

Parasitic adaptations of Phylum Platyhelminthes

Taenia is an endoparasitic worm residing in the internal organs like intestine of humans. To suit its parasitic mode of life it has to overcome to several adverse conditions. And accordingly this tapeworm shows several adjustments. The following are the important parasitic adaptations of Taenia.

1. The body is externally covered by tegument which protects against the digestive action of the alkaline digestive juices of the host. This tegument is permeable to water and nutrients.
2. The osmotic pressure inside the worm is higher than that of the surrounding host fluid. This helps to permit ready absorption of the digestive food from the host.
3. Both the adults and larva lack cilia as there is no need of locomotion.
4. A well organized and developed scolex is present with suckers and spines. These suckers and spines help in attachment so that the parasite is not ejected from the host intestine due to peristaltic contractions.
5. They are located in the regions where there is continuous supply of pre-digested food material which can be readily absorbed by the parasite. Thus there is no need for alimentary canal. Also to increase the surface area of absorption tegument is modified into microvilli.
6. Circulatory, respiratory and sense organs are absent in these parasites.
7. Nervous system is also poorly developed as it is not needed.
8. Of all the systems, reproductive system is well developed. Enormous number of eggs are produced to overcome the hazards and challenges of survival.
9. Resistant shell around the zygotes and embryos gives them protection from unfavorable condition.
10. Hermaphroditism and proglottization ensures self-fertilization within the same proglottid or cross fertilization with another proglottid of the same worm.