International Journal of Current Science Research
www.drbgrpublications.in

Mounting of Earthworm Body Setae

Vasudhevan. I

Assistant Professor of Zoology, Vivekananda College, Agasteeswaram, Kanyakumari, India

Corresponding Author e-mail iD: gold_vasu@yahoo.com

Introduction

The earthworm is an organic indicator of the soil environment. The driving of nutrients is a critical ecology function that is essential to life on earth.

Distribution

Earthworms are broadly distributed throughout the biosphere. All over the world nearly 3627 species of earthworms are there.

Other Names of Earthworm

- Friend of farmers
- Ecosystem engineers
- Dew-worm
- Rainworm
- Nightcrawler
- Angleworm

Scientific Classification

Kingdom: Animalia

Phylum: Annelida

Common Earthworm Species

- *Lumbricus terrestris*
- *Eisenia fetida*
- *Eudrilus eugeniae*

Volume 10; Issue 4; April 2024; pp 1-3; ISSN: 2454-5422

Aim

To notice earthworm body setae for understanding the locomotion.

Requirements

- Alive earthworm
- Dissection box
- Glass slide
- Sodium Hydroxide (NaOH) (or) Potassium Hydroxide (KOH)
- Bunsen burner
- Glycerine
- Cover glass
- Microscope

Body setae

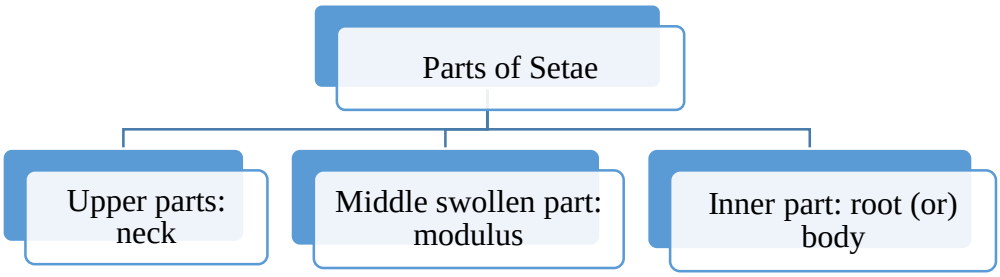
Setae called locomotory organs. They are formed of horny nitrogenous organic substances known as chitin. The movement of setae is controlled by special types of muscles. During movement, muscles take turns contracting. To move forward, muscles in the front of the body contract. Bristles, called setae, are situated on every segment of the earthworm's body. All segments except first, last, and clitellum bears setae. They lie embedded in the middle of each segment which projects backwardly. Setae extend out of the skin and hold the front of its body to the soil. About 80-120 setae are present on each segment.

Fig: Earthworm

Structure of Setae

- Minute
- Elongated
- S-shaped
- Faint yellow in color.

Parts of Setae



Mounting of body setae

- Isolate a small piece (1 cm length) of skin from the dorsal side of earthworm.
- Transfer it to a glass slide.
- Add 2 drops of 30% KOH or NaOH.
- Gently heat on a Bunsen burner until the tissue dissolves.
- Add a drop of glycerine.
- Put a cover glass and examine under the microscope.

Precautions

- Care is vital at each stage of the experiment.
- Microscope slide should be sterile.
- Please use the dustbin

Reference

Nitin Kamboj, Amrit Kumar, Vishal Kamboj, Aditi Bisht, Neeraj Pandey and Manisha Bharti 2021 Role of earthworm biodiversity in soil fertility and crop productivity improvement. In: Biological Diversity: Current Status and Conservation Policies, 1: 230-241.

https://www.usbg.gov/sites/default/files/images/earthworm_science_page.pdf