Differential precocious sexual development of Proctoeces lintoni (Digenea: Fellodistomidae) in three sympatric species of keyhole limpets Fissurella spp. may affect transmission to the final host

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Abstract

The prevalence, abundance, and developmental status of the digenetic trematode Proctoeces lintoni Siddiqui et Cable 1960 were compared in 3 species of keyhole limpets Fissurella. A total of 197 limpets was collected at Caleta Chome, south-central Chile. Fissurella picta and F. costata had the highest prevalence of infection, whereas F. picta showed the greatest abundance of parasites, which increased with host shell length. However, the frequency of P. lintoni specimens with eggs in the uterus was greatest in F. costata. These results suggest that an increased rate of development of a parasite in the intermediate host may shorten the residence time necessary for maturation in the final host. Thus, faster development of the parasite in F. costata suggests the possibility that the parasites transmitted through this host species have shorter maturation times in clingfishes than individuals transmitted via other limpet species.