A STUDY OF FISH (*Tilapia cyprinoides*) ENDOPARASITES IN BRACKISH WATERS OF KUSTEM

GOH WEE LING

FACULTY OF SCIENCE AND TECHNOLOGY
KOLEJ UNIVERSITI SAINS DAN TEKNOLOGI
MALAYSIA
2004

Tarikh	Waktu Pemulangan	Nombor Ahli	Tanda tangan
19/3/07		UK 7889	
20/3/07	1.20 pm	10100	
24/3/07	8.20 pm	UK 10100	
25/3/07	9.30 pm	11006	
27/3/07	10.15 pm	11006	
28/3/07	9.30 pm	10100	
15/3/09	9.40 pm	UK 14453	

31/3/10

Lihat sebelah

A STUDY OF FISH (*Megalops cyprinoides*) ENDOPARASITES IN BRACKISH WATERS OF KUSTEM

BY

CHU WE LING

Research Report submitted in partial fulfillment of
the requirements for the degree of
Bachelor of Science (Marine Biology)

Department of Marine Sciences
Faculty of Science and Technology
Kolej Universiti Sains dan Teknologi Malaysia
2004

This project should be cited as:

Chu. W.L. 2004. A study of fish (*Megalops cyprinoides*) endoparasites in brackich waters of KUSTEM. Undergraduate thesis, Bachelor of Science in Marine Biology, Faculty of Science and Technology, Kolej University Sains and Technology Malaysia, 65p.

JABATAN SAINS SAMUDERA
FAKULTI SAINS DAN TEKNOLOGI
KOLEJ UNIVERSITI SAINS DAN TEKNOLOGI MALAYSIA

PENGAKUAN DAN PENGESAHAN LAPORAN PROJEK PENYELIDIKAN I DAN II

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk:
A Study of Fish (*Megalops cyprinoides*) Endoparasites in Brackish Waters of KUSTEM
oleh Chu We Ling, No. Matrik: UK 5823
telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Sains Biologi sebagai memenuhi sebahagian daripada keperluan memperolehi Ijazah Sarjana Muda Biologi – Biologi Marin,
Falkuti Sains dan Teknologi, Kolej Universiti Sains dan Teknologi Malaysia.

Disahkan oleh:

.....
Penyelia Utama
Nama: Prof. Dr. Faizah binti Shaharom
Cop Rasmi: PROF DR. FAIZAH SHAHAROM
Timbalan Pengarah
Institut Oseanografi
Kolej Universiti Sains dan Teknologi Malaysia
21030 Kuala Terengganu
Terengganu Darul Iman

Tarikh 22/3/04

.....
Ketua Jabatan Sains Samudera
Nama:
Cop Rasmi: PROF. MADYA DR. KAMARUZZAMAN B. YUNUS
Ketua
Jabatan Sains Samudera
Fakulti Sains dan Teknologi
Kolej Universiti Sains dan Teknologi Malaysia
21030 Kuala Terengganu.

Tarikh: .....

ACKNOWLEDGEMENTS

Grateful thanks to my supervisor: Prof. Dr. Faizah binti Shaharom, for her encouragement and so much support. I remain so much indebted to her for sharing so much time to comment on my project and suggesting many improvements, without her diligence and perseverance, my study would never been done. I accept full responsibility for remaining errors and omissions.

I also like to thank the staff and laboratory assistants especially Puan Kartini and Encik Che Mohd Zan, for their support and their able and willing assistance throughout my study. Their advice and understanding are deeply appreciated.

I also would like to express my sincere appreciation to KUSTEM for providing so much useful facilities and equipments in the laboratory, which help a lot throughout my study.

Finally, grateful thanks are also due to my beloved family and fellow friends for their enormous patience, concern, and understanding at all the time, without your support and encouragements; i would be not able to finish my study on time.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

°C = degree celsius

cm = centimeter

g = gram

µm = micron meter

St = standard length

W = weight

Fig. = figure

% = percentage

$^{0}/_{00}$ = part per thousand

DO = dissolved oxygen

sp. = species

LIST OF APPENDICES

ABSTRAK

Sejumlah enam puluh sampel ikan (*Megalops cyprinoides*) telah ditangkap dari kawasan air bakau di KUSTEM pada musim hujan (Julai – Oktober, 2003) and musim kering (Disember, 2003) dengan setiap musim masing-masing tiga puluh sampel ikan. Sampel ikan telah diperiksa untuk menentukan prevalen dan min keamatan parasit yang dijumpai. Sebanyak lapan spesies telah dijumpai sepanjang kajian: dua spesies dari kumpulan trematode (*Allocreadium* sp. dan *Macradenina* sp.), tiga spesies dari kumpulan nematode (*Camallanus* sp., *Contracaecum* sp. dan *Philometra* sp.), dua spesies dari kumpulan cestode and satu spesies dari kumpulan arachnida. Tahap jangkitan untuk *Megalops cyprinoides* semasa musim hujan adalah jauh lebih tinggi berbanding dengan musim kering ($P<0.05$). Tahap jangkitan parasit bagi musim hujan adalah lebih kurang 4 kali lebih daripada musim kering. Terdapat perhubungan rapat di antara saiz ikan dengan tahap jangkitan parasitnya bagi kedua-dua musim itu, iaitu jangkitan parasit pada ikan sampel akan bertambah jika saiz ikan bertambah.

ABSTRACT

A total of sixty specimens of the fish samples (*Megalops cyprinoides*) were collected from KUSTEM's brackish waters during non-monsoon season (July – October, 2003) and monsoon season (December, 2003 – January, 2004) with thirty specimens per season. The fish samples were examined with the reference to the prevalence and mean intensity of the parasites found. A total of 8 species of parasites were discovered throughout the study: two species were trematode (*Allocreadium* sp. and *Macradenina* sp.), three species were nematode (*Camallanus* sp., *Contracaecum* sp. and *Philometra* sp.), two species were cestode and one species of arachnida. From the stations being sampled, infestation levels for *Megalops cyprinoides* during monsoon season were significantly higher ($P< 0.05$) than during non-monsoon season, with the number of parasitic infestation being 4 times higher than those in the non-monsoon season. There was also a significant correlation between the host size and its infection levels for both seasons, which showed an increase of infection with increase in fish size.