

Effects of protozoan parasite, *Perkinsus olseni*  
and trematode parasite, *Cercaria tapidis*  
on the reproductive pattern of Manila clam,  
*Ruditapes philippinarum* from  
Seonjae island, west coast of Korea

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The present study is the survey reports of *Perkinsus olseni* and *Cercaria tapidis* in Manila clam, *Ruditapes philippinarum* collected monthly from east and west of Seonjae Island, west coast of Korea from April, 2003 to June, 2004. The east site characterized as a main clam culture bed with high clam density, while no commercial culture is performed at the west site. Parasite prevalence (the percentage of clams infected) and infection intensity (a numerical scale based on presence of parasite in different organs), and clam reproductive cycle were determined from histological preparations to know the effects of parasites on host reproductive pattern. The prevalence and infection intensity of *P. olseni* were relatively higher in November when most of the clams completed their spawning and the values were relatively lower in June during the commencement of spawning activities of clams. Higher prevalence and infection intensity of *P. olseni* were observed in clams collected from east site than in clams from west site. There was no obvious seasonality in the prevalence of *C. tapidis* and the differences between the sites were not consistent. *C. tapidis* was mainly observed in gonads and some individuals were castrated due to heavy infection. The spawning period of clams prolonged until September in west site, whereas spawning occurred till August in east site where the clams were more infected by *P. olseni*. In conclusion, high level of *P. olseni* infection shortens the spawning period, and high level of *C. tapidis* infection castrates the gonad of *R. philippinarum*. In addition, clam density is considered as a important factor that governing infection of disease in the study area.