

Nanda Teguh Junianto NIM 210341100024. Hubungan Persentase Tutupan Karang Keras (Scleractinia) Dan Karang Lunak (Alcyonacea) Di Perairan Bangsring Underwater Dan Pulau Tabuhan, Banyuwangi. Pembimbing **Wahyu Andy Nugraha, S.T., M.Sc., Ph.D.**

ABSTRAK

Indonesia memiliki ekosistem terumbu karang yang sangat kaya dan menjadi habitat penting bagi berbagai biota laut. Penelitian ini bertujuan untuk menganalisis hubungan antara persentase tutupan karang keras (Scleractinia) dan karang lunak (Alcyonacea) di dua lokasi berbeda, yaitu perairan Bangsring Underwater dan Pulau Tabuhan, Banyuwangi. Metode yang digunakan adalah Underwater Photo Transect (UPT) pada dua kedalaman berbeda di masing-masing lokasi, yaitu 3–5 meter dan 7–10 meter. Analisis dilakukan dengan perangkat lunak CPCe untuk menghitung persentase tutupan, komposisi genera, serta struktur komunitas (indeks keanekaragaman, keseragaman, dan dominansi). Hasil menunjukkan bahwa Pulau Tabuhan memiliki persentase tutupan karang hidup yang sangat baik (87,87%–88,60%), sementara Bangsring memiliki tutupan sedang (39,87%–48,13%). Komposisi genera karang di Pulau Tabuhan didominasi oleh karang keras, sedangkan di Bangsring lebih banyak ditemukan karang lunak. Analisis korelasi Pearson menunjukkan hubungan negatif antara persentase karang keras dan karang lunak, yang mengindikasikan adanya kompetisi spasial di antara keduanya. Temuan ini menunjukkan bahwa perbedaan tekanan antropogenik memengaruhi dominansi jenis karang di suatu wilayah, sehingga penting untuk mempertimbangkan interaksi antar-komponen ekosistem dalam upaya konservasi dan pengelolaan terumbu karang secara berkelanjutan.

Kata kunci: Terumbu Karang, Karang Keras, Karang Lunak, Persentase Tutupan

Nanda Teguh Junianto NIM 210341100024. *The Relationship Between the Percentage Cover of Hard Corals (Scleractinia) and Soft Corals (Alcyonacea) in the Waters of Bangsring Underwater and Tabuhan Island, Banyuwangi.* Thesis Supervisor **Wahyu Andy Nugraha, S.T., M.Sc., Ph.D.**

ABSTRACT

Indonesia hosts an exceptionally rich coral reef ecosystem that serves as a vital habitat for various marine organisms. This study aims to analyze the relationship between the percentage cover of hard corals (Scleractinia) and soft corals (Alcyonacea) in two distinct locations: Bangsring Underwater and Tabuhan Island, Banyuwangi. The research employed the Underwater Photo Transect (UPT) method at two depth zones (3–5 meters and 7–10 meters) in each location. Data were processed using CPCe software to determine percentage cover, genus composition, and community structure indices (diversity, evenness, and dominance). Results showed that Tabuhan Island had a very high percentage of live coral cover (87.87%–88.60%), whereas Bangsring exhibited moderate cover (39.87%–48.13%). Hard corals dominated in Tabuhan Island, while soft corals were more prevalent in Bangsring. Pearson correlation analysis revealed a negative relationship between the percentage of hard and soft coral cover, suggesting spatial competition between the two groups. These findings indicate that differing levels of anthropogenic pressure influence coral composition, highlighting the importance of considering interspecies interactions in coral reef conservation and management efforts.

Keywords: Coral Reef, Hard Coral, Soft Coral, Cover Percentage