leaf, college compound wall and well.

3. RESULT AND DISCUSSION

The results of the present study in our college campus having 58 species of insects insect species are found (Table1) that they are beetles, butterflies, ants, grasshopper, termites, moths, mosquitoes, housefly, wasps, ladybug and etc.. Among these insect species more than 30 species of insect's population are found in high ranges in our college campus (Table-2). In data collection some arthropod organism like butterfly, spider, dragon fly and variety of ants are identified and tabulated. The data collection starts from college campus garden (Vegetable and Flower), paddy field and ground nut field. The insects present in Sacred Heart Arts and Science College are tabulated and shown in figures 1 & 2.

TABLE 1. Shows Insects Found In SHASC Campus

Sl. No	Common Name	Scientific Name
1	Sap sucking pest	Aphid species
2	Lady bug	Aphid species
3	Rose sludge	Rose sawflies
4	Rose feeder	Japaneese beetle
5	Carpenter bee	Xylocopaviolacea
6	Ant	Andrena sp.
7	Ant	Camponotus sp.
8	Ant	Myrmica sp.
9	Ant	Lasius fuliginosus
10	Garden caebus	Carbus horttensis
11	Rove beetle	Velleius dilatatus
12	Damselbug	Prostemma guttula
13	Damselbug	Nabis sp.
14	Spined sting bug	Picromerus bidens
15	forestbug	Pentatoma rupifers
16	Great eggfly	Hypolimnas bolina
17	Clowed yellow	Coliascroseous
18	Ringlet	Aphantopus hyperantus
19	Indian Red Bug	Odotontopus vernicarnis
20	Ditch jewel	Brachthemis contaminata

21	Common wasp	<i>Vespula vulgaris</i>
22	Beet webworm moth	<i>Spoladeare curvalis</i>
23	Ground skimmer	<i>Diplacodes trivialis</i>
24	Cranefly	<i>Ctenophora pectinicornis</i>
25	Chiroomis	<i>Chironomus plumosus</i>
26	Blue bottle fly	<i>Caliphora vomitoria</i>
27	Handmaiden moth	<i>Syntomoidesimaon</i>
28	Yellow winged darter	<i>Sympetrum flaveolum</i>
29	Red dragonfly	<i>Sympetrum fonscolombii</i>
30	Swift long wing skimmer	<i>Pachydiplax longipennis</i>
31	Mosquito hawk	<i>Anax junius</i>
32	Bluetail	<i>Ischnura senegalensis</i>
33	Ground skimmer	<i>Diplacodes trivialis</i>
34	Blue tailed damselfly	<i>Ichnura elegans</i>
35	Blue tailed damselfly	<i>Ichnura pumilio</i>
36	Click beetle	<i>Ampheolus sangulneus</i>
37	Seven spotted ladybug	<i>Coccinella septempunctata</i>
38	red pumpkin beetle	<i>Aulacophora abdominalis</i>
39	Black dotted yellow butterfly	<i>Rhopalocera sp.</i>
40	Jezebel butterfly	<i>Delias eucharis pieridae</i>
41	Rose butterfly	<i>Pachiliopta aristolochiae</i>
42	Black eyes butterfly	<i>Glaucopsyche alexis</i>
43	Thorn butterfly	<i>Vanessa cadui</i>
44	Balkan tiger butterfly	<i>Tarucus balkanicus</i>
45	Blue tiger	<i>Tirumala limnaceae</i>
46	Crimson rose	<i>Pachliopta hector</i>
47	Plain tiger	<i>Danaus chrysippus</i>
48	Ground nut leafhopper	<i>Aproaerema modicella</i>
49	Rice gall midge	<i>Orseolia oryzae</i>
50	Rice thrips	<i>Baliothrips biformis</i>
51	Army worm	<i>Spodoptera frugiperda</i>
52	Green horned caterpillar	<i>Melanitis ismene</i>

53	Yellow stem borer	Scirpophaga incertulus
54	Giant Grasshopper	Calliptamus Italicus
55	China Grasshopper	Northern grass pyrgomorph
56	Brown grasshopper	Valanga irregularis
57	Cockroach	Periplanata americana
58	Termite	Mastotermes darwiniensis

SHASC: Sacred Heart Arts and Science College

TABLE 2. Shows counting of individual present in Higher Range

Sl. No	Name of species	Total number of species
1	Ants	860
2	worms	43
3	bugs	40
4	butterfly's	240
5	grasshopper	60
6	damselflies	150
7	beetle	40
8	Honey bees	500
9	wasp	23
10	dragonfly	60
11	Cockroach	69
12	Termite	650

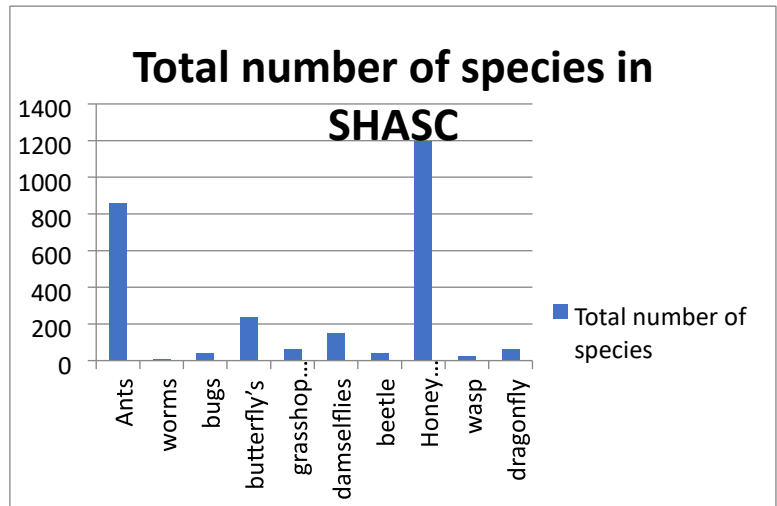


FIGURE 1. Shows graphical representation of insect population in our college.

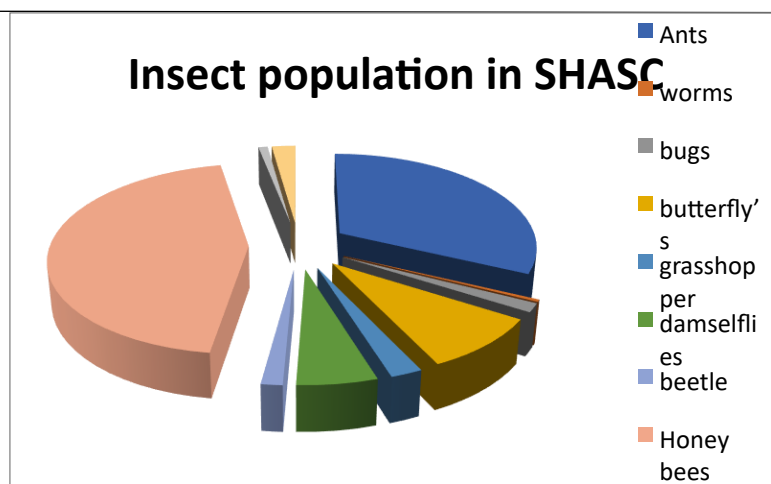


FIGURE 2. Shows pie diagram for higher population of insects in SHASC.

The study of the insect population in Sacred Heart Arts and Science College, Perani campus was done by the observation of insects in the year 2022 from January to July. Insects are among the tiniest living creatures on Earth, but play a huge role in maintaining the ecosystem in globally. They have thrived on Earth for millions of years and are known to be the most diversified life forms on the planet. Altogether, insects can outweigh the human population by nearly 17 times. Globally, scientists have discovered nearly 1 million insect species, while approximately 4 million are still not known to us. Despite their impressive presence and spread, the last few decades have not been kind to the insects. Estimates suggest that the world's insect kingdom has been witnessing a sharp decline and a series of fresh studies have indicated that the Earth is losing about one to two percent of its insect population annually. The insects are found mostly where the food is available. In our college we have vegetable garden, flowering garden, paddy field and ground nut field. Insects like grasshopper, honey bee and ants were found maximum. And also butterfly mainly feed on nectar of flowering plants as well as manila field. Insects play a vital role for the ecosystem and their decline can severely disrupt their ecosystem services like pollination of plants, control of weeds and pests, recycling waste, and keeping the soil fertile. A.P. Zecharia et al., 2018 stated that the insect species diversity of present in based on the environmental condition. They proved the polluted area has low population and unpolluted area has high insect diversity, in this manner our college has good environmental conditions has high insects diversity.

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