

Abstract

Tapeworms of the genus *Mesocestoides*, which belong to the order Cyclophyllidea, are parasites of carnivorous vertebrates. Their larval stages of tetrathyridia are found in a wide range of tetrapod intermediate hosts. Within the genus, there is an anomalous species *Mesocestoides corti*, whose tetrathyridia reproduce in hosts by asexual longitudinal division. There is no mention of the possibility of such reproduction in other species. Thus, the laboratory strain of *M. corti* is widely used as a model organism that is well maintained under *in vivo* and *in vitro* conditions due to its asexual reproduction. Four other species are known to occur in the genus and are described by both morphological and molecular data. The remaining known species are named only on the basis of morphology. Adults are characterised by their rare morphology. This includes the ventromedian position of the genital atrium, the paired vitelline glands, and in gravid proglotids, developed paruterine organ, which contains eggs with oncospheres. The life cycle has not been yet explained, but it is assumed that the putative cycle involves three hosts. An alternative hypothesis considers the possibility of a two-host life cycle.