

**The Effect of Immersion Time and Dose Variation of Steroid Extract of Sea Cucumber  
(*Holothuria scabra*) Towards Sex Reversal of Juvenile Freshwater Crayfish  
(*Cherax quadricarinatus*)**

**Gregorius Nugroho Susanto<sup>1,3</sup>, Supono<sup>2</sup>, Asep Yusup Hamdani<sup>3</sup>**

<sup>1)</sup> Department of Biology, Faculty of Mathematics and Natural Sciences, University of Lampung

<sup>2)</sup> Department of Fishery, Faculty of Agriculture, University of Lampung

<sup>3)</sup> Magister of Biology, Faculty of Mathematics and Natural Sciences, University of Lampung

Jl. Sumantri Brojonegoro No.1 Bandar Lampung 35145

No. HP : 082377331345 Fax (0721) 704625

\*corresponding author : gnugrohos@gmail.com

**ABSTRACT**

Freshwater crayfish (*Cherax quadricarinatus*) is one of fishery commodities which is highly market demand. In order to increase the number of male critters, it is important to know about sex reversal on crayfish. One method of manipulating sex reversal in crayfish is by dipping in steroid hormones. Sea cucumber is one type of marine commodities that has domestic and international values as a potential fishery commodities. The sea cucumber contains a bioactive substance called steroid compound. The aim of this research is to know the effect of dipping time and dose variation of steroid extract of sea cucumber on sex reversal to male on juvenile freshwater redclaw crayfish (*C. quadricarinatus*). The research used Factorial Random Design (FRD) with 9 treatments and 3 replications. The data was analyzed by using analysis of variance (Anava) in accordance with the design used Completely Random Design (CRD) of two variables. When there was any difference, the test must be continued with the Smallest Different Test ( $\alpha = 5\%$ ). The result showed that immersion in 2mg/L of steroid extract of sea cucumber for 18 h was the best treatment as it resulted the highest number of male percentage at 79,86% and the lowest was in control at 31,03%. Also, the steroid influenced on several aspects of growth, such as total length, daily weight and biomass of juvenile crayfish, but it was not give significantly effect on their survival rate. Giving the steroid extract of sea cucumber with different immersion time has resulted the formation of male monosex in juvenile crayfish with the best treatment in 18 h of soaking and dose of 2mg/L.

**Keywords:** sea cucumber, steroid, freshwater crayfish, sex reversal