KEMENTERIAN PENDIDIKAN MALAYSIA

FINAL REPORT
FUNDAMENTAL RESEARCH GRANT SCHEME (FRGS)
Laporan Akhir Skim Geran Penyelidikan Fundamental (FRGS)
Pindaan 1/2015

A

RESEARCH TITLE: 1

PHASE & YEAR: 2012

START DATE: 01.06.2012
END DATE: 31.05.2014
EXTENSION PERIOD (DATE): RMC LEVEL:
KPM LEVEL:

PROJECT LEADER: DR. DARLINA BINTI MD. NAIM
I/C / PASSPORT NUMBER: 790519-12-5950

PROJECT MEMBERS: 1. PROF. SITI AZIZAH MOHD NOR
(including GRA) 2. PROF. MOHD ZAKARIA ISMAIL
3. DR. KHAIRONIZAM MD. ZAN
4. DR. MANSOR MAT ISA (BERPENCEN)

PROJECT ACHIEVEMENT *(Prestasi Projek)*

B

ACHIEVEMENT PERCENTAGE			
Project progress according to milestones achieved up to this period	**0 - 50%**	**51 - 75%**	**76 - 100%**
Percentage (please state #%)			100

RESEARCH OUTPUT		
Number of articles/ manuscripts/ books *(Please attach the First Page of Publication)*	**Indexed Journal**	***Non-Indexed Journal***
	1 (accepted for publication)	-
Conference Proceeding *(Please attach the First Page of Publication)*	**International**	***National***
	2	-
Intellectual Property *(Please specify)*		

HUMAN CAPITAL DEVELOPMENT					
Human Capital	**Number**				**Others** (please specify)
	On-going		**Graduated**		
Citizen	Malaysian	Non Malaysian	Malaysian	Non Malaysian	
No. PHD STUDENT					
Student Fullname: IC / Passport No: Student ID:					
No. MASTER STUDENT	1				Internship student = 2
Student Fullname: IC / Passport No: Student ID:	Lia Juliana Binti Halim 901214105608 P-BM0025/13(R)				
No. UNDERGRADUATE STUDENT					
Student Fullname: IC / Passport No: Student ID:					
Total	1				

EXPENDITURE *(Perbelanjaan) as Borang K1 (RMC)*

C

Budget Approved *(Peruntukan diluluskan)* : **RM 126200**

Amount Spent *(Jumlah Perbelanjaan)* : **RM 126145**

Balance *(Baki)* : **RM 54.27**

Percentage of Amount Spent *(Peratusan Belanja)* : 99.95 %

ADDITIONAL RESEARCH ACTIVITIES THAT CONTRIBUTE TOWARDS DEVELOPING SOFT AND HARD SKILLS (Aktiviti Penyelidikan Sampingan yang menyumbang kepada pembangunan kemahiran insaniah)

D

International		
Activity	Date (Month, Year)	Organizer
1. Regional Conference on Local Knowledge	6-7 October 2013	Local Knowledge Group, Universiti Sains Malaysia
2. Asian Fish Biodiversity Conference	12-13 February 2014	Universiti Sains Malaysia
National		

Activity	Date (Month, Year)	Organizer
(e.g : Course/ Seminar/ Symposium/ Conference/ Workshop/ Site Visit)		

E PROBLEMS / CONSTRAINTS IF ANY *(Masalah/ Kekangan sekiranya ada)*

Not applicable

F RECOMMENDATION *(Cadangan Penambahbaikan)*

Based on phylogenetic relationship derived from this study, there are 3 major species of *Hypsibarbus*, namely, *H. malcomi, H. wetmorei* and *B. gonionotus*. More samples and sampling site should be included in future study to elucidate the phylogeny of these genus. Besides, further study is needed for *B. gonionotus* as well as its morphotypes to generate more reliable identification method to provide deeper understanding including good conservation strategy for the original species of *B. gonionotus* in future fisheries management.

G RESEARCH ABSTRACT – Not More Than 200 Words *(Abstrak Penyelidikan – Tidak Melebihi 200 patah perkataan)*

Taxonomy is the foundation of traditional conservation practices and understanding the taxonomic details of a species is central to the development of successful management strategies for sustainable fisheries resources. Genus *Hypsibarbus* was previously described as synonym of *Poropuntius* (Smith, 1931) and *Barbodes* (Bleeker, 1859), where *Hypsibarbus* is morphologically resemblance with those genera. In this study, 12 samples were collected from Perak and 21 samples were collected from Pahang. All samples were identified by local people as Ikan Krai (*Hypsibarbus* sp.). Molecular taxonomic data derived from mitochondrial cytochrome oxidase *c* subunit 1 (COI) was used to identify all representative samples of Malaysian *Hypsibarbus*. All samples showed 99% similarity with sequence obtained from GenBank; 13 samples were identified as *H. malcomi* and six samples as *H. wetmorei*. The other 14 samples were identified as *Barbonymus gonionotus*. Based on Maximum Likelihood phylogenetic analysis, *H. wetmorei*, *H. malcomi* and *B. gonionotus* were clustered according to their species in three major clades with three subclades found within *B. gonionotus* and each clade is clustered accordingly to three different morphotypes with >50% bootstrap in ML tree. The morphology of *Barbonymus gonionotus* is quite similar to the *Hypsbarbus* sp. since they are sibling species. More samples and sampling site should be included in this study to elucidate the phylogeny of this genus. Besides, further study is needed for *B. gonionotus* as well as its morphotypes to generate more reliable identification method to provide deeper understanding including good conservation strategy for the original species of *B. gonionotus* and *Hypsibarbus* sp. in future fisheries management.

Date : 6 Februari 2015
Tarikh

Project Leader's Signature:
Tandatangan Ketua Projek

H **COMMENTS, IF ANY/ ENDORSEMENT BY RESEARCH MANAGEMENT CENTER (RMC)**
(Komen, sekiranya ada/ Pengesahan oleh Pusat Pengurusan Penyelidikan)

Panggil utk pemantauan.

Name:
Nama:

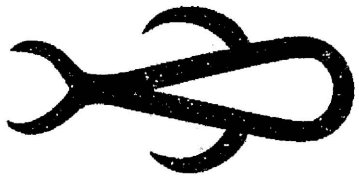
PROF. DR LEE KEAT TEONG
Pengarah
Pejabat Pengurusan & Kreativiti Penyelidikan
Universiti Sains Malaysia
11800 USM, Pulau Pinang

Signature:
Tandatangan:

Date:
Tarikh:

10/2/15

AFBC2014



Conference Program and Abstracts

ASIAN FISH BIODIVERSITY CONFERENCE 2014

12 - 13 February 2014, Penang, Malaysia

Molecular Taxonomy of *Hypsibarbus* spp. in Peninsular Malaysia: A Preliminary Study

Nurul Farhana Samsudin[1]*, Mohd. Zakaria Ismail[2], Khaironizam Md. Zain[1] and Darlina Md. Naim[1]

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The tropical Asian cyprinid, genus *Hypsibarbus* is widely distributed in the freshwater habitats throughout Southeast Asia. Record on systematic status of the endangered genus *Hypsibarbus* in Malaysia has not been well documented. Molecular taxonomic data derived from mitochondrial cytochrome oxidase *c* subunit 1 (COI) was used to identify 22 representative samples of Malaysian *Hypsibarbus*. The aligned sequence of *Hypsibarbus* spp. was subjected to similarity searches against GenBank Basic Local Alignment Search Tool (BLAST). All samples showed 99% similarity with sequence obtained from GenBank; 13 samples were identified as *H. malcomi* and eight samples as *H. wetmorei*. Maximum likelihood and neighbor-joining methods were used to construct phylogenetic tree. Sequences obtained from this study were also compared to congener species sequences. This study will provide new insight into the taxonomy of *Hypsibarbus* in Malaysia and provide deeper understanding for future fisheries management on *Hypsibarbus*.

Semang (Negrito), *Senoi* and *Proto Malay*; all of which consist of 19 subgroups (3), (4). This study interviewed four practitioners from three settlements in Simpang Pulai, Perak; Kampung Pos Slim (*Semai*), Kampung Makmur (*Temiar*) and Kampung Pos Raya (*Temiar*). Plant specimens were collected for systematic extraction and bioactivity testing and as voucher specimen. Five plants indicated for malaria and associated symptoms were found to have good antiplasmodial activity and have a sound basis for further investigation into potential drug discovery.

Evolusi Peralatan Penangkapan Ikan Penyumbang Kepada Kepupusan Ikan di Malaysia: Kajian Kes Ikan Krai (Hypsibarbus)

Nurul Farhana Samsudin, Darlina Md. Naim

Abstrak

Ikan merupakan kelompok yang paling beaneka ragam dengan jumlah spesies melebihi dari 27,000 di seluruh dunia. Ikan megandungi sumber protein yang tinggi menjadikannya sumber makanan yang sangat penting kepada manusia. Di Malaysia, ikan merupakan sumber protein termurah dan permintaan terhadap ikan sebagai sumber makanan terus meningkat seiring dengan peningkatan penduduk. Di samping itu, sektor perikanan menyumbang sebanyak 1.37% kepada Keluaran Dalam Negara Kasar (KDNK). Penangkapan ikan yang berlebihan, pengenalan kepada penggunaan alatan moden, aktiviti alternatif untuk komuniti tempatan dan juga pencemaran antara faktor penyumbang kepada kepupusan fauna ini. Kertas kerja ini akan memfokuskan kepada evolusi peralatan penangkapan ikan yang seterusnya menjadi penyumbang kepada kepupusan ikan di Malaysia dengan menjadikan ikan Krai sebagai model.

Fosil Hidup Paya Bakau: *Carcinoscorpius Rotundicauda* (Belangkas Bakau)

Adibah Abu Bakar, Darlina Md. Naim

Abstrak

Belangkas bakau *(Carcinoscorpius rotundicauda)* adalah spesies belangkas bersaiz kecil ditemui di kawasan pantai dari Laut China Selatan hingga ke benua India. Di seluruh dunia, spesies ini dikenali sebagai belangkas bakau manakala di Malaysia, spesies ini dinamakan sebagai 'kuncus', 'koncong' atau 'koncos' yang bermaksud kecil dalam bahasa Melayu oleh penduduk tempatan. Kini, belangkas digunakan dalam bidang perubatan di seluruh dunia kerana darah biru mereka mengandungi serum yang digunakan sebagai assay untuk mengesan bakteria dan toksin. Disebabkan nilai komersil belangkas, populasi haiwan ini dikatakan sedang merosot di seluruh dunia terutamanya di Asia kerana kebanyakan nelayan tempatan akan mengumpul belangkas

Dianjurkan oleh:
Kumpulan Kearifan Tempatan (KKT)
Universiti Sains Malaysia

PERSIDANGAN SERANTAU KEARIFAN TEMPATAN 2013

Regional Conference on Local Knowledge (RCLK)

Memperkukuhkan Kearifan Tempatan Ke Arah Pengantarabangsaan

6 - 7 Oktober 2013

Sutra Beach Resort, Kuala Terengganu

From: Darlina binti Md. Naim
Sent: Friday, February 06, 2015 6:04 PM
To: Jeffiz Ezuer Shafii
Subject: FW: GMR - Publication Fee - LAPORAN AKHIR FRGS

Assalamualaikum En. Jeffiz,

Disertakan juga email dari journal GMR sebagi bukti penerbitan.

Terima kasih.

DMN

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From: Genetics and Molecular Research <gmr@geneticsmr.com>
Sent: 14 November 2014 03:05
To: Darlina binti Md. Naim
Cc: gmr@geneticsmr.com
Subject: GMR - Publication Fee

Dear Author,
GMR5798 – "Molecular taxonomy of Hypsibarbus sp. in Malaysia"
The manuscript was accepted in scientific merit by our editorial board and as part of the new policy of Genetics and Molecular Research (GMR), we are asking for payment of the publication fee at this time, so that we can proceed to the next step in the processing of your submitted paper, which was accepted by our editorial board.
Payment of the publication fee ($960.00) should be made so that the manuscript can be evaluated and revised by our technical editorial staff.
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