

General characteristics of Phylum: Porifera ‘pore-bearing’:

1. Multicellular; body an aggregation of several types of cells.
2. Sponges are freelifing on rocks near sea shore solitary (singly) or in colonies.
3. Body is a **mass** of different **cells** embedded in gelatinous matrix and hardened by spicules skeleton of CaCO_3 ; colorful, diploblastic, asymmetry and has not any systems. Body is perforated the pores called **ostia** and there is a big pore at the end called **osculum**. There is one body cavity called **Paragastric cavity** that lined by choanocytes.
4. Sponges are filter feeders; feed on organic mater and small organisms.
5. Digestion is intracellular. It is happened inside the cells.
6. Respiration is by diffusion.
7. They are sessile animals either singly or in colonies.
8. Reproduction occurs asexually (by budding; regeneration) and sexually (by gametes).
9. Excretion is by diffusion.
10. Have no nervous system and sensory cells.
11. The spoges are hermaphroditic (both sexes are found in the same animals).

Kingdom: Animalia

Sub king.: Parazoa

Phylum: Porifera

A. Class: Calcarea

1. Order: Homocoela

Leucosolenia sp.

1) Ascon Type Sponge, e.g., Leucosolenia sp.

1. Leucosolenia sp. is a simple sponge that grows in colonies.
2. Body is simple with horizontal branches bear cup-shaped individuals up to 2 cm long each. Body wall is thin, clear, and the ostia are supported by triradiate spicules.
3. Water current → Ostia → Paragastric cavity → Osculum → Outside.

2. Order: Heterocoela

Sycon sp.

2) Sycon Type Sponge, e.g., Sycon sp.

1. Sycon sp. is more complex sponge, grows singly.
2. Body is thick including flagellated chambers opened into paragastric cavity. Buds may be found near the base, and ostia are surrounded by monoaxonic CaCO_3 spicules.
3. Water current → Ostia → Inhalant canal → Flagellated chamber → Paragastric cavity → Osculum → Outside.

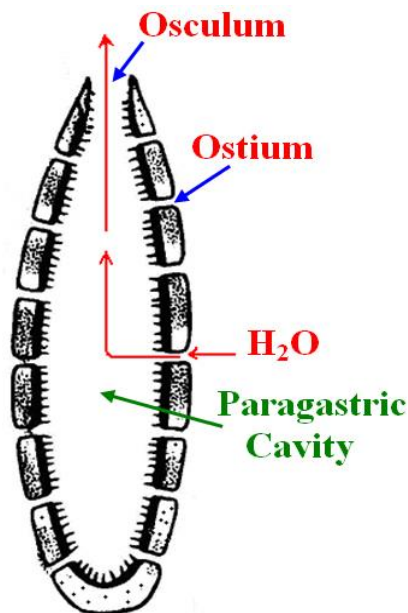
B. Class: Demospongiae

Order: Keratosa

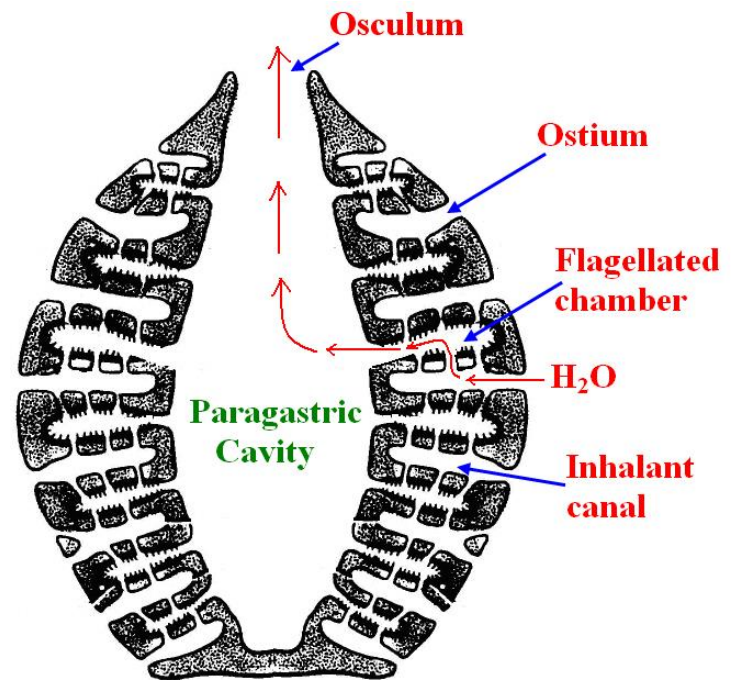
Euspongia sp.

3) Leucon Type Sponge, e.g., Euspongia sp. (Bath sponge)

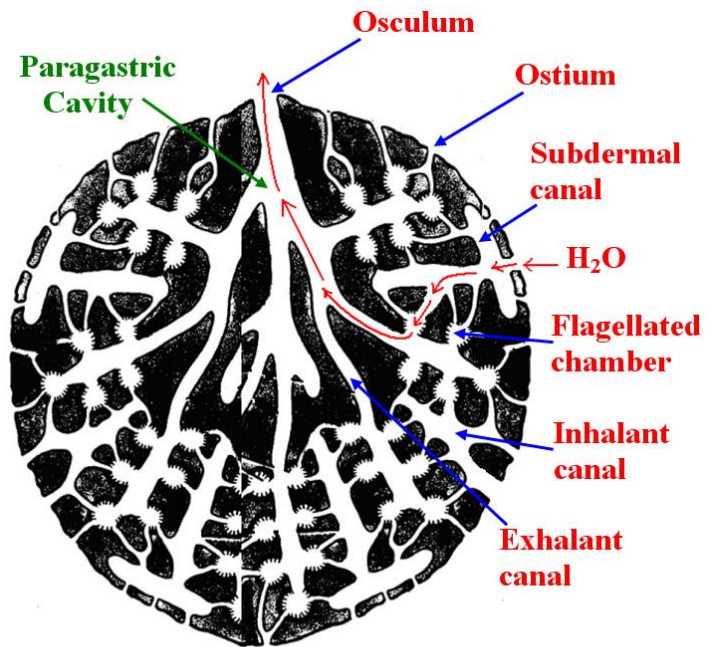
1. Euspongia sp. is the most complex sponge, grows singly.
2. Body wall includes further folding forming a very complex system of canals including subdermal and inhalant canals that opened into flagellated chambers, exhalant canal then small paragastric cavity. Spicules are not found. Skeleton is consisted of a net of spongin silky fibers. This type is used for washing by human.
3. Water current → Ostia → Subdermal canal → Inhalant canal → Flagellated chamber → Exhalant canal → Paragastric cavity → Osculum → Outside.



Leucosolenia sp.
(Ascon type sponge), L. S.



Sycon sp., (Sycon type sponge), L. S.



Euspongia sp., (Leucon type sponge) , L. S.