

## ABSTRAK

### PERBANDINGAN LAJU PERTUMBUHAN DAN TINGKAT KELANGSUNGAN HIDUP KARANG TRANSPLANTASI (*Acropora sp.*) MENGGUNAKAN DUA METODE DAN LOKASI YANG BERBEDA DI KAB. PESAWARAN, LAMPUNG.

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Terumbu karang merupakan ekosistem laut penting yang memiliki fungsi ekologis, sosial, dan ekonomi, namun mengalami degradasi akibat faktor alam dan aktivitas antropogenik. Salah satu upaya rehabilitasi adalah transplantasi karang menggunakan struktur buatan. Penelitian ini bertujuan untuk membandingkan laju pertumbuhan dan tingkat kelangsungan hidup karang transplantasi (*Acropora sp.*) pada dua media dan lokasi berbeda, yaitu rusun ikan di Pulau Balak dan rak besi di Pulau Pahawang, Kabupaten Pesawaran, Lampung. Penelitian dilakukan selama 4 bulan di masing-masing lokasi dengan pengamatan bulanan terhadap panjang, lebar, diameter, dan *survival rate* (SR). Hasil penelitian menunjukkan pertumbuhan karang pada media rak besi lebih tinggi dibandingkan rusun ikan, dengan rata-rata pertumbuhan panjang masing-masing sebesar 1,03 cm/bulan dan 0,88 cm/bulan. Nilai SR pada rak besi (83,33%) juga lebih tinggi dibandingkan rusun ikan (62,50%). Hasil uji *independen sample t-test* menunjukkan bahwa perbedaan pertumbuhan antara kedua media bersifat signifikan ( $p < 0,05$ ). Perbedaan ini dipengaruhi oleh faktor lingkungan seperti kedalaman dan intensitas cahaya, serta faktor teknis dan biotik. Dengan demikian, media rak besi lebih efektif dalam mendukung pertumbuhan dan kelangsungan hidup karang transplantasi.

**Kata kunci:** terumbu karang, *Acropora sp.*, transplantasi, rusun ikan, rak besi, pertumbuhan, kelangsungan hidup

## **ABTRACTS**

### ***Comparison of Growth Rate and Survival Rate of Transplanted Coral (*Acropora* sp.) Using Two Different Methods and Locations in Pesawaran Regency, Lampung.***

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*Coral reefs are important marine ecosystems with ecological, social, and economic functions; however, they are increasingly degraded due to natural factors and anthropogenic activities. One of the rehabilitation efforts is coral transplantation using artificial structures. This study aimed to compare the growth rate and survival rate of transplanted corals (*Acropora* sp.) using two different substrates and locations, namely fish apartments (rusun ikan) at Balak Island and iron racks at Pahawang Island, Pesawaran Regency, Lampung. The study was conducted over four months at each site, with monthly observations of length, width, diameter, and survival rate (SR). The results showed that coral growth on iron rack media was higher than on fish apartment media, with average growth rates in length of 1.03 cm/month and 0.88 cm/month, respectively. The survival rate on iron racks (83.33%) was also higher than that on fish apartments (62.50%). The independent sample t-test indicated that the difference in growth between the two media was statistically significant ( $p < 0.05$ ). These differences were influenced by environmental factors such as depth and light intensity, as well as technical and biotic factors. Therefore, iron rack media are more effective in supporting the growth and survival of transplanted corals.*

**Keywords:** *Acropora* sp., artificial reef, coral reefs, growth rate, iron racks, survival rate, transplantation.