

ABSTRAK

Alfa Sahaya, NIM 4202520001 (2020). Keanekaragaman Zooplankton di Muara Sungai Belumai Kecamatan Pantai Labu Kabupaten Deli Serdang.

Sungai merupakan ekosistem penting yang mendukung berbagai aktivitas manusia, namun intensitas aktivitas tersebut berpotensi menimbulkan pencemaran, terutama di wilayah muara. Untuk memantau kualitas perairan, zooplankton dapat digunakan sebagai bioindikator karena sensitif terhadap perubahan lingkungan. Penelitian ini bertujuan untuk mengetahui tingkat keanekaragaman, nilai kelimpahan dan tingkat dominansi zooplankton di Muara Sungai Belumai, Kecamatan Pantai Labu, Kabupaten Deli Serdang serta hubungan dengan parameter fisika-kimia perairan. Penelitian berlangsung pada bulan Juli-September 2024 di lima stasiun dengan metode *purposive sampling* dengan tiga kali ulangan, dan analisis dilakukan di Laboratorium Biologi FMIPA UNIMED. Hasil penelitian menunjukkan zooplankton terdiri dari 28 genus. Tingkat keanekaragaman tergolong sedang bernilai 2,5. Nilai kelimpahan tergolong mesotrofik bernilai 8,2 Ind/L. Tingkat dominansi tergolong sedang bernilai 0,11. Parameter fisika-kimia perairan menunjukkan suhu perairan $29\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$, kecerahan perairan $42,4\text{ cm} \pm 1,673\text{ cm}$, kecepatan arus perairan $0,112\text{ m/s} \pm 0,035\text{ m/s}$, pH perairan $6,924 \pm 0,087$, DO perairan $1,27\text{ mg/L} \pm 0,275\text{ mg/L}$ dan BOD perairan $3,926\text{ mg/L} \pm 2,128\text{ mg/L}$. Berdasarkan hubungan antara zooplankton dan parameter fisika-kimia, dapat disimpulkan bahwa perairan Muara Sungai Belumai tergolong dalam kategori tercemar sedang.

Kata Kunci: Zooplankton, Bioindikator, Keanekaragaman, Kualitas Perairan, Muara Sungai Belumai.



ABSTRACT

Alfa Sahaya, NIM 4202520001 (2020), Diversity of Zooplankton in the Estuary of Belumai River Pantai Labu District Deli Serdang Regency.

Rivers are vital ecosystems that support various human activities; however, the intensity of these activities has the potential to cause pollution, particularly in estuarine areas. To monitor water quality, zooplankton can be used as bioindicators due to their sensitivity to environmental changes. This study aims to determine the diversity level, abundance value, and dominance level of zooplankton in the Belumai River Estuary, Pantai Labu District, Deli Serdang Regency, as well as their relationship with the physicochemical parameters of the waters. The research was conducted from July to September 2024 at five stations using purposive sampling with three replications, and the analysis was carried out at the Biology Laboratory of the Faculty of Mathematics and Natural Sciences, UNIMED. The results showed that the zooplankton consisted of 28 genera. The diversity level was moderate with a value of 2,5. The abundance value was categorized as mesotrophic with a value of 8,2 Ind/L. The dominance level was moderate with a value of 0,11. The physicochemical parameters of the water showed a temperature of $29\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$, water transparency of $42,4\text{ cm} \pm 1,673\text{ cm}$, current velocity of $0,112\text{ m/s} \pm 0,035\text{ m/s}$, pH of $6,924 \pm 0,087$, dissolved oxygen (DO) of $1,27\text{ mg/L} \pm 0,275\text{ mg/L}$, and biochemical oxygen demand (BOD) of $3,926\text{ mg/L} \pm 2,128\text{ mg/L}$. Based on the relationship between zooplankton and physicochemical parameters, it can be concluded that the waters of the Belumai River Estuary fall into the moderately polluted category.

Keywords: Zooplankton, Bioindicator, Diversity, Water Quality, Belumai River Estuary.