

The radial canals are provided with choanocytes or flagellated collared cells. Therefore, these are also called flagellated canals. The internal openings of the radial canals into spongo-coel are called internal ostia. Spongo-coel opens to the exterior by an opening, called osculum, as in ascoid type of canal system.

The walls between incurrent canals and radial canals are perforated by numerous pores, which are intercellular spaces and not the channels, called prosopyles. In the mesenchyme of syconoid sponges is situated a skeleton, made up of spicules.

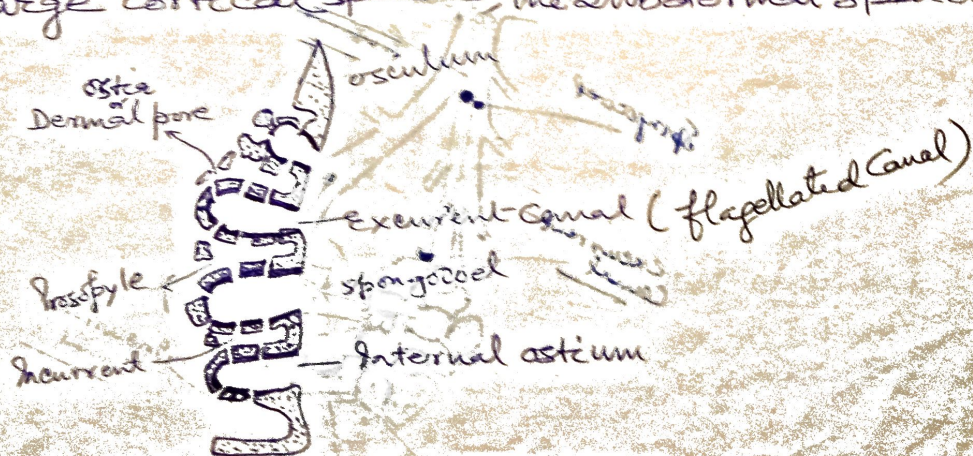
The important points of differentiation of the sycon type from that of ascoid type

- ① In the syconoid type, thick, folded-wall having incurrent canals and radial canal is present.
- ② In syconoid type choanocytes are not continuous but are found only in the radial canals.

Syconoid type of canal system consists of two stages: →

① The type as found in sycon, where the internal surface consists of blind outer end of radial canals with spaces between them serving as dermal ostia.

② In the 2nd stage the epidermis and mesenchyme spread over the outer surface so as to form a thick cortex, containing cortical spicules. Epidermis is perforated by definite pores, which lead into incurrent canals, that take irregular course through the cortex, ultimately reaching outer ends of flagellated chambers or may form large cortical spaces, the subdermal spaces.



Syconoid type of canal system with cortex.

Direction of flow of water currents :-
 water → Dermal pores → in current canals

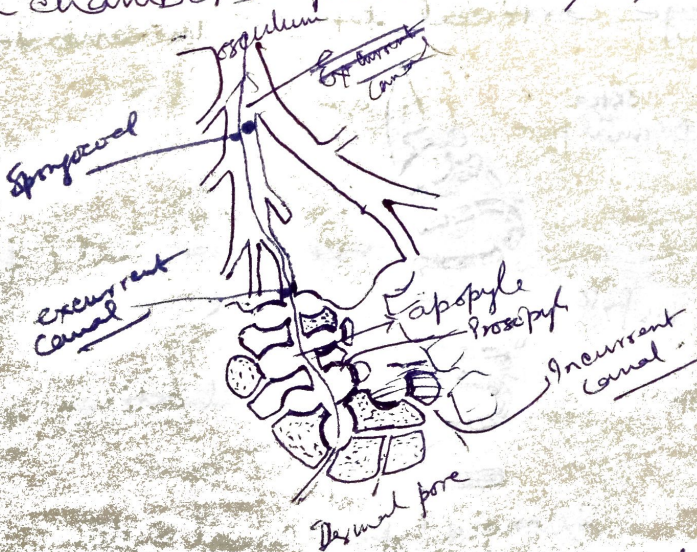
outside ← osculum ← Spongocoel ← Internal ostia ← Radial canals

Prosopyles

④ Leuconoid type of canal system

This type of canal system is formed from the rhagon type by outfoldings of the choanocyte layer. In this type oval or rounded chambers lined by flagellated cells are formed by evagination of the radial canal. The surface is perforated by dermal pores, these pores lead into incurrent canals, which are found in mesenchyme. These canals are usually branched. In many cases dermal pores open into subdermal spaces, which are large and are provided with spicules. Incurrent canals open into small rounded chambers provided with flagellated cells. The openings of the incurrent canals into the flagellated chambers are called prosopyles. The flagellated chambers open into the excurrent canals by small apertures, known as apopyles. These excurrent canals are united to form large tubes, which open into spongocoel. This cavity is largely obliterated. Spongocoel opens to the outside by the osculum. Leuconoid type of canal system can be divided into 3 subtypes

① Euryto Eurypylous :- → In this type, flagellated chambers open directly by wide mouths



Leuconoid type with Eurypylous chambers