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GROWTH RESPONSE OF PAINTED TERRAPIN (*Callagur borneoensis*) HATCHLINGS TO COMMERCIALLY AVAILABLE FEEDS

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

Department of Marine Sciences
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PENGAKUAN DAN PENGESAHAN LAPORAN PROJEK PENYELIDIKAN I DAN II

Alasan ini diakui dan disahkan bahawa laporan penyelidikan bertajuk:
Growth Response Of Painted Terrapin (*Callagur borneoensis*) Hatchlings To Commercially Available Feeds oleh **Nor Marianti bt Nor Azham**, No. Matrik **UK 8273** telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Sains Samudera sebagai memenuhi sebahagian daripada keperluan memperolehi Ijazah Sarjana Muda Sains (Biologi Marin), Fakulti Sains dan Teknologi, Kolej Universiti Sains dan Teknologi Malaysia.

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TABLE OF CONTENT

CONTENTS		PAGE
ACKNOWLEDGEMENT		ii
TABLE OF CONTENTS		iii
LIST OF FIGURES		v
LIST OF TABLES		vi
LIST OF ABBREVIATIONS		vii
LIST OF APPENDIXES		viii
ABSTRACT		ix
ABSTRAK		x
CHAPTER 1	INTRODUCTION	1
CHAPTER 2	LITERATURE REVIEW	4
	2.1 The Level of Endangerment and Threats	4
	2.2 Conservation	6
	2.3 Distribution	8
	2.4 Biological Characteristic	8
	2.5 Behavior	9
	2.6 Reproduction	10
	2.7 Feeding	11
	2.8 The Growth Measurement	13
CHAPTER 3	METHODOLOGY	14
	3.1 Hatchlings	14
	3.2 Tagging	14

	3.3 Acclimatization to Freshwater	16
	3.4 Tank Maintenance	17
	3.5 The Treatments	18
	3.6 The Measurement of Growth	19
CHAPTER 4	RESULTS	23
	4.1 Body Weight	23
	4.1.1 Growth in terms of body weight	23
	4.2 Straight Carapace Length	27
	4.2.1 Growth in terms of straight carapace length	27
	4.3 Straight Carapace Width	30
	4.3.1 Growth in terms of straight carapace width	30
	4.4 Shell Depth	33
	4.4.1 Growth in terms of shell depth	33
CHAPTER 5	DISCUSSION	36
CHAPTER 6	CONCLUSION	39
CHAPTER 7	REFERENCES	40
CHAPTER 8	APPENDICES	44

Perpustakaan
Kolej Universiti Sains dan Teknologi Malaysia (KUSTEM)

LIST OF FIGURES

Figure		Page
3.1	Notching process	15
3.2	Refractometer	16
3.3	The experimental tanks	17
3.4	Digital Weighing Balance	20
3.5	Vernier calipers	20
3.6	Straight Carapace Length	21
3.7	Straight Carapace Width	21
3.8	Shell Depth	22
4.1	Body weight gains	24
4.2	Straight Carapace Length Increment	27
4.3	Straight Carapace Width Increment	30
4.4	Shell Depth	33

LIST OF TABLES

Table		Page
4.1	Average for body weight gains	23
4.2	Average for SCL increment	26
4.3	Average for SCW increment	29
4.4	Average for SD increment	32

LIST OF ABBREVIATIONS

ANOVA – Analysis of Variance

SCL – Straight Carapace Length

SCW – Straight Carapace Width

SD – Shell Depth

LIST OF APPENDICES

Appendices		Page
APPENDIX 1	Nutrient content	56
APPENDIX 2	Nutritional function	57
APPENDIX 3	Body weight	59
APPENDIX 4	Body weight gain	62
APPENDIX 5	Straight carapace length increment	66
APPENDIX 6	Straight carapace length	70
APPENDIX7	Straight carapace width increment	73
APPENDIX 8	Straight carapace width	77
APPENDIX 9	Shell depth increment	80
APPENDIX 10	Shell depth	84
APPENDIX 11	Morning glory dry weight standard curve	87

ABSTRACT

This project investigates the growth response of 45 *Callagur borneoensis* hatchlings fed using five different combinations of feeds such are frog pellet, frog pellet mixed with morning glory (*Ipomoea aquatica*), tilapia pellet, tilapia pellet mixed with morning glory, and morning glory. The amounts of pellets given were 1.5% of the body weight. Growth response was determined as increment in body weight, straight carapace length, straight carapace width, and shell depth. Growth increment in weight, straight carapace length, straight carapace width, and shell depth for the whole experiment were 89.89g; 2.69cm, 2.24cm; 1.16cm, for terrapins fed tilapia pellet, 86.66g; 2.54cm; 2.24cm; 1.07cm, for terrapins fed frog pellet, 75.11g; 2.47cm; 2.05cm; 1.05cm for terrapins fed frog pellet mixed with morning glory, 71.78g; 2.37cm; 2.03cm; 0.98cm, for terrapins fed tilapia pellet mixed with morning glory and 8.89g; 0.71cm; 0.74cm; 0.38cm, for terrapins fed morning glory. All the treatments showed the significant differences between each other for every parameters tested, especially in weight gain (ANOVA, $F = 9.8636$, $p = 0.0000257$). Two-way ANOVA analysis was used to indicate the significant differences between treatments. From the results, hatchlings fed tilapia pellet exhibiting the highest growth.

ABSTRAK

Projek ini adalah bertujuan untuk mengkaji tindak balas pertumbuhan 45 ekor anak tetasan tuntung laut (*Callagur borneoensis*) terhadap lima jenis kombinasi makanan yang berbeza iaitu pelet katak, pelet katak bercampur kangkung (*Ipomoea aquatica*), pelet tilapia, pelet tilapia bercampur kangkung, dan kangkung. Peratusan makanan yang diberi adalah 1.5% daripada berat badan anak tetasan.Tindak balas perumbuhan ditentukan melalui empat parameter iaitu berat badan, panjang lurus karapas, lebar lurus karapas, dan kedalaman cengkerang. Kadar pertumbuhan bagi berat, panjang lurus karapas, lebar lurus karapas dan kedalaman cengkerang bagi keseluruhan eksperimen adalah 89.89g; 2.69cm, 2.24cm; 1.16cm, bagi pemakanan pellet tilapia, 86.66g; 2.54cm; 2.24cm; 1.07cm, bagi pemakanan pellet katak, 75.11g; 2.47cm; 2.05cm; 1.05cm bagi pemakanan pelet katak bercampur kangkung, 71.78g; 2.37cm; 2.03cm; 0.98cm, bagi pemakanan pelet tilapia bercampur kangkung dan 8.89g; 0.71cm; 0.74cm; 0.38cm, bagi pemakanan kangkung. Kesemua anak tetasan bagi setiap jenis pemakanan menunjukkan perbezaan yang nyata terutamanya dalam peningkatan berat (ANOVA, $F = 9.8636$, $p = 0.0000257$). ANOVA dua hala digunakan untuk mencari perbezaan antara jenis makanan yang diuji. Keputusan menunjukkan pemakanan pelet tilapia memberikan pertumbuhan tertinggi sepanjang eksperimen.