ABSTRAK

KUALITAS PERAIRAN SUNGAI BRONJONG KECAMATAN GEDONG TATAAN, KABUPATEN PESAWARAN, BERDASARKAN KOMUNITAS MAKROZOOBENTOS

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Sungai Bronjong merupakan salah satu sungai yang digunakan untuk kegiatan sehari-hari dan wisata air. Berbagai limbah yang dihasilkan dari aktivitas masyarakat yang dibuang secara langsung ke sungai akan menyebabkan penurunan kualitas air sungai. Tujuan dari penelitian ini yaitu menganalisis struktur komunitas makrozoobentos, menganalisis kualitas air berdasarkan struktur komunitas makrozoobentos dan menganalisis hubungan antar parameter kualitas air dan kelimpahan makrozoobentos di Sungai Bronjong, Pesawaran. Penelitian ini dilaksanakan pada bulan Februari-Maret 2024 di aliran Sungai Bronjong, Kecamatan Gedong Tataan, Kabupaten Pesawaran. Analisis data yang digunakan *family biotic index* (FBI), *stream invertebrate grade number average level 2* (SIGNAL 2) dan *principal component analysis* (PCA). Hasil penelitian didapatkan 4 kelas makrozoobentos yaitu Insekta, Krustasea, Gastropoda, dan Oligochaeta yang ditemukan di lokasi tersebut. Jenis yang paling banyak ditemui berasal dari kelas Gastropoda. Nilai indeks keanekaragaman berkisar antara 0,83-2,34 (sedang), indeks keseragaman berkisar antara 0,54-0,89 (tinggi) dan indeks dominansi berkisar antara 0,12-0,57 (rendah). Kelimpahan makrozoobentos di Sungai Bronjong memiliki korelasi positif terhadap pH, DO, BOT, TSS, dan berkorelasi negatif dengan suhu, kecerahan dan kedalaman. Hasil FBI dan SIGNAL 2 menunjukan kondisi sungai pada stasiun 1 masuk ke dalam kategori baik, stasiun 2 masuk ke dalam kategori sedang, serta kondisi stasiun 3 masuk dalam kategori sedang.

Kata kunci: Makrozoobentos, kelimpahan, FBI, SIGNAL 2

ABSTRACT

THE WATER QUALITY OF BRONJONG RIVER, GEDONG TATAAN DISTRICT, PESAWARAN DISTRICT, BASED ON MACROZOOBENTOS COMMUNITIES

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The Bronjong River is one of the rivers used for daily activities and water tourism. Various wastes generated from human activities that are dumped directly into the river will cause a decrease in river water quality. The purposes of this study were to analyze the structure of the macrozoobentos community, analyze water quality based on the structure of the macrozoobentos community, and analyze the relationship between water quality parameters and the abundance of macrozoobentos in the Bronjong River, Pesawaran. The research was carried out in February-March 2024 in the flow of the Bronjong River, Gedong Tataan District, Pesawaran Regency. Data were analyzed using family biotic index (FBI), stream invertebrate grade number average level 2 (SIGNAL 2) and principal component analysis (PCA). The results of the study showed that there were 4 classes of macrozoobentos, namely Insect, Crustacean, Gastropods, and Oligochaeta found in the location. The most common species came from the class of Gastropoda. The diversity index value ranged from 0.83-2.34 (moderate), the uniformity index ranged from 0.54-0.89 (high) and the dominance index ranged from 0.12-0.57 (low). The abundance of macrozoobentos in the Bronjong River had a positive correlation with pH, DO, BOT, TSS, and negatively correlated with temperature, brightness and depth. The results of FBI and SIGNAL 2 showed that the condition of the river at station 1 was in the good category, station 2 was in the medium category, and the condition of station 3 was in the medium category.

Keywords: Macrozoobenthos, abundance, FBI, SIGNAL 2