

## Struktur komunitas dan pola sebaran polychaeta di hutan Mangrove, perairan Teluk Kotania, Seram Barat

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### Abstrak

Penelitian mengenai Polychaeta di hutan mangrove, perairan Teluk Kotania, Seram Barat telah dilakukan pada bulan Februari 1996. Dari sampel yang telah dikumpulkan diketahui bahwa di lokasi Teluk Kotania terdapat 40 jenis Polychaeta yang digolongkan ke dalam 36 marga dan 13 suku. Dua jenis di antaranya mempunyai frekwensi kehadiran yang tinggi yaitu Pulliella sp dan Armandia intermedia masing-masing (89%). Rata-rata kepadatan individu Polychaeta di lima lokasi berkisar antara 12.102 individu/m<sup>3</sup> - 21.307 individu/m<sup>3</sup>, keanekaragaman jenis berkisar antara 2,44 - 3,78 dan kemerataan jenis berkisar antara 0,56 - 0,78. Nilai indeks keanekaragaman dan kemerataan jenis di lima lokasi penelitian sangat ditentukan oleh kontribusi Pulliella sp dan Armandia intermedia. Hasil pengukuran terhadap faktor fisik lingkungan diperoleh kisaran nilai rata-rata salinitas 22,50/00 - 27°100; suhu 29,5°C - 31°C dan pH 7,8 - 8,4. Sedangkan hasil analisis terhadap tekstur sedimen menunjukkan bahwa umumnya lokasi penelitian bersubstrat pasir sangat kasar, kecuali Pulau Burung didominasi oleh pasir sedang. Hasil analisis cluster dan analisis diskriminan di lima lokasi membentuk dua kelompok. Kelompok I terdiri atas Pulau Tatumbu dan Pulau Burung, sedangkan kelompok II terdiri dari Pelita Jaya 2, Pulau Buntal, dan Pelita Jaya I. Pengelompokan tersebut berdasarkan kepadatan jenis dan substrat. Janis Polychaeta yang menyebar pada jarak 0 - 45 m adalah Armandia intermedia, Pulliella sp dan Aphelia sp. Hasil analisis koresponden mendapatkan bahwa pengelompokan terbentuk berdasarkan kepadatan dan spesifikasi jenis di lokasi tertentu.

<hr><i>Polychaeta is a group of invertebrates which is important in the marine food chain, particularly for demersal fishes, shrimps, and crabs. Polychaeta lives in various habitats, in muddy, sandy, and stony bottoms. Information about Polychaeta in Indonesian waters, especially in Maluku waters, has not yet been known well. Based on those fact, a research on the community structure and distribution of Polychaeta of mangrove forest in the waters of Kotania Bay was conducted in February 1996. Samples were collected from five stations using a transect method. The aim of the study was to find out the relationship of Polychaeta community structure with the environmental factors in Kotania Bay. The distribution of Polychaeta of mangrove forest in Kotania Bay was also studied. Hopefully, the results of this study can be used as basic information for futher research. During the study, 40 species of Polychaeta belonging to 36 genera of 13 families were collected from the locality. Two species showed high frequency of occurrence (89%), i.e. Pa/lie/la sp and Armandia infermedia. This indicated that the two species were common and distributed more widely than the others. The highest' density of Polychaeta was in Burung Island (21.307 indlm<sup>3</sup>) and the lowest was in Pelita Jaya 1 (12.102.ind/m<sup>3</sup>). The highest density of Polychaeta in Burung Island was mainly due to the highest density of Pulliella sp, Armandia intermedia, and A. lepfocirrus. The highest diversity and evenness indeces of Polychaeta species were found in Buntal island. Tatumbu Island and Burung Island had the highest similarity index. The water conditions of Kotania Bay showed that salinity ranged from 22,5°100 to 27°1°0, temperature ranged from 29,5°C to 31°C, and pH varied between 7,8 and 8,4. Substrates mostly contained sand with the very high percentage of very coarse sand. Cluster

analysis divided the five station into two groups : Group 1, defined by Tatumbu Island and Burung Island, and Group II, defined by Pelita Jaya 2, Buntal Island, and Pelita Jaya 1. Discriminant analysis also divided the stations into two groups. Medium sand in the substrat was responsible in separating the five stations into two different communities. Factorial Correspondence Analysis (CA) classified the species of Polychaeta into four group based on species densities and specification of species in the location.</i>