

RINGKASAN

PRAMUDITA AMANDA Embriogenesis, Laju Penetasan dan Metamorfosis Larva Teripang Pasir (*Holothuria scabra*) Pada Salinitas Berbeda. Dibimbing oleh SHAVIKA MIRANTI dan MUZAHAR.

Pemberian salinitas yang berbeda terhadap perkembangan hidup larva teripang pasir sangat diperlukan mengingat masih rendahnya tingkat kehidupan dan perkembangan larva teripang pasir. Tingkat kelulusan hidup teripang pasir (*Holothuria scabra*) masih tergolong kecil. Saat ini teripang sudah mulai dibudidayakan mengingat populasi di alam jumlahnya setiap hari semakin sedikit. Penelitian ini bertujuan untuk mengetahui pengaruh salinitas yang berbeda terhadap embriogenesis dan tingkat penetasan telur (*hatching rate*) teripang pasir dan mengetahui serta menganalisa salinitas yang tepat terhadap optimalisasi embriogenesis dan tingkat penetasan telur (*hatching rate*) teripang pasir berdasarkan data penelitian yang sudah didapatkan. Sedangkan manfaat dari penelitian ini adalah memberikan informasi kepada pembudidaya tentang pengaruh salinitas terhadap embriogenesis dan tingkat penetasan telur (*hatching rate*) teripang pasir. Parameter lingkungan yang diuji pada penelitian ini terdiri dari tiga salinitas yang berbeda yaitu 30, 32, 34 ppt. Metode penelitian menggunakan metode rancangan acak lengkap (RAL) menggunakan 3 percobaan dengan tiga kali pengulangan pada masing-masing perlakuan. Analisis data dilakukan secara deskriptif untuk data parameter penelitian perkembangan telur dan kualitas air. Sedangkan data tingkat penetasan telur ditabulasi menggunakan Microsoft Excel dan dilakukan uji statistik dengan melakukan uji sidik ragam (ANOVA) menggunakan SPSS versi 16. Jika data berbeda signifikan maka dilakukan uji lanjut Duncan.

Hasil penelitian ini menunjukkan bahwa embriogenesis dan metamorfosis serta *hatching rate* diketahui pada perlakuan C (salinitas 34 ppt) berpengaruh terhadap embriogenesis dan metamorfosis larva teripang pasir. Secara deskriptif perlakuan C (salinitas 34 ppt) menunjukkan hasil terbaik bila dibandingkan dengan perlakuan A (salinitas 30 ppt) dan perlakuan B (salinitas 32 ppt). Tingkat penetasan telur tertinggi terdapat pada perlakuan C (salinitas 34 ppt) yaitu sebesar $51.11 \pm 3.47b$, Hasil ini berbeda nyata dengan perlakuan A (salinitas 30 ppt) sebesar $23.89 \pm 2.55a$ dan berbeda nyata juga dengan perlakuan (salinitas 32 ppt) sebesar $28.33 \pm 5.00a$. Data perlakuan A (Salinitas 30 ppt) tidak berbeda nyata dengan perlakuan B (salinitas 32 ppt).

Kata kunci: Embriogenesis, Metamorfosis, Salinitas, Teripang Pasir.

SUMMARY

PRAMUDITA AMANDA Embryogenesis, *Hatching rate* and Metamorphosis of Sand Sea Cucumber (*Holothuria Scabra*) Larvae at Different Salinities Supervised by SHAVIKA MIRANTI and MUZAHAR.

Giving different salinity to the live development of sand sea cucumber larvae is very necessary considering the low level of life and development of sand sea cucumber larvae. The survival rate of the sand sea cucumber (*Holothuria scabra*) is still relatively small. Currently, sea cucumbers have begun to be cultivated considering that the population in nature is decreasing every day. This study aims to determine the effect of different salinity on embryogenesis and egg hatching rate (*hatching rate*) of sand sea cucumbers and determine and analyze the right salinity to optimize embryogenesis and *hatching rate* of sand sea cucumbers based on research data that has been obtained. Meanwhile, the benefit of this research is to provide information to farmers about the effect of salinity on embryogenesis and the *hatching rate* of sea cucumbers. The environmental parameters tested in this study consisted of three different salinities, namely 30, 32, 34 ppt. The research method used a completely randomized design method (CRD) using 3 trials with three repetitions for each treatment. Data analysis was carried out descriptively for research parameter data on egg development and water quality. Meanwhile, egg *hatching rate* data was tabulated using Microsoft Excel and statistical tests were carried out by performing a variance test (ANOVA) using SPSS version 16. If the data were significantly different, Duncan's further test was carried out.

The results of this study indicated that embryogenesis and metamorphosis as well as the *hatching rate* were known in treatment C (salinity 34 ppt) had an effect on the embryogenesis and metamorphosis of sand sea cucumber larvae. Descriptively, treatment C (salinity 34 ppt) showed the best results when compared to treatment A (salinity 30 ppt) and treatment B (salinity 32 ppt). The highest egg *hatching rate* was found in treatment C (salinity 34 ppt) which was $51.11 \pm 3.47b$. These results were significantly different from treatment A (salinity 30 ppt) of $23.89 \pm 2.55a$ and also significantly different from the treatment (salinity 32 ppt) of $28.33 \pm 5.00a$. Data for treatment A (salinity 30 ppt) were not significantly different from treatment B (salinity 32 ppt).

Keywords: Embryogenesis, Metamorphosis, Salinity, Sea Cucumber.