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LARVAL DEVELOPMENT OF KERAI LAMPAM HYBRID

MUHAMMAD AKMAL BIN HARUN

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156044

This project report is submitted in partial fulfilment of the requirements for the degree of Bachelor of Agriculture (Aquaculture)

DEPARTMENT OF AQUACULTURE
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CERTIFICATION OF APROVAL

DEPARTMENT OF AQUACULTURE

FACULTY OF AGRICULTURE

UNIVERSITI PUTRA MALAYSIA

Name of student : Muhammad Akmal bin Harun

Matric number : 156044

Programme : Bachelor of Agriculture (Aquaculture)

Year : 2013

Name of supervisor : Prof. Dr. MohdSalleh b. Kamarudin

Title of Project : Larval Development of Kerailampamhybird

This is to certify that I have examined the final project report and all corrections have been made as recommended by the panel of examiners. This report complies with the recommended format stipulated in the AKU 4999 project guidelines, Department of Aquaculture, Faculty of Agriculture, Universiti Putra Malaysia.

Signature and official stamp of supervisor:

_____

Prof. Dr. MohdSalleh b. Kamarudin
Date:

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ABSTRACT

The larval development of lemon fin barb hybrid was studied for 21 days after hatching (21 DAH). The hatching of eggs beganat 15 hours after fertilization. At hatching, larvae were transparent with the presence of the yolk sac which was bulbous on the anterior and slightly narrowed on the posterior position. The mouth began to open at 3 DAH and the yolk absorption completed at the end of the same day. On 4 DAH, the exogenous feeding started and many morphological changes occurs especially on fins, head and gut of the larvae. The lateral line was clearly visible at 13 DAH but no scale was developed even at 21 DAH. A strong relationship (BW = 1.2311TL- 3.74, R^2= 0.9415) between total length and body weight of larval fish was observed.

ABSTRAK

Perkembanganlarva ikankacukankerailampamtelahdikajiselama 21 hariselepasmenetas (DAH).Telurmulamenetasselepas 15 jampersenyawaan. Semasamenetas, larva adalahlutsinardengankehadiranpundiyolka yang berbentukbulat di bahagianhadapandanmenirus di bahagianbelakang.Mulutlarva mulaterbukapada 3 DAH danpundiyolkasempurnapadahujunghari yang sama. Pada 4 DAH, pemakananeksogenousbermuladanbanyakperubahanmorfologiberlakuterutamapad asirip, kepaladanusus larva. Garisan lateral jelaskelihatanpada 13 DAH namunpertumbuhansisiktidakkelihatanwalaupunpada 21 DAH. Perhubungan linear yang kukuh (BW = 1.2311TL- 3.74, R^2= 0.9415) didapatiwujudantarapanjangkeseluruhandanberatbadan.

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ABBREVIATIONS

cm	centimeter
mm	millimeter
µm	micrometer
kg	kilogram
g	gram
mg	milligram
l	liter
ppm	part per million
%	percent
°C	degree Celsius
pH	power of Hydrogen
h	hour
RM	Ringgit Malaysia

CHAPTER 1

INTRODUCTION

Fish products are nutritionally better than livestock meat as they are rich in omega-3 fatty acids and other micronutrients (Gjedrem et al.,2012). Throughout the years, the demand of cultured fishacross the country increasedrapidly due to increase in price of captured fish. The Department of Fisheries Malaysia (DOF,2011) reported that the aquaculture production increase every year since 1990. Common cultured freshwater species in Malaysia based on their production by weight are*Clariasgariepinus*, *Tilapia niloticus* and *Pangasiussutchii* (DOF, 2012).

Lemon fin barb, *Hypsibarbuswetmorei*belongs to carps or minnows family (Rainboth, 1969). It is called 'keraikunyit' in Malaysia. It can be identified by its golden colour on its belly and reddish brown colour on its dorsum area (Fishbase, 2012). This fish population only can be found in Maeklong basin, Mekong basin, Chao Phraya basin and Malay Peninsula. On the other hand, *Barbonymousgonionotus*(silver barb or 'lampamJawa')is a popular culture species in Thailandbecause of its good taste and high consumer demand (Haque et al., 1998).

Since 2004, Aquaculture Extension Centre in Perlok, Jerantut has successfully crossed males*H.wetmorei*withfemales*B.gonionotus*. This new hybrid was named kerailampam.Anuar(2010) reported that this fish fingerling (5-10cm) can fetch about RM1.20 per piece. This response of fish farmers in Pahang on this hybrid has been positively overwhelming. Despite this success, its larval development has never been described.

Thus, objective of this study was to examine and record the larval development of kerailampam hybrid from the first day of hatching (DAH) to the juvenile stage.

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