

A STUDY ON THE DIGESTIBILITY OF SQUID, JELLYFISH:
AND MACROZOOPLANKTON BY LEATHERBACK
(*Dermochelys coriacea*, Linnaeus) HATCHLINGS

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A STUDY ON THE DIGESTIBILITY OF SQUID, JELLYFISH
AND MACROZOOPLANKTON BY LEATHERBACK
(Dermochelys coriacea, Linnaeus) HATCHLINGS

BY

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FACULTY OF FISHERIES AND MARINE SCIENCE
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DEDICATION

To the Lord, who believed in my capabilities and gave me the opportunity to be where I am today.

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ABSTRACT

The digestibility of squid, jellyfish and macrozooplankton by leatherback (*Dermochelys coriacea* L) hatchlings were investigated over a 13 day period. The three food types were prepared in the form of agar discs, with 1% chromic oxide (Cr O_{23}) incorporated as an internal marker for the evaluation of digestibility.

The results indicated that squid was the most digestible food compared with jellyfish and macrozooplankton. The apparent digestibility of dry matter in squid was 78.07%, as compared to jellyfish and macrozooplankton at 73.55% and 70.63% respectively.

The apparent digestibility of protein, ash, fat, carbohydrate and gross energy of the squid diet by the hatchlings was 95.96%, 9.03%, 97.06%, 84.07% and 79.11% respectively. Whereas in the jellyfish diet, the apparent digestibility of protein, ash, fat, carbohydrate and gross energy was respectively 98.29%, 18.43%, 89.61%, 84.46% and 76.12%. Finally, the apparent digestibility of protein, ash, fat, carbohydrate and gross energy of the macrozooplankton diet was 92.59%, 61.45%, 89.77% 79.39% and 77.60% respectively.

Hatchlings fed on a diet of squid, showed a mean increase of body weight of 15.3%, whereas those fed on jellyfish and macrozooplankton showed a mean increase of body weight of 7.81% and 5.37% respectively over the 13-day experimental period.

ABSTRAK

Kadar pencernaan ketara untuk sotong, ubur-ubur dan makrozooplankton oleh anak-anak tetasan penyu belimbing (Dermochelys coriacea L.) telah dikaji dalam tempoh masa 13 hari. Ketiga-tiga jenis diet makanan telah disediakan dalam bentuk kepingan bulat agar. 1% kromik oksida (Cr_2O_3) telah dimasukkan ke dalam setiap diet sebagai penanda dalaman untuk penentuan kadar ketara penghadaman.

Keputusan kajian menunjukkan yang sotong adalah merupakan makanan yang paling tinggi dicerna, jikalau dibandingkan dengan ubur-ubur dan makrozooplankton. Kadar pencernaan ketara bahan-bahan kering dalam diet sotong adalah sebanyak 78.07%, manakala untuk ubur-ubur dan makrozooplankton adalah masing-masing pada 73.55% dan 70.63%.

Kadar pencernaan ketara untuk protin, abu, lemak, karbohidrat dan tenaga kasar oleh anak-anak tetasan penyu untuk diet sotong adalah 95.96%, 9.03%, 97.06%, 84.15% dan 79.11% masing-masing. Dengan diet ubur-ubur pula, kadar pencernaan ketara untuk protin, abu, lemak, karbohidrat dan tenaga kasar adalah masing-masing pada 98.29%, 18.43%, 89.61%, 84.46% dan 76.12%. Akhirnya, kadar pencernaan ketara untuk protin, abu, lemak, karbohidrat dan tenaga kasar dengan diet makrozooplankton adalah masing-masing 92.59%, 61.45%, 89.77%, 79.39% dan 77.60%.

Anak-anak tetasan penyu belimbing yang diberi diet sotong telah menunjukkan purata peningkatan berat badan sebanyak 15.3% setelah jangkamasa 13 hari. Manakala, yang diberikan diet ubur-

ubur dan makrozooplankton telah menunjukkan purata peningkatan berat badan masing-masing sebanyak 7.81% dan 5.57% dalam tempoh jangkamasa yang sama.

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