

COASTAL ECOLOGY OF PAHANG WATER

COASTAL
ECOLOGY
OF PAHANG
WATER
(South China Sea)

**DR. NUR NAZIFAH MANSOR
DR. MOHD ZAINI MUSTAPA**



IIUM Press
Gombak • 2017

First Print, 2017
©IIUM Press, 2017

IIUM Press is a member of the Majlis Penerbitan Ilmiah Malaysia - MAPIM
(Malaysian Scholarly Publishing Council)

All rights reserved. No part of this publication may be reproduced,
stored in retrieval system, or transmitted in any form or by any means,
electronic, mechanical, photocopying, recording, or otherwise,
without any prior written permission of the publisher.

Perpustakaan Negara Malaysia

Cataloguing-in-Publication Data

Dr. Nur Nazifah Mansor, Dr. Mohd Zaini Mustapa
Coastal Ecology of Pahang Water (South China Sea)
/ DR. NUR NAZIFAH MANSOR, DR. MOHD ZAINI MUSTAPA
ISBN 978-967-418-704-0
1. Protheses--Research. 2. Artificial hands--Research. I. Title.

Published & Printed in Malaysia by
IIUM Press
International Islamic University Malaysia
P.O. Box 10, 50728 Kuala Lumpur, Malaysia

CONTENTS

	<i>Forward</i>	<i>vi</i>
	<i>Preface</i>	<i>vii</i>
Chapter 1	COMMUNITY OF ZOOPLANKTON IN DIFFERENT SUB-HABITAT IN COASTAL MANGROVES OF BALOK RESERVE FOREST, PAHANG MALAYSIA	1
Chapter 2	THE ABUNDANCE OF BENTHIC DINOFLAGELLATES ON DIFFERENT SUBSTRATES	8
Chapter 3	EMERGENCE OF ANTIBIOTIC RESISTANCE IN BACTERIA ISOLATED FROM RECREATIONAL BEACHES OF KUANTAN, PAHANG, MALAYSIA	17
Chapter 4	SEASONAL VARIATION OF MARINE PHYTOPLANKTON IN THE PAHANG WATERS, MALAYSIA, SOUTH CHINA SEA	33
Chapter 5	HEAVY METAL STUDY IN MANGROVE SEDIMENT OF KUANTAN RIVER ESTUARY, PAHANG	46
Chapter 6	CONCLUSION	48
	<i>REFERENCES</i>	78
	<i>APPENDIX</i>	90

FOREWORD

متاكربو الله اتمحرو مكيلاء ماسلا

Microbial ecology or also known as environmental microbiology is all about the interaction and relationship of microorganisms and its environment. The microbial organisms may play a primary role in balancing the environmental systems as well as human activities itself. Study on microbial ecology of coastal water is essential as it can indicate the environment balance systems. This information is very useful as it's related to microbial resource management, carbon fixation, food security, food safety and environmental conservation. Through the publication of this book which contains research papers on the microbial ecology of coastal water, I believed the priceless knowledge was written will benefit all mankind especially the marine scientist and related agencies. I hope in its own way, findings presented in the book will strengthen effort made by relevant agencies to sustain the marine ecosystem for future generation. Last but not least, I congratulate the Department of Marine Science for their sincere effort and hardworking in producing this book. As a new department under Kulliyyah of Science, I adore the commitment given and hope that the department keeps its spirit of Excellency in the coming future.

ماسلاو

Prof. Dr. Kamaruzzaman Yunus
Dean
Kulliyyah of Science

PREFACE

متاكربو الله اتمحرو مكيلاء ماسلا

This first book of Department of Marine Science marks the combination effort and sincere support of all academic staff under the Department which has just embark its journey as one of the important Department under the umbrella of Kulliyyah of Science. The book also features some interest of the marine academic staff if not all that have been carried out to reveal the secret of marine life towards sustainable management of the marine ecosystem. This book presented research discussed on research related to the diversity of marine organism including zooplankton, benthic dinoflagellates, antibiotic resistance and distribution of phytoplankton of coastal water. The fundamental research presented in the book will surely add into existing knowledge particularly for Malaysian marine waters.

Therefore, I would like to congratulate all member of Marine Science Department for their enormous effort and contribution to materialize this book. This indicates the spirits of togetherness and hope that this motivated environment will sustain for the benefit of all.

ماسلاو

DR. NUR NAZIFAH MANSOR
DR. MOHD ZAINI MUSTAPA