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# Struktur komunitas dan sebaran spasial bivalvia hubungannya dengan karakteristik lingkungan di Teluk Kotania, Seram Karat, Maluku Tengah

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Abstrak

Telah dilakukan penelitian mengenai struktur komunitas dan sebaran spasial Bivalvia serta hubungannya dengan karakteristik lingkungan di Teluk Katania, Seram Barat, Maluku Tengah. Ada 5 stasiun penelitian yaitu : Pelita Jaya 1, Pelita Jaya 2, Pulau Buntal, Pulau Tatumbu, dan Pulau Burung. Anadara maculafa merupakan jenis Bivalvia yang kepadatannya tertinggi (2,5 individu/m2). Nilai H' (indeks keanekaragaman) Bivalvia tertinggi ada di Pulau Burung (H' = 0,958) dan terendah di Pulau Buntal (H' = 0,624). Indeks kemerataan J' tertinggi (J' = 0,843) terdapat di Pelita Jaya 1. indeks kesamaan Morisita C tertinggi adalah antara Pelita Jaya 2 dan Pulau Buntal (C = 0,92). Kondisi substrat di Pelita Jaya 2 dan Pulau Buntal mempunyai persentase Lumpur yang tinggi. Dengan analisis cluster, 5 stasiun penelitian terbagi menjadi 2 kelompok. Kelompok I terdiri atas stasiun Pelita Jaya 2 dan Pulau Buntal kemudian kelompok II terdiri atas Pelita Jayal, Pulau Tatumbu, dan Pulau Burung. Analisis diskriminan dengan faktor lingkungan substrat pasir halus dan lumpur juga membagi kelima stasiun menjadi dua kelompok yang sama seperti pada analisis cluster. Substrat lumpur mempunyai kontribusi yang tinggi (96,3 %). Tellina sp merupakan jenis yang penyebarannya luas sebab selalu hadir di setiap stasiun penelitian. Hasil analisis faktorial koresponden membentuk enam kelompok. Penyebaran spasial jenis jenis Bivalvia di 5 stasiun dari hasil analisis tersebut berdasarkan pada kepadatan tertinggi dari jenis jenis tertentu (lima kelompok) dan berdasarkan jenis-jenis yang selalu hadir di setiap stasiun (satu kelompok).

.....Bivalvia, also known as Pelecypoda, is the second largest class in phylum Mollusca. This group has 28.000 species (Barth & Broshear, 1982) and about 1000 species of Bivalvia live in Indonesian waters (Nontji, 1987). Information about Bivalvia in Kotania Bay has not been known well. Based on those fact, a research on the community structure and spatial distribution of Bivalve in the waters of Kotania Bay was conducted in February 1996. The aim of study was to find out the relationship between Bivalvia community structure with environmental factors in the waters of Kotania Bay. The spatial distribution of Bivalvia in several small islands in Kotania Bay was also studied. Hopefully, the results can be used as basic information for father research.

The research was conducted in five stations, i.e. Pelita Jaya 1, Pelita Jaya 2, Buntal Island, Tatumbu Island, and Burung Island. The sampling method used in the study was belt transact. The water conditions measured were water temperature, salinity, and pH. The substrates were characterized by the sediment fractions. Temperatures in the research stations ranged between 29.5°C and 31 °C, the range of pH is between 7 and 8.4. Water salinities in the research stations varied between 22 % and 30 %. Substrates in the research stations mostly contained sand with the very high percentage of very coarse sand. Silt was the smallest fraction found in the substrate.

In five research stations, 32 species of Bivalvia belonging to 15 families were collected. Anadara maculata had the highest density (2.5 individulm2) of all Bivalvia species found. The highest H' value (diversity index) of Bivalvia was in Burung Island (H' = 0.958) and the lowest was in Buntal Island (H' = 0.624). The

highest evenness index J' = 0.843 was found in Pelita Jaya 1. The highest similarity index was shown by Pelita Jaya 2 and Buntal Island. Substrates in Pelita Jaya 2 and Buntal Island were dominated by silt. Cluster analysis at five research stations divided the stations into two groups. Group I, defined by Pelita Jaya 2 and Buntal Island. Group ii, defined by Pelita Jaya 1, Tatumbu Island, and Burung Island. Discriminant analysis based on two environmental factors, i.e. very fine sand and silts, also divided the stations into two similar groups as cluster analysis did. The silt factor had high contribution (96.3%) in separating the stations.

Factorial correspondence analysis classified the species of Bivalvia into six groups. Based on the highest density of the certain species (five groups) and on the common species found in all stations (one group). Among the species collected Tellina sp was the common species found in the five stations. Spondylus squamosus, Trachydarium subrugosum, and Vulsella vulsella were found only in Pelita Jaya 2. Pitar subpellucidus, Septifer hi/ocular-is, Fimbria fmbriata and Chama pacifica were found only in Burung island. The species of Bivalvia only found in Pelita Jaya 1 were Atrina vexillum, Tellina staurella, Chama ruderalis, Limaria fragilis, and Clycymeris pectunculus.