

Topic: canal system in sponges

Class: B.Sc Part –I (Hons.)

Paper- 1

Group – A

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Sycon type of canal system

- Sycon type of canal system is more complex compared to the ascon type.
- This type of canal system is the characteristic of syconoid sponges like Scypha.
- Theoretically this canal system can be derived from asconoid type by horizontal folding of its walls.
- Also embryonic development of Scypha clearly shows the asconoid pattern being converted into syconoid pattern.

- Body walls of syconoid sponges include two types of canals,
- The radial canals and the incurrent canals paralleling and alternating with each other.
- Both these canals blindly end into the body wall but are interconnected by minute pores.
- Incurrent pores also known as dermal ostia are found on the outer surface of the body.
- These incurrent pores open into incurrent canals.

- In sycon type of canal system, spongocoel is a narrow, non-flagellated cavity lined by pinacocytes.
- It opens to the exterior through an excurrent opening called osculum
- which is similar to that of the ascon type of canal system.

- The incurrent canals are non-flagellated as they are lined by pinacocytes and not choanocytes.
- The incurrent canals lead into adjacent radial canals through the minute openings called prosopyles.
- On the other hand radial canals are flagellated as they are lined by choanocytes.
- These canals open into the central spongocoel by internal ostia or apopyles.