



PHOTOTACTIC RESPONSE AND MORPHOMETRIC CHARACTERISTIC OF CLIMBING PERCH *Anabas testudineus* (Bloch, 1792) UNDER CULTURE SYSTEM

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ARTICLE INFO

Received: 26 February 2018
Received in revised form: 29 April 2018
Accepted: 18 May 2018
Online first: 18 October 2018

Keywords:

Anabas testudineus
Continuous light
Blinking light
LED
Negative allometric
Light trap

How to Cite

ABSTRACT

Phototaxis in climbing perch (*Anabas testudineus*) was investigated by subjecting fish to LED light traps (blue, green, yellow, orange, red, white) and control (total 13 traps). The trap was constructed of polyamide (PA) nylon monofilament (31.75 mm mesh size), fastened around two wire ring frames (\varnothing 490 mm) with a net height of 270 mm. A lamp was placed on the bottom of the trap. 96 individuals, consisting of 34 males and 62 females, were analysed. Both continuous and blinking light traps were considerably higher in the number of catch compared to the control. The body size of catch ranged from 76-135 mm TL and 8.00-55.00 g W. The mean YPUEs (yield per unit effort) for male and female were 4.00 ± 2.25 and 7.00 ± 4.50 g trap⁻¹ trial⁻¹, respectively. The CPUEs (catch per unit effort) for continuous, blinking light traps and the control ranged from 0.43 to 0.93, 0.21 to 0.86, and 0.21 fish trap⁻¹night⁻¹, respectively. The mean condition factor (*K*) values of 2.10 ± 0.40 for males and 2.13 ± 0.34 for females indicate fish with better condition. Positive group responses of fish were more pronounced in the middle size classes between 90 and 109 mm TL. Negative allometric growth pattern (*b*) (1.7271-1.8828) was observed, indicating that the culture system should be refined. *A. testudineus* showed positive phototaxis to the "colors of light". In addition, efforts to collect climbing perch from the wild for breeding and commercial purposes may benefit from this study.

Ahmadi, A. (2018): Phototactic response and morphometric characteristic of climbing perch *Anabas testudineus* (Bloch, 1792) under culture system. Croatian Journal of Fisheries, 76, 164-173. DOI: 10.2478/cjf-2018-0020

INTRODUCTION

Climbing perch (*Anabas testudineus* Bloch, 1792) is an economically important freshwater species in Southeast Asia and other countries, e.g. Vietnam (Van and Hoan, 2009), southern Thailand (Chotipuntu and Avakul, 2010),

Malaysia (Zalina et al., 2012), the Philippines (Bernal et al., 2015), Bangladesh (Begum and Minar, 2012) and India (Kumar et al., 2013) due to delicious and high-quality meat fish. In nature, climbing perch inhabit freshwaters such as rivers, streams, lakes, reservoirs, irrigation canal and paddy field (Sarkar et al., 2005; Rahman and Marimuthu, 2010)