



KEANEKARAGAMAN MAKROZOOBENTOS SEBAGAI BIOINDIKATOR KUALITAS PERAIRAN SUNGAI BEDOG YOGYAKARTA

Intisari

Sungai Bedog merupakan salah satu sungai yang berada di Daerah Istimewa Yogyakarta yang melewati Kabupaten Sleman dan Kabupaten Bantul. Penelitian ini bertujuan untuk mengetahui keanekaragaman dan kelimpahan makrozoobentos serta mengetahui kualitas air di Sungai Bedog. Penelitian ini dilaksanakan pada bulan September – Oktober 2020 di Sungai Bedog. Pengambilan data dilakukan sebanyak 8 kali di 6 stasiun. Sampel makrozoobentos diperoleh dengan menggunakan *Surber net*, kemudian diawetkan menggunakan formalin 4%. Indeks ekologi yang dianalisis antara lain kelimpahan makrozoobentos, keanekaragaman, dominansi, dan pemerataan. Data kualitas air yang diukur meliputi suhu air, kecepatan arus, padatan tersuspensi (TSS), kedalaman, pH, oksigen terlarut, karbon dioksida bebas, dan bahan organik. Hasil penelitian didapatkan sebanyak 26 spesies dengan kelimpahan makrozoobentos berkisar antara 42–521 individu/m². Spesies yang paling banyak ditemukan yaitu *Sulcospira testudinaria*. Substrat pada keenam stasiun terdiri dari bebatuan, berpasir, dan berlumpur; suhu air berkisar antara 27,71–28,63°C; kecepatan arus 0,61–0,7 m/detik; TSS 282,08–290,42 mg/L; dan kedalaman sungai 15,37–24,74 cm. Hasil pengukuran pH berkisar antara 6,27–6,6; oksigen terlarut 4–6,61 ppm; karbon dioksida bebas 8,67–12,13 ppm; dan bahan organik 4,74–16,57 ppm. Indeks keanekaragaman makrozoobentos diperoleh 1,28 dengan kategori sedang. Kondisi perairan Sungai Bedog memiliki ekosistem seimbang dengan tekanan ekologi sedang. Parameter kualitas air mempengaruhi kelimpahan makrozoobentos.

Kata kunci: keanekaragaman, kelimpahan, makrozoobentos, Sungai Bedog



MACROZOOBENTHOS BIODIVERSITY AS BIOINDICATOR OF WATER QUALITY IN BEDOG RIVER YOGYAKARTA

Abstract

Bedog River was located in Special Region of Yogyakarta that passes through the Sleman Regency and Bantul Regency. This research aimed to know the diversity and abundance of macrozoobenthos and to know water quality in Bedog River. This research was conducted during September – October 2020 in Bedog River. Data were collected eight times in 6 stations. Macrozoobenthos samples were collected using Surber net, then preserved using formalin 4%. Ecological indexes analyzed were macrozoobenthos abundance, diversity, dominance, and evenness. Water quality measured were water temperature, flow velocity, Total Suspended Solid (TSS), river depth, pH, dissolved oxygen, free carbon dioxide, and organic matter. The results showed 26 species with macrozoobenthos abundance ranged from 42–521 individual/m². The macrozoobenthos that commonly found was *Sulcospira testudinaria*. Substrate type at six stations consist of rocks, sand, and mud; water temperature ranged from 27.71–28.63°C; flow velocity 0.61–0.7 m/second; TSS 282.08–290.42 mg/L; and river depth 15.37–24.74 cm. Result measured of pH ranged from 6.27–6.6; dissolved oxygen 4–6.61 ppm; free carbondioxide 8.67–12.13 ppm; and organic matter 4.74–16.57 ppm. The diversity of macrozoobenthos was 1.28 with a moderate category. The water conditions of Bedog River have a balanced ecosystem with moderate ecological pressure. Water quality parameter affect the abundance of macrozoobenthos.

Key words: abundance, Bedog River, diversity, macrozoobenthos