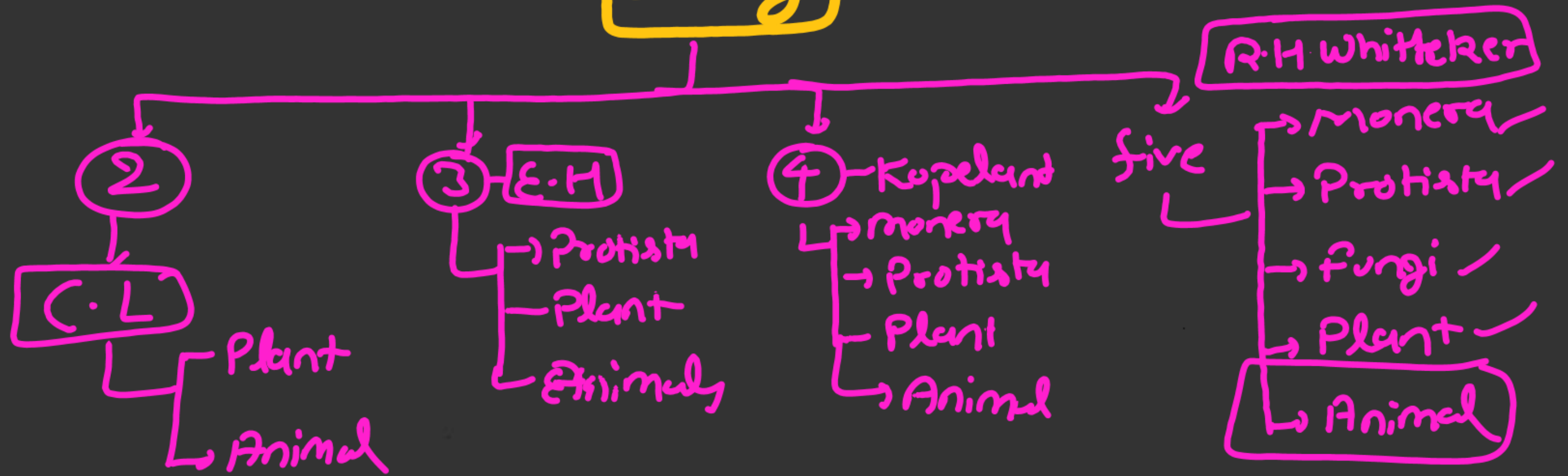


# Living



Animal - Phylum - 10

- Protozoa → unicellular

Invertebrate  
अशरीरवादी

- Porifera
- Cnidaria

- Platyhelminthes
- Aschelminthes

- Annelida

- Arthropoda → Largest phylum

- Mollusca

- Echinodermata

- Chordata

Vertebrate  
शरीरवादी

→ multicellular

- Fishes
- Amphibian
- Reptiles
- Aves
- Mammals

→ Cold Blooded

→ Warm

## Protozoa :-

1. सभी स्थानों पर / Everywhere
2. Parasitic / Saprophytic / Free living / Symbiotic ✓
3. Unicellular होते हैं।
4. Micro Org. होते हैं।
5. Asexual & Sexual दोनों Type
6. Tissue xx
7. Organ xx

# Protozoa



Paramecium



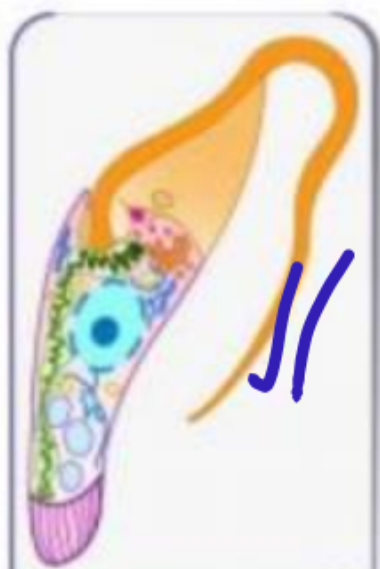
Euglena



Amoeba



Giardia



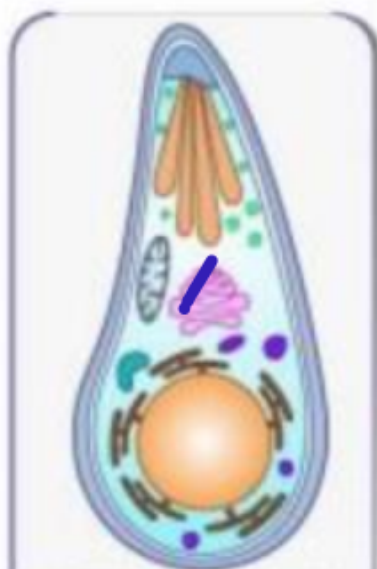
Trypanosoma



Plasmodium



Stentor



Toxoplasma

- Leishmaniasis = मलेरिया
- Leishmania Donovani = Kala Azar
- Tripanosom = Sleeping Sickness
- Ascitobulberia = Largest Protozoan

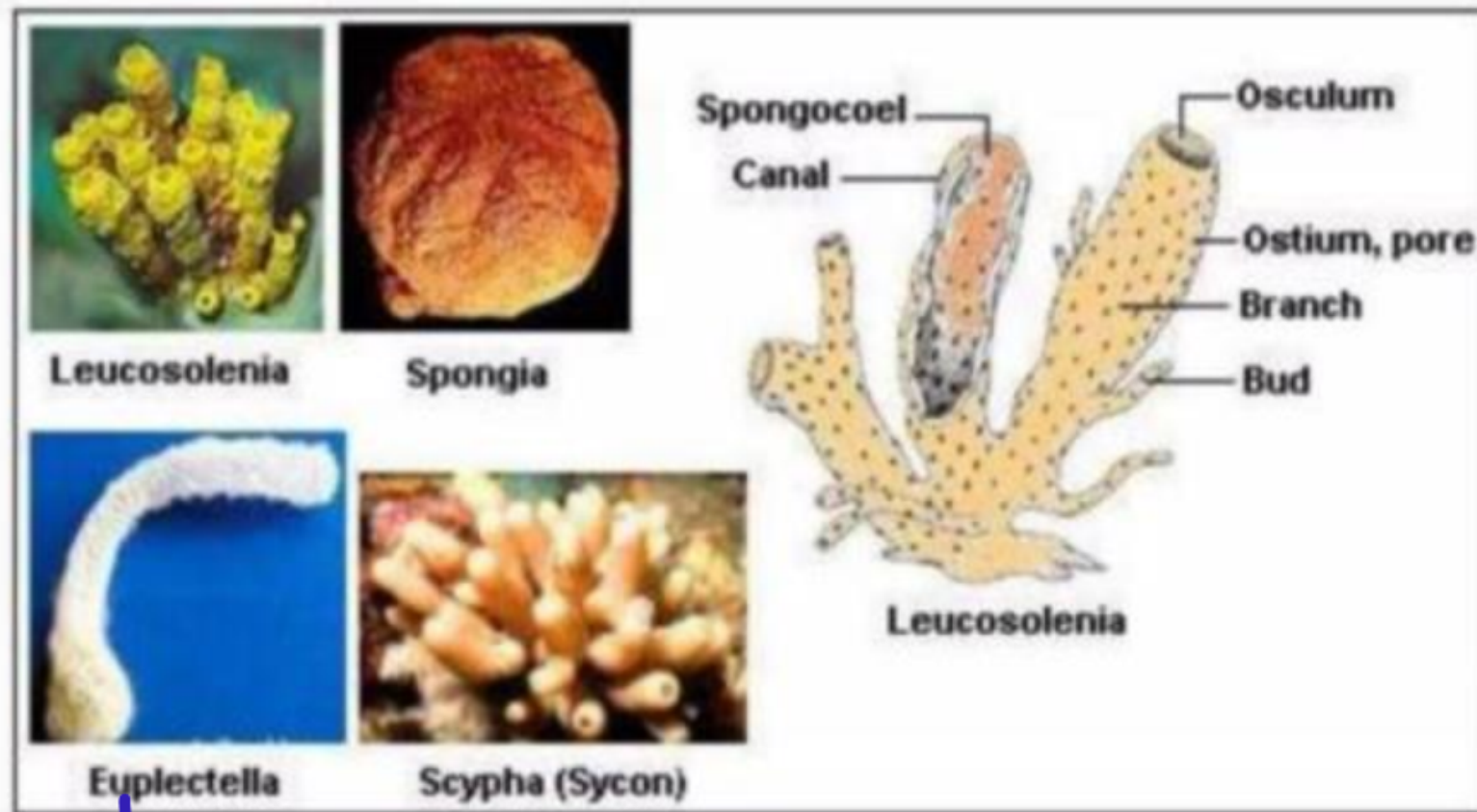




## Porifera :-

1. Marine water
2. Micro org.
3. Motion less xx
4. Body - Pores - ✓✓
5. Bixexual & Regeneration
6. Organ. xx

# Example of Porifera



Venus Flower  
Basket

# Cnidaria / Coelenterata :-

1. Marine water
2. Skin - Diploblastic ← Ectoderm  
← Endoderm
3. Digestive system ✓✓, ફોડો મળવા જેવું organ x
4. Radial Symmetry -

Ex- Hydra, Coral, Aurelia, Obelia, Pennatulula, Fascicula

↓  
Immortal  
મમ

↓  
Skin  
↓  
Gastro  
↓  
Ocean  
↓  
Island

↓  
Jelly fish

↓  
Sea Fan

↓  
Sea Pen

↓  
Portuguese man of war



# Cnidaria

Cubozoa



Box Jelly

Scyphozoa



Moon Jelly



Purple Jelly

Anthozoa



Anemone



Coral

Hydrozoa



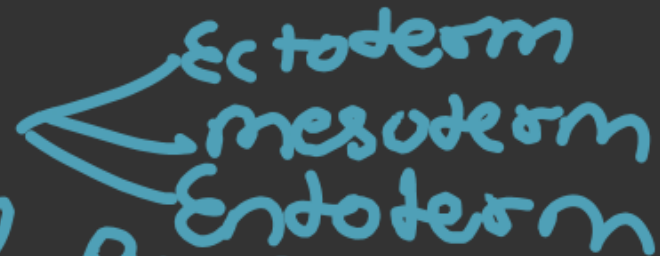
Hydra



Portuguese man of war

# Platyhelminthis / Tap worm ( फीटा कीड़े )

- Parasitic (पक्षीय)
- Symmetrical
- Skin - Triploblastic
- Body divide into small parts



✓✓



Planeria



Schistosoma



Fasciola



Taenia Solium

→ Human Intestine

# Aschelmenthis / Nematoda / Round worm

- Parasitic
- Unisexual
- water / land

Ex - 

- Wuchereria → फुलकिया (Elephant foot)
- Ascaris → Human Intestine



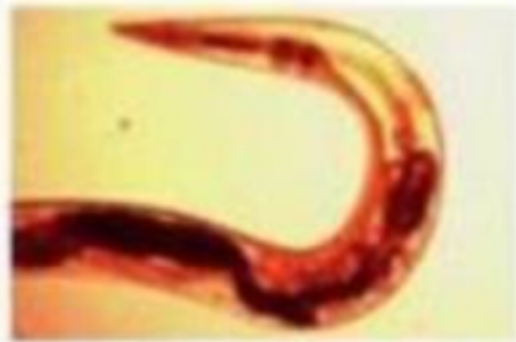
**Rhabditis**



**Dracuculus**



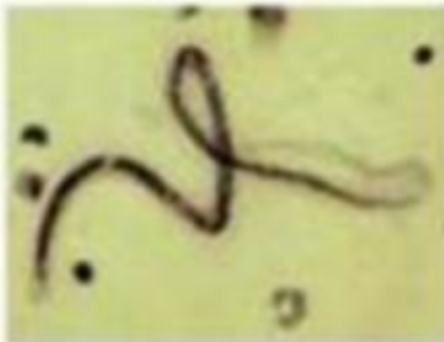
**Ascaris**



**Enterobium**



**Trichiuris**



**Loa loa**

**Fig: Certain examples of round worms**



# Annelida

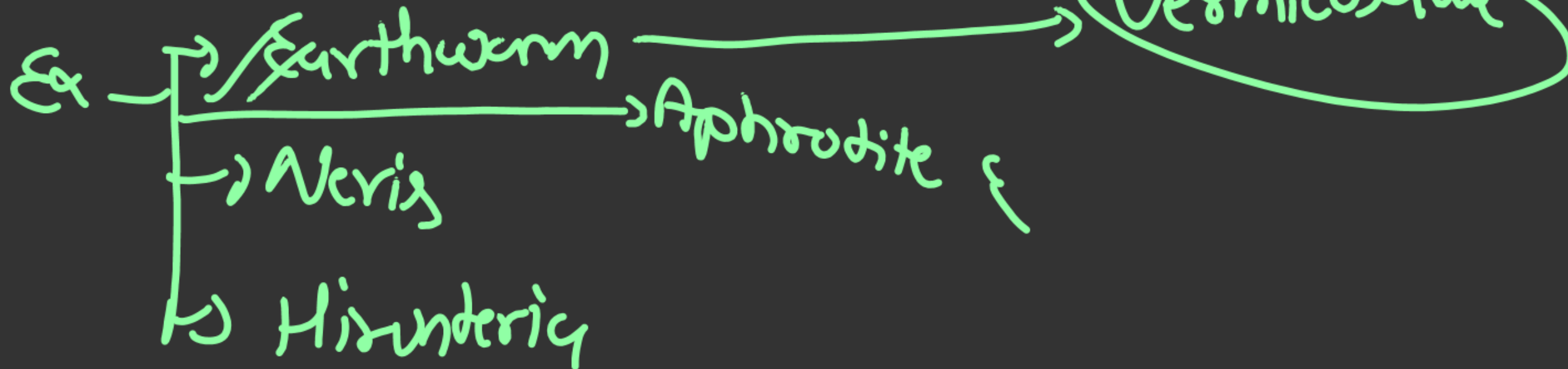
⇒ Free living

⇒ Triploblastic

⇒ Symmetrical

⇒ શરીર છોટે-છોટે - દિલ્લો ને બધા હોતા

⇒ Unisexual & Bisexual





Nereis

Leech

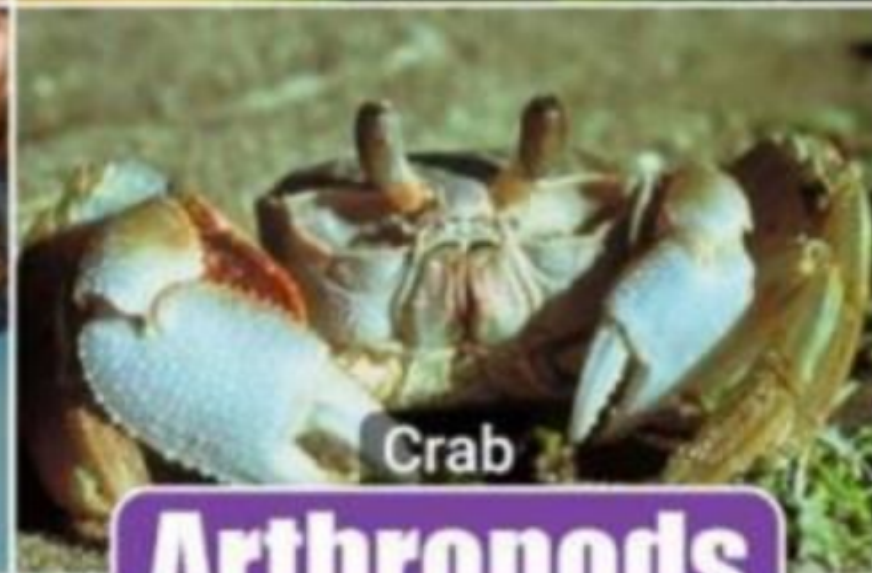
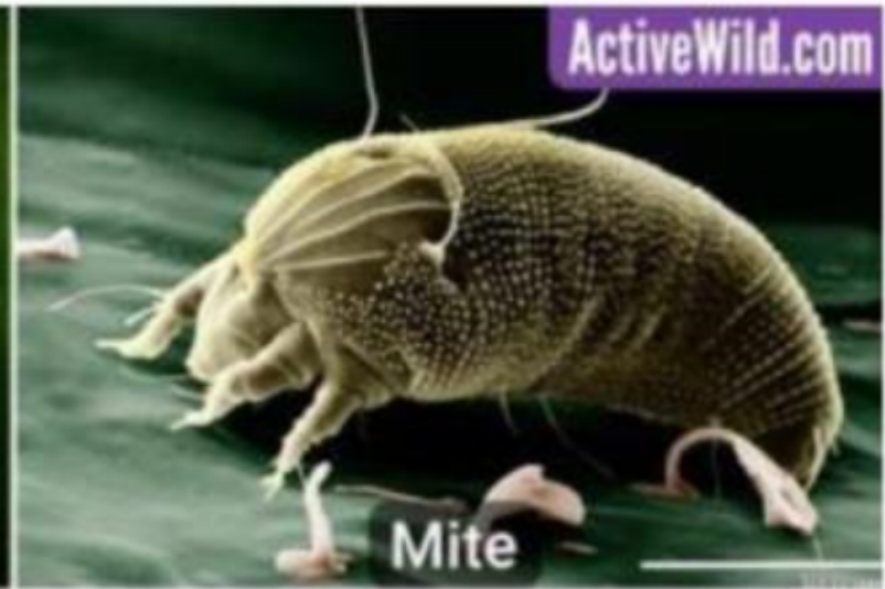


Earthworms

## Arthropoda

- દર બાજે 34 લેખ
- Parasitic, Symbiotic, Saprophitic ✓
- Largest Phylum
- Head, Thorax, Abdomen - Divide
- Unisexual
- Organ - ✓
- Insecty ⇒ 3 Pair leg





# Arthropods





### Subphylum Uniramia



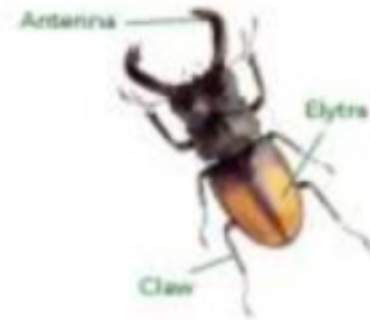
Mosquito  
Class Insecta



Centipede  
Class Chilopoda



Moth  
Class Insecta



Beetle  
Class Insecta

### Subphylum Chelicerata



Tick  
Class Arachnida



Spider  
Class Arachnida



Horseshoe Crab  
Class Merostomata

### Subphylum Crustacea



Water Flea  
Class Copepoda



Shrimp  
Class Malacostraca



Barnacle  
Class Cirripeda

### Subphylum Trilobita



Trilobite

→ Prawn (जैव फिश)  
→ कोरडा, लीलचट्टा, कारवधूत  
मच्छर, मच्छी, मधुमच्छी  
लीवली, बिच्छू, मकड़ी



# Mollusca

⇒ marine water

⇒ Skin — कोमल (soft)

⇒ Triploblastic

⇒ Organ Development

Ex - Pila

↓  
घाघा

Chiton

↓  
Sea snail

Octopus

↓  
Devil Fish

Sepia

Helix

Doris



Sea lemon



Snail



Clam

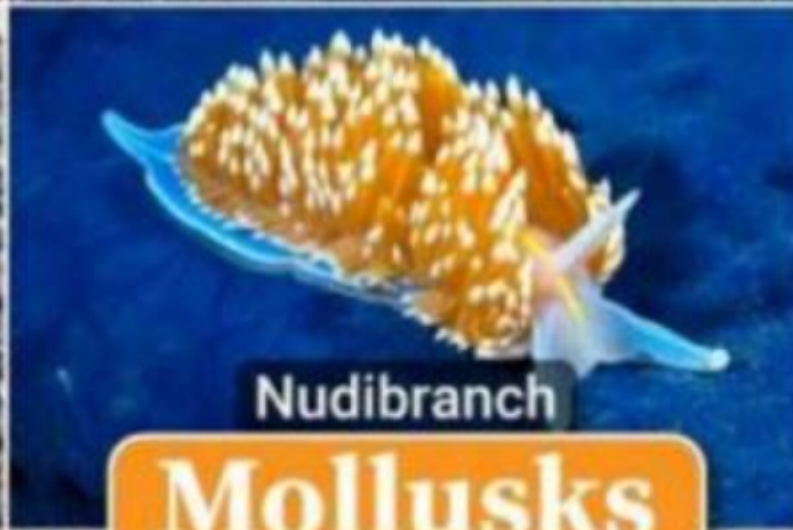


ActiveWild.com

Octopus



Slug



Nudibranch

# Mollusks



Cuttlefish



Limpet



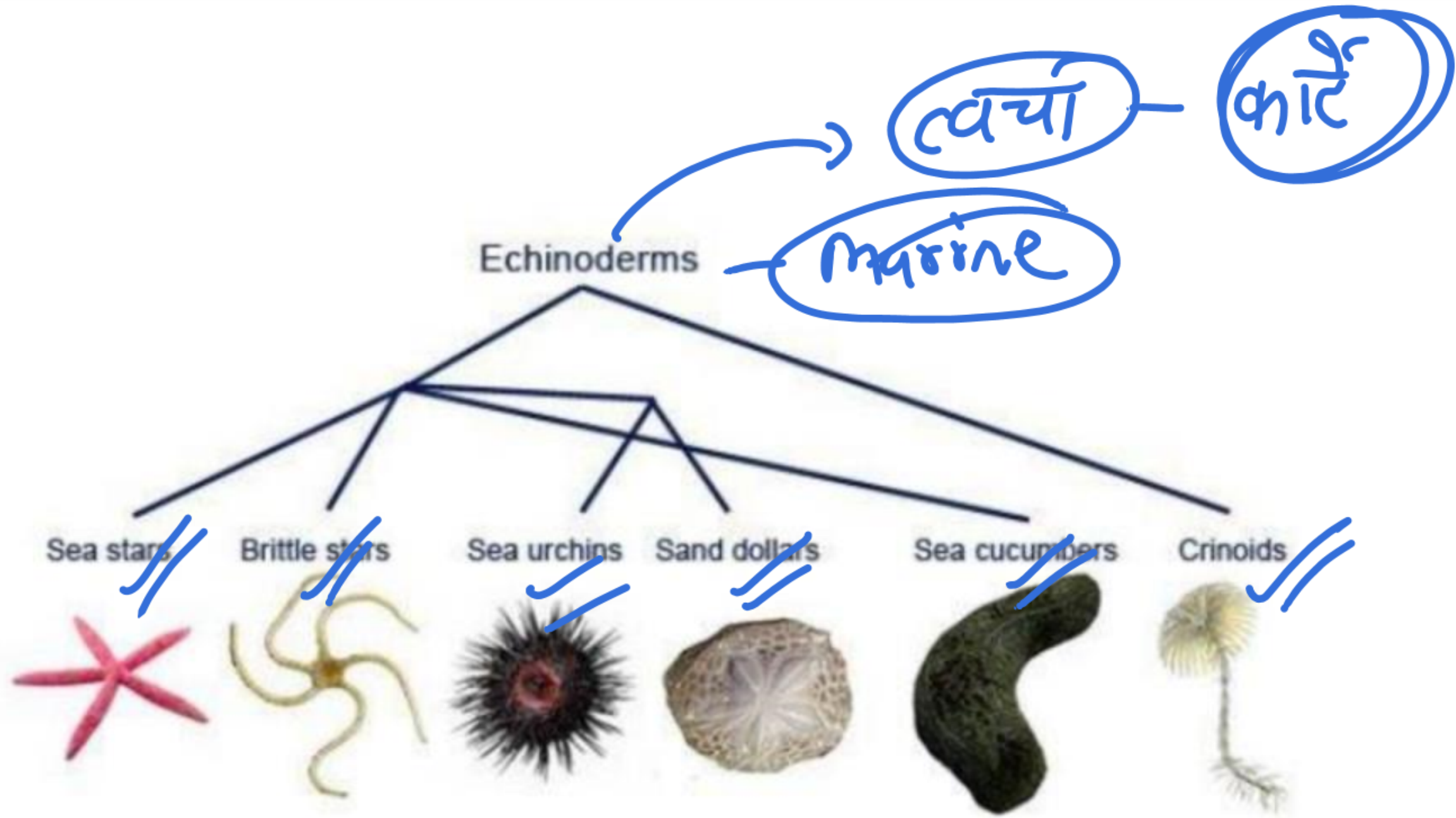
Chiton



Nautilus









Ichthyology

(chordata)

vertebrates

ornithology

Fish

Amphibian

Herpetology

Reptiles

Aves

mammals

1. Shark - Dogfish
2. Torpedo - Electric
3. Gambusia - Goldfish
4. Hippocampus - Seahorse
5. Stone fish - Scorpionfish
6. Mongoose - Catfish

Fish  
Toad  
Hydra

Snake  
Lizards  
Crocodile  
Tortoise

Ostrich  
Penguin  
Humming Bird  
Kiwi  
Swift  
Pigeon  
Hen

mammals -  $\rightarrow$  Prototheria  $\Rightarrow$  ઝાપડ/egg = Echidna

$\rightarrow$  Metatheria  $\Rightarrow$  ઝાપેકાસેલ = Kangaroo  
બચા

$\rightarrow$  Eutheria  $\Rightarrow$  પૂર્ણ વિકાસેલ = 

1. Whale = ଅମଳେ ଜଳ (Water)
2. Elephant =    "    " (Land)
3. Shrew = ଅମଳେ ଭୌମ
4. Bat = ✓