

TAXONOMY, GROWTH AND REPRODUCTIVE PERIODICITY OF
SARGASSUM SPECIES IN CHENDERING, TERENGGANU

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TERENGGANU
2000



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Taxonomy, growth and reproductive periodicity of *Sargassum* species in Chendering, Terengganu / Poon Wai Kam.

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**TAXONOMY, GROWTH AND REPRODUCTIVE PERIODICITY OF
SARGASSUM SPECIES IN CHENDERING, TERENGGANU**

BY

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**This project report is submitted in partial fulfillment of
the requirements for the Degree of
Bachelor of Fisheries Science**

**Faculty of Science and Technology
UNIVERSITY PUTRA MALAYSIA TERENGGANU**

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ACKNOWLEDGEMENT

At the very beginning, I wish to express my utmost respect for my supervisor, Dr. Siti Aisah Abdullah @ Christine A. Orosco, who gave me the chance to learn from her. Her patience, guidance and understanding have an important impact on my final year project. She was always there to help me, gave me lots of valuable insights and suggestions to widen my knowledge in this study though she was always busy.

I am greatly indebted Dr. Tadahide Noro, a *Sargassum* taxonomist from Kagoshima University, Japan, who helped me in identifying *Sargassum* specimens. His kindness and patience helped support this study. Particular thanks must go to Subarjo Merehojono, for his willingness to help with the sampling in Chendering.

I would also like to extend my sincere gratitude to my beloved family. Without them, I would never have the chance to be in UPMT and this project will never be done by me. I would like to express my appreciation to my dearest father, Poon Sung San and my dearest mum, Tan Kim Hon, who love me, care for me and educated me all the years. I would like to thank my brothers and elder sister, for their love and encouragement. Their understanding allowed me to concentrate on this study especially during the holidays when I was supposed to be at home with them.

Lastly, I would like to thank all my friends at UPMT especially: Guan Hong, my study partner during this project, Choon Sean, Leon, Soon Lai, Ya Tat, King Chang, Choon Loon, Kok Wei, Yoke Wai and other buddies. They were always there to give me a helping hand whenever I needed it, either in my studies or in this project. And of course I will never miss out my fantastic housemates, Wei Chin, my senior and my ex-housemate, Gek Lan, my best friend since our first year in UPMT, Wu Ling and Elaine, who made me regret for knowing them a little late. They were always there to support me.

Thank you very much!

ABSTRACT

Three species of *Sargassum*: *S. ilicifolium* (Turner) C. Agardh, *S. polycystum* C. Agardh and *S. oligocystum* Montagne were collected in Chendering. Description of each *Sargassum* species collected is provided in this report. These *Sargassum* species were identified to species based on their morphological characteristics.

Biomass, density, growth and reproductive periodicity of *Sargassum* species were investigated by conducting monthly sampling from May to September, 1999. In this study, biomass was generally highest in June and lowest in September (ranging from 29.12 to 0.42 kgm⁻²). *S. ilicifolium* was the most dominant species in terms of biomass. However, maximum density of *Sargassum* species was reported in August and minimum was obtained in June (ranging from 1450.67 to 362.66 individuals m⁻²). *S. polycystum* was the most dominant and abundant in terms of density.

Growth of *Sargassum* species was taken as the change in average length and wet weight of the monthly samples. Maximum length and wet weight were achieved in June. After the luxuriant growth, length and wet weight of *Sargassum* species started to decrease gradually during July to September with the loss of leaves.

Reproductive periodicity of *Sargassum* species were also observed in this study. In May, receptacles started to appear in *S. ilicifolium* and *S. polycystum*. However, the first receptacles in *S. oligocystum* were observed in June. By June and July, most thalli of

these species were reproductive. After the peak of the reproductive season, the thalli shed their leaves and by August and September only perennial bases and stalks remained.

Morphological observation of the *Sargassum* species indicated that vesicles, receptacles and leaves were most abundant in June. After that, *Sargassum* species started to shed their leaves, receptacles and vesicles. By September, *S. oligocystum* had completely disappeared from the study area.

ABSTRAK

Tiga spesies *Sargassum*: *S. ilicifolium* (Turner) C. Agardh, *S. polycystum* C. Agardh dan *S. oligocystum* Montagne telah dikumpul di Chendering. Deskripsi bagi setiap spesies diberi dalam kajian ini. *Sargassum* spesies ini telah dikenalpasti hingga ke peringkat spesies berdasarkan ciri-ciri morfologi.

Biojisim dan density bagi setiap *Sargassum* species telah dikaji dengan menjalankan pengutipan setiap bulan (Mei hingga September 1999). Dalam kajian ini, nilai biojisim tertinggi telah dicatat pada Jun manakala nilai terendah telah dicatat pada September dengan julat antara 29.12 hingga 0.42 kgm⁻². *S. ilicifolium* merupakan spesies yang paling dominan dari segi biojisim. Sementara pada Ogos, nilai densiti maksimum telah direkodkan manakala nilai minimum direkod pada Jun dengan julat antara 1450.67 hingga 362.66 individu m⁻². Dari segi densiti, *S. polycystum* adalah spesies yang paling dominan.

Pertumbuhan spesies *Sargassum* telah diambil berdasarkan perubahan purata panjang dan berat basah sampel pada setiap bulan. *Sargassum* spesies telah mencatat nilai maksimum bagi panjang dan berat basah pada Jun. Selepas mencapai pertumbuhan maksimum, panjang dan berat basah spesies *Sargassum* mula menurun pada bulan yang seterusnya.

Reseptakel mula muncul pada *S. ilicifolium* dan *S. polycystum* pada Mei. Sementara reseptakel mula muncul pada *S. oligocystum* pada Jun. Dalam tempoh masa Jun dan Julai, kebanyakan thalli telah menjadi reproduktif atau matang. Selepas mencapai tempoh puncak reproduktif, dedaun pada thalli mula meluruh atau gugur. Pada Ogos dan September, spesies *Sargassum* hanya tinggal pelekap dan batang.

Pemerhatian morfologikal bagi setiap spesies *Sargassum* telah menunjukkan bahawa reseptakel, vesikel dan dedaun paling padat pada Jun. Selepas itu, reseptakel, vesikel dan dedaun mula meluruh. Pada September, *S. oligocystum* telah hilang daripada kawasan kajian.