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Physiological Studies of Snakehead Fish (*Channa gachua*) Maintained in Controlled Containers

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Abstract : The purpose of this study was to determine the physiological study of snakehead fish (*C. gachua*) maintained in controlled containers with different substrates. This study was conducted in January to April 2016 in Fish Reproduction Laboratory, University Brawijaya. The study employed experimental method through a completely randomized design (CRD) with four treatments and three replications. The fish used are snakehead fish (*C. gachua*) with the size of 10-20 cm. Maintenance treatment consisted of sand, paralon, loster and gravel substrates. The main parameter to observe was the survival and physiological responses (*cortisol*, blood sugar levels, blood picture leukocytes, erythrocytes, hemoglobin and *hematocrit*) and survival rate (SR) of the fishes. The results showed that the snakehead fish experience stress as they were moved from the natural water to the controlled containers. The fishes kept in the controlled containers decreased their *cortisol* and blood sugar, and also experienced changes in blood profile including erythrocytes, leukocytes, hemoglobin, and *hematoktrit*. The best treatments for the fishes in the controlled containers were sand, *loster*, PVC pipe, and gravel as the substrates maintenance with the survival of 55%, 46 %, 42% and 25%, respectively.

Keywords: cortisol, blood sugar, blood picture, snakehead fish (*Channa gachua*).

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