PARASITES OF CULTURED OYSTER (*Crassostrea iredalei)*

Ainatul Hakimah Binti Zakaria

This project report is submitted in partial fulfillment of the requirement of the degree of Bachelor of Science in Agrotechnology (Aquaculture)

FACULTY OF AGROTECHNOLOGY AND FOOD SCIENCE
UNIVERSITI MALAYSIA TERENGGANU

2007

This project report should be cited as:

Ainatul, H. Z. 2007. Parasites of cultured oyster (*Crassostrea iredalei*). Undergraduates thesis, Bachelor of Science in Agrotechnology (Aquaculture), Faculty of Agrotechnology and Food Science, Universiti Malaysia Terengganu, Terengganu. 47p.

ACKNOWLEDGEMENT

Alhamdulillah, the greatest thanks to Almighty Allah s.w.t for the compassion and clemency, finally I have completed my final year project although many assumption and obstacle that I should go through. I would like to express my appreciation and special thanks to my supervisor Prof. Dr. Faizah Bt. Shaharom for her supervision, guidance, and spending time that enables this project done. Sincere thanks also to my coordinator, Pn. Nur Asma Bt Ariffin for her guidance and cooperation. Appreciation is also extended to my late beloved parent, Wan Zaharah Bt Hj. Wan Abdullah and Zakaria Bin Awang for their remain and never-ending loves. May God bless both of you. My heartfelt gratitude goes to Pn. Kartini, En. Zan, En. Shahrul, Pn. Faridah, and En. Jo for the willingness to assist me during running the experiment in the laboratory. Special thanks to all my friends for the assistance and kindness. Last but not least, my appreciation goes to those who have contributed to this project.

ABSTRACT

This study was carried out to identify the parasites found in oyster (*Crassostrea iredalei*), the prevalence and the mean intensity of parasites found and the relationship between the prevalence of parasites found with the water parameters (DO, pH, salinity, and temperature). A total of 40 oysters were obtained from the raft culture in Setiu and Merchang, then placed in aquarium and brought to the laboratory for examination. The water parameters at sampling site were tested and recorded by pH meter, DO meter and salinity meter. The shell's oyster was opened and the various part of the oyster was examined. Smear was made by scraping mucous from the various parts of the oyster, put on the glass slide and then examined under microscope for parasites observation. Giemsa's stain was used to stain for identification. One species of dinoflagellate and one species of ciliate have been found. The dinoflagellate closely resembled Amylodinium *ocellatum* and the ciliate closely resembled *Trachelius sp*. The prevalence and the mean intensity of dinoflagellate were 80% and 33.09 while the ciliate were 97.5% and 92.9 respectively. The prevalence of both ciliate and dinoflagellate were not correlated with all the water parameters (DO, pH, salinity, and temperature) where the Spearsman's rho Correlation test showed that the relationship were not significantly different ($P>0.05$).

ABSTRAK

Kajian ini dijalankan untuk mengenalpasti parasit yang terdapat pada tiram (*Crassostrea iredalei*), prevelen dan purata keamatan parasit serta hubungan antara prevalen parasit dengan parameter air (oksigen terlarut, pH, suhu dan saliniti). Sejumlah 40 tiram yang diternak secara rakit di Setiu dan Merchang diambil, kemudian dimasukkan ke dalam akuarium yang diberi pengudaraan dan dihantar ke makmal untuk diperiksa. Parameter air di lokasi penyampelan diuji dan direkod dengan menggunakan pH meter, DO meter dan saliniti meter. Cangkerang tiram dibuka dan pemeriksaan dijalankan di pelbagai bahagian tiram. "Smear" dilakukan dengan mengkikis mukus di pelbagai bahagian tiram, kemudian mukus diletakkan di atas slaid kaca dan dilihat di bawah mikroskop untuk pencarian parasit. "Giemsa's stain" digunakan untuk mewarnakan parasit bagi tujuan pengenalpastian parasit.Keputusan menunjukkan satu spesis "dinoflagellate" dan satu spesis "ciliate" telah dijumpai. Dinoflagellate yang dijumpai jelas menyerupai *Amyloodinium ocellatum* manakala ciliate jelas menyerupai *Trachelius* sp. Prevalen dan purata keamatan dinoflagellate ialah 80% dan 33.09 manakala prevalen dan purata keamatan ciliate ialah 97.5% dan 92.9. Prevalen kedua-dua dinoflagellate dan ciliate menunjukkan tiada hubungan dengan kesemua parameter air (oksigen terlarut, pH, saliniti dan suhu). Ujian "Spearsman's rho Correlation" menunjukkan tiada perbezaan bererti ($P > 0.05$) antara prevalen dan kesemua parameter air.