

Phylum → Arthropoda (आर्थ्रोपोडा)

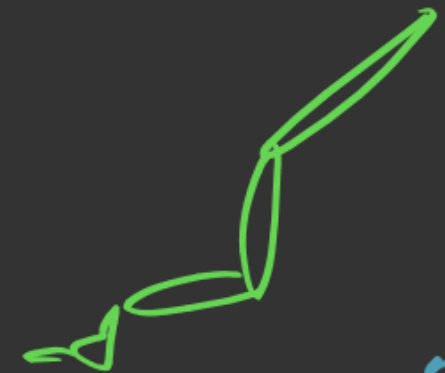


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⇒ Largest Phylum of Animal Kingdom.

[जन्तु जगत का सबसे बड़ा समूह]

⇒ Joined appendages (जुड़े हुए पैर).



⇒ Chitinous exoskeleton (काइटिनयुक्त बाह्य कंकाल)

⇒ Respiratory Organs
श्वसन अंग

→ Tracheal System
ट्रेकिया

⇒ Open Circulation (खुला परिसंचरण)

NOTE → Cockroach
[किलचड] → 13 chambered heart.
[13 कक्षीय हृदय]

⇒ excretory Organ.
[उत्सर्जी अंग] → Malpighian tubules
[माल्पिगियन ट्यूब्यूल्स]

⇒ Oviparous (अंडज).



Phylum – Arthropoda

- 1.This is the largest phylum of Animalia which includes insects.**
- 2.Over two-thirds of all named species on earth are arthropods.**
- 3.The body of arthropods is covered by chitinous exoskeleton.**
- 4.The body consists of head, thorax and abdomen.**
- 5.They have jointed appendages (arthros-joint, poda-appendages).**
- 6.Respiratory organs are gills, book gills, book lungs or tracheal system.**



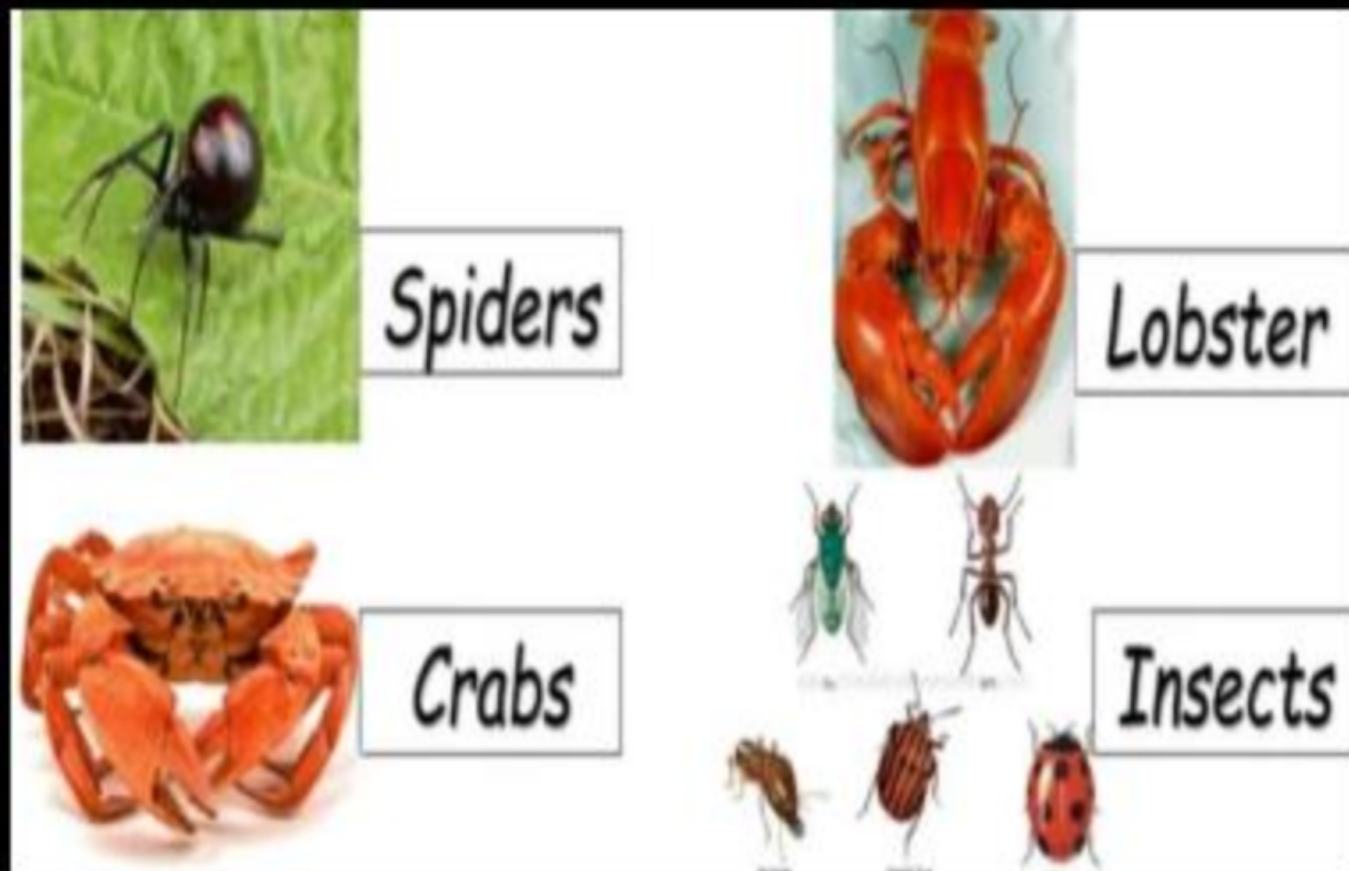
7. Circulatory system is of open type.

8. Sensory organs like antennae, eyes (compound and simple), statocysts or balance organs are present.

9. Excretion takes place through Malpighian tubules.

10. They are mostly oviparous.

11. Development may be direct or indirect.



12. Examples:

- a) **Economically important insects** – Apis (Honey bee), Bombyx (Silkworm), Laccifer (Lac insect)
 आर्थिक रूप से महत्वपूर्ण → एपिस → नवपुष्करनी
 बॉम्बेक्स → रेशम का कीड़ा लैसिफर → लाख का कीड़ा
- b) **Vectors** – Anopheles, Culex and Aedes
 वाहक ऐनाफिलिस क्यूलेक्स ऐडिस
 (Mosquitoes) Gregarious pest – Locusta (Locust)
 (गच्छर) पैरा → खटमल, तिलचट्टा
- c) **Living fossil – Limulus (King crab).**
 जीवित जीवाश्म ल्यूसीलस (किंग केकड़ा)
 स्लीपिंग मछली → शींगा मछली → Silver fish.
 सिल्वर फिश

Phylum - Mollusca (मोलस्का)

- ⇒ Second largest Phylum of Animal Kingdom.
(दूसरे नं० पर सबसे बड़ा समूह है।)
- ⇒ Shell (कवच) → Calcium (कैल्शियम)
- ⇒ Radulla (रेड्यूला) → feeding (खाना खाने में सहायक)

* Pila (शंख)

* Snail (चोंचा)

* Octopus (ऑक्टोपस)

* Pearl Oyster.

(मोती बनाने वाली सीप)

* Catfish
करलफिश

* Squid
स्क्विड

Octopus

औक्टोपस

* Hearts (हृदय) \longrightarrow 3

* Blood (रक्त) \longrightarrow Blue (नीले रंग). \longrightarrow Haemocyanin
हिमोसायनीन

Phylum – Mollusca



1. This is the second largest animal phylum.
2. Body is covered by a calcareous shell and is unsegmented with a distinct head, muscular foot and visceral hump.
3. The mouth contains a file-like rasping organ for feeding, called radula.
4. Examples: Pila (Apple snail), Pinctada (Pearl oyster), Sepia (Cuttlefish), Loligo (Squid), Octopus (Devil fish), Aplysia (Seahare), Dentalium (Tusk shell) and Chaetopleura (Chiton).

Phylum – Echinodermata



BRITTLE STAR



CRINOID



SAND DOLLAR



SEA CUCUMBER



SEA CUCUMBER



SEA URCHIN



SEA URCHIN



STARFISH

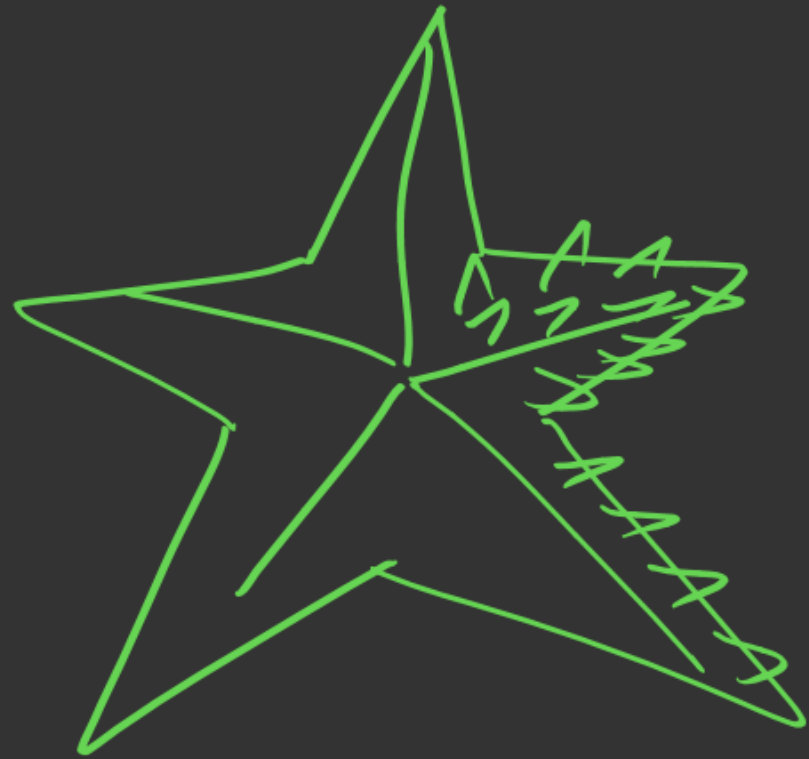


STARFISH

1. These animals have an endoskeleton of calcareous ossicles and, hence, the name Echinodermata (Spiny bodied).

2. Examples: Asterias (Star fish), Echinus (Sea urchin), Antedon (Sea lily), Cucumaria (Sea cucumber) and Ophiura (Brittle star).

Phylum → Echinodermata (इकाइनो डर्मेटा)



↓
कंठ
spike

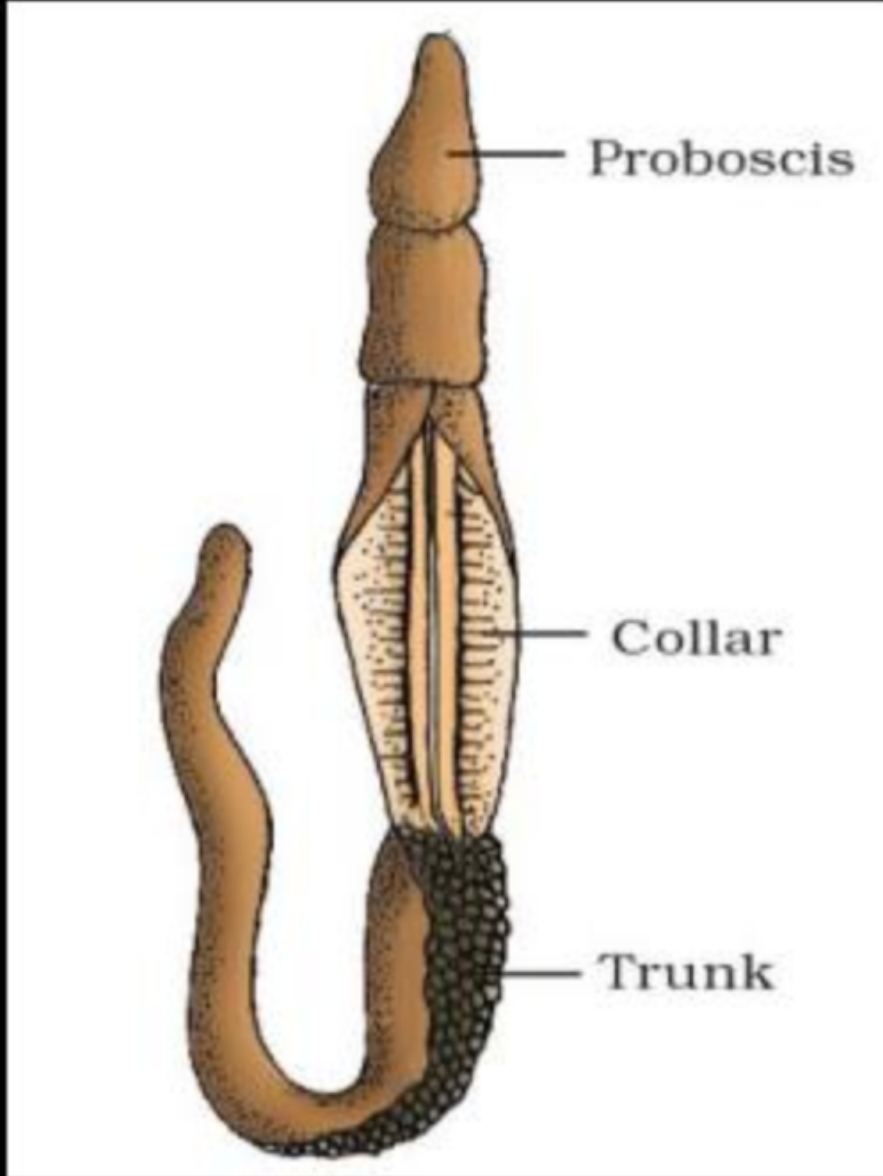
→ skin
(चर्म)

↳ spine



Phylum – Hemichordata

- 1. This phylum consists of a small group of worm-like marine animals with organ-system level of organization.**
- 2. They are bilaterally symmetrical, triploblastic and coelomate animals.**
- 3. The body is cylindrical and is composed of an anterior proboscis, a collar and a long trunk.**
- 4. Circulatory system is of open type.**
- 5. Respiration takes place through gills.**



6. Excretory organ is proboscis gland.

7. Sexes are separate.

8. Fertilisation is external.

9. Development is indirect.

10. Examples: Balanoglossus and Saccoglossus.