Creation of *E-museum* as Open Educational Resource Repository of Organisms for Students of Biological Sciences

Sarita Kumar, Ravi Toteja and Charu K. Gupta

Acharya Narendra Dev College
(University of Delhi)
New Delhi, India

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Why this Initiative?

- **Trigger Event:**
  - Government Ban on use of live animals or specimens for experimentation in India and other countries
  - Guidelines issued by statutory Bodies of India to phase out dissection and experimentation on live animals
  - Non-availability of specimens creating escalating need to develop a repository of Organisms

- **Reasons For Ban:**
  - Inhumane treatment to animals in dissection and other educational purposes
  - Mishandling of animals in trapping, transportation and storage by suppliers
Objectives....

- **Creating**: dynamic, flexible, knowledgeable, OER available to all biologists & academicians
- **Sharing**: knowledge throughout the scientific community among Indian & Foreign Universities
- **Availability**: Adapt, re-use, modify, transform and supplement resource with required information
- **Awareness**: Enhancing Knowledge & curiosity in biological diversity erosion at enormous rate
- **Documents**: List the diverse/threatened/extinct species
**E-Museum....**

**Features:**
- Repository of biological specimens using Wiki platform
- Information on organisms’ classification, habits, habitats & characteristic features

**Availability:**
- Under Creative Commons licence
- Freely available and accessible to all educators/students

**Ease & Access:**
- Can be used with ease and modified as per the need
- No training/expertise required in teaching-learning process
- Can be accessed at far-off and rural places in India.
Challenges in creating e-museum

**Finances**
Staff, Equipment, Website, Space

**Expertise**
Designing, Digitization, Documentation

**Recurring Cost**
Maintenance, Preservation, Quality control

Challenges & Requirements
Please visit.....

http://wikieducator.org/Department_of_Zoology_at_ANDC/Zoology_Museum/Museum_specimens

Website Developed....
**Classification**

Phylum: Cnidaria  
Class: Anthozoa  
Order: Alcyonacea  
Genus: Tubipora

**Common Name**

Organ pipe coral

**Habitat and Habitat**

It is a marine and colonial form, it is widely distributed on the coral reefs in warm waters.

**Identifying Characters**

- Colony is made up of long and upright polyps.  
- Each polyp lives in a separate tube, which are parallel to each other.  
- Polyps are connected to each other by horizontal stolons at particular intervals.  
- Polyps are bright green in color.  
- Skeleton is red in color due to presence of iron salts.  
- Microlarvae: Spicules are fused and oval shaped which forms the continuous tube for each polyp.  
- Skeleton is covered by an epidermis and is thus internal.  
- Reproduction is sexual by budding.

**Common Name:** Venus’s flower basket  
**Classification:**  
- Phylum: Porifera  
- Class: Hexactinellida  
- Order: Hexasterophora  
- Genus: Euplectella

**Distribution:**

Found in abundance near the Philippine island and West Indies.  
Habitat:

Found abundantly in deep waters at the depth of 500 to 5000 meters in slow running water.

**Identifying Features**

- Long, curved, cylindrical body fastened in the mud of sea bottom by a mass of long siliceous root spicules.  
- Size of individual varies from 15-30 cm in length and 2-5 cm in diameter.

**Common Characters**

- Skeleton consists of four and six-rayed siliceous spicules which are interfaced and fused at their tips forming a three dimensional network with pentalgal gaps.  
- Canal system simple lecnonid, having thimble-staged radial canals.  
- Pentalgal gap in the in the network of spicules connect with the spongocoel.
4. Coracias

Common name: It is called Nuthatch in Hindi and blue jay in English.

Distribution: Found in India, Pakistan, Iran and Ceylon.

Habitat and Food: Like to live in open cultivated country and avoids dense forests.

Food: Grasses, seeds, insects, and fruits. They eat insects, bees, and hogs sometimes.

Identifying Characters:
- Body: similar to a sparrow in size.
- Body: color—dull and pale blue portion on wing, the breast is brown.
- Head: heavy-looking, covered with heavy black slat.
- It has a noisy voice.
- The nest is made out of straw, feathers and other trash in the tree.

5. Passer

Common name: ganga in Hindi and HOUSE BIRD in English.

Distribution: Found in China, Japan, Korea, and other parts of Asia.

Habitat and Food: Like to live near rice fields and other areas.

Food: wheat, grain, water, and other seeds etc.

Identifying Characters:
- Body: small in size.
- Body: length about 12 cm
- Body: color—greenish-brown and underparts are white.
- Head: A small black one is not present and its head.
- It has a wide range of movements.
- Nest is made of grass and other trash in which the nest is made in the tree.

6. Anas

Common name: duck in English and duckling in Hindi.

Distribution: Found in India, Pakistan and Burma.

Habitat and Food: Like to live near fresh water, ponds and pools.

Food: wheat, grains etc.

Identifying Characters:
- Body: color—white.
- Head: long and S-shaped.
- Skin: black and flaps, base of the bill is covered by a soft transparent membrane.
- Legs: connect to transverse bristle on inner surface.
- Plumage consists of single patch which sense to operation.

2. Chiton

Common Name:

Habitat and Habitat: Chiton is a sluggish, marine animal bound attached to the rocks.

Identifying Characters:
- Body: elongated, bilaterally symmetrical and dorso-ventrally compressed.
- It consists of shell: foot, mantle and the visceral mass.
- Shell composed of a series of eight calcaneous pieces.
- Foot is flat and vertical.
- Mouth and anus are at opposite ends.
- Head is not distinct. Eyes and tentacles are absent.
- Mantle covers the main part of the body and covered the shell plates.
- Foot is semi-vertical, muscular with a flat sole: it is whole extending along the length of the body.

3. Pila

Common Name:

Habitat and Habitat: Pila glauca is commonly found in ponds, tanks.

Identifying Characters:
1) Pila is soft body of the animal is enclosed in a shell.
2) Shell is spiralized close in an axis called the columnella and opens outside by the mouth or aperture.
3) Operculum is well developed and close the aperture or the mouth of the shell.
Common Name: Ray worm or clam worm.

Distribution: Cosmopolitan distribution.

Habit and Habitat: Found in marine, crawling type.

Identifying characters:

- It is the simplest annelid.
- Body: cylindrical and elongated.
- Metamerism: body consists of about 200 segments or metameres.
- Head: initial segments fused to form head consisting of eyes and peristomium.
- Peristomium: consists of peristomial tentacles (four pairs) and mouth on the anterior surface.
- Parapodia: locomotory organs which are found on each segment of the body (exception: 1st and last segment). Each parapodium consists of notopodium, neuropodium and needle-like setae for crawling purpose.