

Sudathip Seansupha 2009: Effect of Water Quality Change to Growth of Freshwater Bryozoans. Master of Science (Environmental Technology and Management), Major Field: Environmental Technology and Management, Department of Environmental Science. Thesis Advisor: Associate Professor Pattana Anurakpongsatorn, D. Tech. Sc. 72 pages.

According to un-free migration, easy to collect and living in wide range environments, freshwater bryozoans have possibility to use as bio-indicator for water quality. This study aimed to investigate the relationship of the growth of freshwater bryozoans and water quality in natural reservoir and simulated conditions. After eight weeks in the pond, species attached and grew on tested materials were classified. The results showed that freshwater bryozoans, *Hislopia malayensis*, *Plumatella casmiana* and *Plumatella chulabhornae* grew well on plastic net. The growth rate was slow in an initial stage and rapid during 4th and 5th weeks. Density of freshwater bryozoans covered on plastic net was classified to high, medium and low dense, and the zooids were counted *H. malayensis* had more zooids than *P. casmiana* and *P. chulabhornae* in all dense levels. Freshwater bryozoans grew well in natural reservoir where parameters of water quality changed in the small ranges. However, in simulated conditions with the addition of nutrient, nitrate and phosphate. *H. malayensis* was more endurant than *P. casmiana* and *P. chulabhornae*. The nutrient concentration had an effect to the survival. The starting point of dead was similar in three species of bryozoans but the extermination point was different.

Student's signature

Thesis Advisor's signature