**Topic name. No. 1: Commonly known names of some Echinoderms**

Dr. Merina Narah

Assistant Professor

Dept. of Zoology

Silapathar College

|  |  |  |
| --- | --- | --- |
| Sl. No. | Scientific name | Commonly Known names |
| 1. | ***Antedon*** | Feather star |
| 2. | ***Cucumaria*** | Sea- cucumber |
| 3. | ***Echinus*** | Sea- Urchin |
| 4. | ***Echinarachinus*** | Sand dollar |
| 5. | ***Echinocardium*** | Heart Urchin |
| 6. | ***Ophiothrix*** | Spiny Brittle star |

Topic 2: Characters of Different classes of Echinodermata

Class I: Crinoidea (Gr., *crinon*= lily + *eidos*= form)

1. Both extinct and living forms.
2. Living members are without stalk and free moving but extinct forms attached by a stalk.
3. Body consists of an aboral cup, the calyx and oral cover or roof, the tegmen and strongly pentamerous in structure.
4. Oral surface is directed upwards.
5. Sexes are separate. Larva Doliolaria
6. Commonly known as sea lilies or feather stars.

Eg: ***Antedon, Metacrinus***

Class II: Holothuroidea (Gr., *holothurion*= water polyp + *eidos* = form)

1. Body bilaterally symmetrical, usually elongated in the oral-aboral axis having mouth at or near one end and anus at or near the other end.
2. Body surface is coarse.
3. Mouth surrounded by a set of tentacles attached to water vascular system.
4. Sexes are usually separate and gonads single or paired tufts of tubules.
5. Commonly called sea cucumbers.

Eg: ***Holothuria***

Class III: Echinoidea (Gr., *echinos*= hedgehog + *eidos*= form)

1. Body is spherical, disc-like, oval or heart- shaped.
2. Body is enclosed in an endoskeletal shell.
3. Outer calcareous plates are distinguished into five alternating ambulacral and five inter ambulacral areas.
4. Sexes are separate. Gonads are pentamerous.
5. Development includes a free swimming echinopluteus larva.
6. Commonly called Sea-urchins and Sand Dollars.

Eg: ***Echinus***

Class IV: Asteroidea (Gr., *aster*= star + *eidos* = form)

1. Body is flattened, pentagonal or star shaped.
2. Oral and aboral surface are distinct.
3. Mouth is centrally placed at the oral surface.
4. Sexes separate. Gonads radially arranged.
5. Development includes bipinnaria or brachiolaria larva.
6. Commonly called starfishes or sea stars.

Eg: ***Asterias, Archaster***.

Class V: Ophiuroidea (Gr., ophis= serpent + oura = tail + eidos= form)

1. Body is flattened with pentamerous or rounded central disc.
2. Oral and aboral surface are distinct.
3. Anus and intestine are absent.
4. Madreporite is on the oral surface.
5. Sexes are separate. Gonads pentamerous.
6. Development includes free swimming ophiopluteus larva

Eg: ***Ophiothrix, Ophioderma***