

### LEARNING OBJECTIVES

- To understand the importance of preservation of museum specimens
- To identify animals based on special identifying characters
- To understand different organ systems through demo or virtual dissections
- To maintain a neat, labelled record of identified museum specimens

### SYLLABUS:

Study of museum slides / specimens / models (Classification of animals up to orders)

- Protozoa: *Amoeba*, *Paramecium*, *Paramecium Binary fission and Conjugation*, *Vorticella*, *Entamoeba histolytica*, *Plasmodium vivax*
- Porifera: *Sycon*, *Spongilla*, *Euspongia*, *Sycon- T.S & L.S*, Spicules, Gemmule
- Coelenterata: *Obelia – Colony & Medusa*, *Aurelia*, *Physalia*, *Velella*, *Corallium*, *Gorgonia*, *Pennatula*
- Platyhelminthes: *Planaria*, *Fasciola hepatica*, *Fasciola larval forms – Miracidium, Redia, Cercaria*, *Echinococcus granulosus*, *Taenia solium*, *Schistosoma haematobium*
- Nematelminths: *Ascaris (Male & Female)*, *Dracunculus*, *Ancylostoma*, *Wuchereria*
- Annelida: *Nereis*, *Aphrodite*, *Chaetopteurs*, *Hirudinaria*, Trochophore larva
- Arthropoda: *Cancer*, *Palaemon*, *Scorpion*, *Scolopendra*, *Sacculina*, *Limulus*, *Peripatus*,
  - Larvae - Nauplius, Mysis, Zoea, Mouth parts of male & female *Anopheles* and *Culex*, Mouthparts of Housefly and Butterfly.
- Mollusca: *Chiton*, *Pila*, *Unio*, *Pteredo*, *Murex*, *Sepia*, *Loligo*, *Octopus*, *Nautilus*,
  - Glochidium larva
- Echinodermata: *Asterias*, *Ophiothrix*, *Echinus*, *Clypeaster*, *Cucumaria*, *Antedon*,
  - Bipinnaria larva
- Hemichordata: *Balanoglossus*, Tornaria larva

### DISSECTIONS:

Computer - aided techniques should be adopted or show virtual dissections Dissection of edible (Prawn/Pila) invertebrate as per UGC guidelines

An "Animal album" containing photographs, cut outs, with appropriate write up about the above-mentioned taxa. Different taxa/ topics may be given to different set of students for this purpose

### REFERENCE WEB LINKS:

- <https://virtualmicroscopy.peabody.yale.edu/>
- <https://tnhm.in/category/assorted-gallery-for-vertebrates-and-invertebrates/invertebrates/>
- <http://www.nhc.ed.ac.uk/index.php?page=24.25.312>
- <https://biologyjunction.com/invertebrate-notes/>
- <https://lanwebs.lander.edu/faculty/rsfox/invertebrates/>
- <http://www.zoologyresources.com/uploadfiles/books/dc64b77d8769325515d17c945e461b45.pdf>

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