

**A STUDY OF STOMACH CONTENT OF BILLFISH IN KUALA
ROMPIN, PAHANG**

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**FACULTY OF MARITIME STUDIES AND MARINE SCIENCE
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A Study of Stomach Content of Billfish in Kuala Rompin, Pahang

By

Muhammad Asri bin Misnan

**Research report submitted in partial fulfillment of
the requirement for the degree of
Bachelor of Science (Marine Science)**

**Department of Marine Science
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DECLARATION AND VERIFICATION FORM
FINAL YEAR RESEARCH PROJECT

It is hereby declared and verified that this research report entitled:

Study of Stomach Content of Billfish in Kuala Rompin, Pahang by Muhammad Asri bin Misnan, Matric No. **UK20907** has been examined and all errors identified have been corrected. This report is submitted to the Department of Marine Science as partial fulfillment towards obtaining the Degree of **Bachelor of Science (Marine Science)**, Faculty of Maritime Studies and Marine Science, Universiti Malaysia Terengganu.

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ABBREVIATIONS

| | |
|------|-----------------------|
| cm | Centimeter |
| EFL | Eye-fork length |
| g | Gram |
| kg | Kilogram |
| LJFL | Lower jaw-fork length |
| PW | Processed weight |

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ABSTRACT

This study was done in order to study the stomach content of billfish, *Makaira indica* and *Istiophorus platypterus* in Kuala Rompin, Pahang, as well as to determine the major food items in stomach content of the billfish by using Index of Relative Importance (IRI). Fish stomach content from 5 black marlin, *Makaira indica*, and 13 sailfish, *Istiophorus platypterus*, that were caught as by-catch in purse-seiner and trawler vessels in Kuala Rompin was examined. The major food items in the stomachs were determined with Index of Relative Importance (IRI). As carnivorous species, the *Makaira indica* were found fed on 4 species of fish, while the *Istiophorus platypterus* were found fed on nine species of prey foods, consisted of squid and 8 fish species. All food items were identified to the possible lowest taxonomic level. The total number, wet weight and frequency of occurrence of each prey food item were recorded. The shortfin scad, *Decapterus* spp. was found as the major prey food item in the *Makaira indica* diet. On the other hand, the *Engraulis* spp. was found to be the most abundant as prey food item for *Istiophorus platypterus*.

Kajian Ke atas Isi Perut Ikan Layaran di Kuala Rompin, Pahang

ABSTRAK

Kajian ini telah dijalankan untuk mengkaji kandungan isi perut ikan layaran, *Makaira indica* dan *Istiophorus platypterus*, dan untuk mengenalpasti item makanan utama ikan layaran dengan menggunakan Indeks Kepentingan Relatif. Kandungan isi perut daripada 5 ekor mersuji hitam, *Makaira indica*, dan 13 ekor layaran, *Istiophorus platypterus* yang terperangkap pada pukot jerut dan bot tunda di Kuala Rompin telah dikaji. Item makanan utama yang terdapat dalam perut ikan layaran ditentukan menggunakan Indeks Kepentingan Relatif. Sebagai spesies karnivor, *Makaira indica* di Kuala Rompin didapati telah memakan 4 spesies ikan, manakala *Istiophorus platypterus* didapati telah memakan 9 spesies mangsa yang terdiri daripada 1 sotong dan 8 spesies ikan yang lain. Kesemua item makanan telah dikenalpasti sehingga ke tingkat taksonomi terendah yang berkemungkinan. Diet item makanan ikan layaran adalah berbeza mengikut bilangan, berat, dan kekerapan item makanan tersebut dijumpai. Jumlah keseluruhan bagi bilangan, berat, dan kekerapan setiap item makanan (mangsa) yang ditemui telah direkodkan. Ikan selayang, *Decapterus* spp. didapati sebagai item makanan utama yang dimakan oleh *Makaira indica*. Namun begitu, ikan bilis, *Engraulis* spp. merupakan item makanan yang paling banyak yang dimakan oleh *Istiophorus platypterus*.