

**THE EFFECT OF VARIOUS LIGHTING CONDITION ON FEED
PREDATION AND SURVIVAL RATE OF MUD CRAB (*Scylla
olivacea*) LARVAE STADIUM ZOEA UNTIL MEGALOPA**

**PENGARUH BERBAGAI KONDISI PENCAHAYAAN TERHADAP
LAJU PEMANGSAAN PAKAN DAN SINTASAN LARVA
KEPITING BAKAU (*Scylla olivacea*) STADIA ZOEA SAMPAI
MEGALOPA**

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Abstract

Mangrove crab is one of the important economically aquatic and have been cultivated commercially in many tropical countries. This study aimed to analyze the influence of different lighting conditions on the feeding predation rate and survival rate of mud crab (*Scylla olivacea*) larvae. The research was carried out in the Center of Brackish Water Aquaculture, Takalar Regency, South Sulawesi Province for 30 days. Research using completely randomized design with 3 treatments and lighting conditions each 3 replicates. Treatment consists of an open light conditions (TT), half open (ST), and close (TB). Data were analyzed using analysis of variance and Tukey test used to determine differences between treatments. The results of analysis of variance showed that the lighting condition was highly significant ($p < 0.01$) in the feeding predation rate and survival rate of mud crab (*S. olivacea*) larvae stadia zoea to megalopa. The highest of feeding predation rate and survival rate was half lighting conditions ie 65.46 and 18.32%, while the lowest in the close condition ie 7.38 and 38.56%.

Key word: crab larvae, light, feed predation, survival rate

Abstrak

Kepiting bakau merupakan salah satu biota perairan bernilai ekonomis penting dan telah dibudidayakan secara komersial di beberapa negara tropis. Penelitian ini bertujuan untuk menganalisis pengaruh berbagai kondisi pencahayaan terhadap laju pemangsaan pakan dan sintasan larva kepiting bakau (*Scylla olivacea*). Penelitian dilaksanakan di Balai budidaya Air Payau, Kabupaten Takalar, Propinsi Sulawesi Selatan selama 30 hari. Penelitian menggunakan rancangan acak lengkap dengan 3 perlakuan kondisi pencahayaan dan masing-masing 3 ulangan. Perlakuan terdiri atas kondisi cahaya terbuka (TT), setengah terbuka (ST), dan tertutup (TB). Data dianalisis dengan menggunakan analisis ragam dan uji Tukey digunakan untuk mengetahui perbedaan antar perlakuan. Hasil analisis ragam memperlihatkan bahwa kondisi pencahayaan berpengaruh sangat nyata ($p < 0,01$) pada laju pemangsaan pakan dan sintasan larva kepiting bakau (*S. olivacea*) stadia zoea sampai megalopa. Laju pemangsaan pakan dan sintasan tertinggi dihasilkan pada kondisi pencahayaan setengah terbuka yakni 65,46 dan 18,32%, sedangkan terendah pada kondisi terbuka yakni 7,38 dan 38,56%.

Kata kunci : larva kepiting, cahaya, pemangsaan pakan, sintasan