

TELANGANA TRIBAL WELFARE RESIDENTIAL DEGREE COLLEGE FOR
WOMEN,RAJANNA SIRICILLA

Department of Zoology Protect work -2019

A PROGECT REPORT
ON

“ COLLECTION IDENTIFICATION AND CHARECTERIZATION OF INSECTS AT LOCAL AREA”

SUBMITTED BY

B. MUNNY

S.PRASANYA

R.ANKHITHA

P. SUVARNA

K. RAJITHA

UNDER THE GUIDENCE

OF

P. VEENA M.Sc,SET.

DEPT OF ZOOLOGY



TELANGANA TRIBAL WELFARE RESIDENTIAL DEGREE COLLEGE [W], RAJANNA SIRICILLA
[AFFILIATED TO SATAVAHANA UNIVERSITY]

DECLARATION

C. MUNNY, R. ANKHITHA, S. PRASANYA, P. SUVARNA, K. RAJITHA we hereby declare that the project report titled "COLLECTION IDENTIFICATION AND CHARECTERIZATION OF INSECTS AT LOCAL AREA" was carried out from 13/11/2019 under the guidance of P. VEENA at TTWRDC (W), Thangallapally.

I affirm that:

The work presented in this report is original and has not been submitted elsewhere for any other purpose.

The project report represents my own work and reflects my understanding of the subject matter.

Date:13/11/2019

Place: TTWRDC (w) Thangallapally

Name of the student

B.MUNNY

S.PRASANYA

R.ANKHITHA

P. SUVARNA

K. RAJITHA

CERTIFICATE

This is to certify that the project report title "COLLECTION IDENTIFICATION AND CHARECTERIZATION OF INSECTS AT LOCAL AREA" Is completed by B.MUNNY, R. ANKHITHA, P. SUVARNA, K. RAJITHA. S. PRASANYA, under the guidance of P. VEENA GDL in Zoology. This has to not been submitted to any other institute or university for the award of any degree.



signature of the faculty



Principal

Principal
TTWRDC(W)SIRCILLA
Dist: Rajanna Sircilla

Project Report on Collection, Characterization, and Classification of Insects at TTWRDC Women Rajanna Siricilla

Date:-13/11/2019

Introduction

The project undertaken by the degree students at TTWRDC Women Rajanna Siricilla focuses on the collection, characterization, and classification of various insect species found in the region. This project aims to enhance students' understanding of entomology, biodiversity, and the ecological significance of insects.

Objectives

- ❖ To collect a diverse range of insect species from different habitats.
- ❖ To characterize the collected insects based on morphological features.
- ❖ To classify the insects into appropriate taxonomic groups.
- ❖ To document and analyze the ecological roles of the collected insects.

Methodology

The project was carried out in several phases:

Collection

Field Trips: Students conducted multiple field trips to various ecosystems including forests, agricultural fields, and urban areas.

Collection Methods: Techniques such as sweep netting, pitfall traps, and light traps were used to collect insects.

Preservation: Collected insects were preserved using standard entomological methods, including pinning and storing in ethan

Characterization

Morphological Analysis: Detailed examination of insects' external structures such as wings, antennae, legs, and mouthparts using magnifying glasses and microscopes.

Measurement: Recording the size and other measurable parameters of each specimen.

Results

Diversity of Collected Insects

Orders Identified: Insects from various orders including Lepidoptera (butterflies and moths), Coleoptera (beetles), Diptera (flies), Hymenoptera (bees and wasps), and Orthoptera (grasshoppers and crickets) were identified.

Ecological Roles

Pollinators: A significant number of pollinating insects were identified, emphasizing their role in local agriculture and natural ecosystems.

Decomposers: Many beetles and flies were found to contribute to decomposition processes.

Discussion

The project highlighted the rich insect biodiversity in the Rajanna Siricilla region. Students gained practical skills in field collection, specimen preservation, and taxonomic classification. The data collected serves as a valuable resource for future ecological and agricultural studies.

Conclusion

The project successfully achieved its objectives, providing a comprehensive overview of the insect diversity in the region. It also emphasized the importance of insects in maintaining ecological balance and their potential impact on human activities. Future projects could expand on this work by exploring seasonal variations in insect populations and their interactions with other wildlife.

BUTTERFLY

CLASSIFICATION

Kingdom - Animalia

Phylum – Arthropoda

Subphylum- Hexapoda

Class - Insecta

Order - Lepidoptera

Suborder - Rhopalocera



Charecteristics of butterfly which observed by students :-

- Butterflies are active during the day and are usually **brightly coloured or strikingly patterned**.
- Perhaps the most distinctive physical features of the butterfly are its club-tipped antennae and its habit of holding the wings vertically over the back when at rest.
- **Head:** foremost part of the body of a butterfly.
- **Antenna:** organ of touch of a butterfly.
- **Compound eye:** complex sight organ.
- Butterflies acts as a good pollinator helps in crop pollination

HONEY BEE(Apis)

CLASSIFICATION

Kingdom: Animalia

Phylum: Arthropod

Class-Insecta



Order: Hymenoptera

Family: Apidae

Charecteristics of HONEY BEE which observed by students :-

- This study was conducted in order to determine the morphological characteristics of the honeybee
- All honeybees are social insects and live together in nests or hives.
- a body in 3 parts: head, thorax and abdomen.
- a pair of antennae,
- 3 pairs of jointed legs and.
- compound eyes.
- The honeybee is **remarkable for the dancing movements it performs in the hive** to communicate information to its fellow bees about the location, distance, size, and quality of a particular food source in the surrounding area.
-

ANT

CLASSIFICATION

Kingdom - Animalia

Phylum - Arthropoda

Sub phylum-Hexapoda

Class - Insecta

Order - Hymanoptera

Charecteristics of ANT which observed by students :-

- Like all insects, an ant's body is divided into three main parts: **the head, the thorax, and the abdomen.**
- Ants have a hard, waterproof exoskeleton, which is made of a material called chitin.
- They are exceptionally strong for their size: they can lift 10 times their own weight! Most ants have two large compound eyes.
- Six legs with three joints each and a hooked claw for climbing.
- Large heads with compound eyes.

HOUSE FLY

CLASSIFICATION



Kingdom - Animalia

Phylum - Arthropoda

Sub phylum-Hexapoda

Class - Insecta

Order – Diptera



Charecteristics of HOUSE FLY which observed by students :-

- Adult houseflies have short antennae, a gray thorax with four darker longitudinal stripes, and a gray or yellow abdomen with a darker median line and irregular pale yellowish spot at the anterior lateral margins Abdomen.
- The body of housefly is distinguished into **head, thorax and abdomen**. The head is hemispherical in shape and bears two lateral compound eyes. Three simple eyes are also present on dorsal side of the head.
- The last section that makes up the fly's body is the abdomen. **Female houseflies have nine segments in their abdomen**, while males have eight. In a female, the last four segments of the abdomen are hidden until she is ready to lay eggs

GRASSHOPPER

CLASSIFICATION

Kingdom - Animalia

Phylum - Arthropoda

Class - Insecta

Order –Orthoptera

Family-Acrididae



Charecteristics of GRASSOPPER which observed by students :-

- Grasshopper Anatomy Like all insects, the grasshoppers have three main body parts – the head, the thorax and the abdomen. They have six jointed legs, two pairs of wings and two antennae.
- Compound eye – grasshoppers have 2 faceted eyes made up of many hexagonal lenses.
- Jumping legs -the long, hindmost pair of the grasshoppers six legs.
- Abdomen – the segmented tail area of a grasshopper, which contains the heart, reproductive organs, and most of the digestive system

SPIDER

CLASSIFICATION

Kingdom - Animalia

Phylum – Arthropoda

Subphylum-Chelicerata

Class - Arachnida

Order –Araneae



Charecteristics of SPIDER which observed by students :-

- Unlike an insect, the spider's body is in two sections. The head and thorax, bearing the eyes, mouthparts and legs, are fused together to form **the cephalothorax**.
- The cephalothorax is the first of 2 body parts on a spider.
- It is a combination of the head and thorax, and on it are found the legs, eyes, pedipalps, chelicerae, and other mouthparts.
- The cephalothorax and abdomen are connected by a thin stalk called the "pedicel."
- A spider's pedipalps are part of its mouth, and are located just between the chelicerae and first pair of legs on the cephalothorax
- Spiders have 8 legs, all of which are attached to the cephalothorax. Each leg is made up of 7 segments Like all arachnids

DRAGONFLY

CLASSIFICATION

Kingdom - Animalia

Phylum – Arthropoda

Subphylum-Hexapoda

Class - Insecta

Order –Odonata



Charecteristics of SPIDER which observed by students :-

- Dragonflies have **long, delicate, membranous wings** which are transparent and some have light yellow colouring near the tips.
- Their bodies are long and slender and they have a short antennae.
- Dragonflies are very colourful.
- A dragonfly is an insect and so has three main body segments and six legs.Dragonflies have two sets of wings with a notch in the front edge of each wing.
- The front wing pairs are smaller than the back pairs. They function independently, giving the dragonfly speed and height during flight.

BUGS(Coccinella septempunctata)

CLASSIFICATION

Kingdom - Animalia

Phylum – Arthropoda

Subphylum-Hexapoda

Class - Insecta

ORDER-Coleoptera



Charecteristics of BUG which observed by students :-

- These insects are generally called ladybugs or lady beetles.
- Like all insects, lady beetles have three body regions; a head, thorax and abdomen.
- Body is round and red.
- Pronotum is black with large white spots on each side.
- There are seven black spots total, three on each wing cover and one central spot at the base of the pronotum.

MOSQUITO

CLASSIFICATION

Kingdom - Animalia

Phylum – Arthropoda

Subphylum-Hexapoda

Class - Insecta

ORDER-Diptera



Charecteristics of MOSQUITO which observed by students :-

- Mosquitoes have **thin, long bodies and three pairs of extremely long legs.**
 - They have scales along the veins of their wings and long beak-like, sharp sucking mouth parts called a proboscis.
 - These two features distinguish mosquitoes from other flies.
 - Mosquitoes also have feathery or hairy antennae.
 - **Two compound eyes for vision.**
- Mouyh parts :-**
- Labrum - a cover which may be loosely referred to as the upper lip.Mandibles - hard, powerful cutting jaws.
 - Maxillae - 'pincers' which are less powerful than the mandibles.
 - Labium - the lower cover, often referred to as the lower lip.

TERMITES

Kingdom - Animalia

Phylum – Arthropoda

Subphylum-Hexapoda

Class - Insecta

ORDER-Isoptera



Charecteristics of TERMITES which observed by students :-

- Termites live in large social groups called **colonies**. Termites are insects, so they have body segments and six legs.
- They may also have wings, and the wings are all about the same length. **termites**, winged insects that live in colonies and feed on wood and plant matter.
- Termites have **pale brown to white bodies with a darker head and have no waist between the thorax and abdomen.**
- The antennae have bead-like segments. The non-reproductive forms never develop wings, are blind, and have thin skin that makes them vulnerable to drying out.

