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Keanekaragaman Jenis Makrobentos di Sungai Winongo Kota Yogyakarta
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Intisari

KEANEKARAGAMAN JENIS MAKROBENTOS
DI SUNGAI WINONGO KOTA YOGYAKARTA

Sungai Winongo merupakan sungai yang berhulu di lereng Gungung Merapi dan bermuara di Sungai Opak. Sungai yang terletak di Daerah Istimewa Yogyakarta tersebut melalui wilayah Kabupaten Sleman, Kota Yogyakarta, dan Kabupaten Bantul. Tujuan penelitian ini yaitu untuk mengetahui keanekaragaman jenis makrobentos serta mengetahui kualitas air Sungai Winongo khususnya yang berada di wilayah Kota Yogyakarta. Penelitian dilakukan pada bulan November 2023 hingga Januari 2024 di aliran Sungai Winongo di stasiun, dengan pengambilan sampel makrobentos dan pengukuran kualitas air sebanyak 8 kali ulangan. Sampel makrobentos diambil dengan menggunakan *surber net* dan diawetkan dengan larutan formalin 4%. Kualitas air yang diamati dan diukur yaitu tipe substrat, suhu air, kecepatan arus, kedalaman, pH, kandungan oksigen terlarut, dan kandungan bahan organik. Hasil penelitian menunjukkan di Sungai Winongo Kota Yogyakarta terdapat 17 spesies makrobentos dengan total sejumlah 2.754 individu, jumlah individu terbanyak yang ditemukan *Sulcospira testudinaria* sejumlah 715 individu dan paling sedikit *Palaemonetes paludosus* sejumlah 3 individu. Rerata kerapatan jenis makrobentos 512 individu/m^2, indeks keanekaragaman 1,04 (termasuk keanekaragaman sedang), indeks dominansi 0,53 (termasuk dominansi sedang), dan indeks kemerataan 0,54 (termasuk kemertaan sedang, komunitas stabil). Hasil penelitian juga menunjukkan bahwa Sungai Winongo Kota Yogyakarta memiliki tipe substrat campuran antara berpasir, berbatu, berkerikil, dan berlumpur, rerata suhu air 27,7^oC, kecepatan arus 0,42 m/dt, kedalaman 22 cm, kandungan oksigen terlarut 4,0 mg/l, dan kandungan bahan organik 9,86 mg/l.

Kata kunci: keanekaragaman, jenis, kualitas air, makrobentos, Sungai Winongo

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Abstract

DIVERSITY SPECIES OF MACROBENTHOS
IN WINONGO RIVER, YOGYAKARTA CITY

The Winongo River originates on the slopes of Mount Merapi and eventually discharges into the Opak River. Located in the Special Region of Yogyakarta, Indonesia, the river passes through Sleman Regency, Yogyakarta City, and Bantul Regency. This study aims to determine the diversity species of macrobenthos communities and to evaluate the water quality of the Winongo River, with a particular focus on the section flowing through Yogyakarta City. The study was conducted from November 2023 to January 2024 in the Winongo River at designated monitoring stations. Macrobenthos sampling and water quality measurements were carried out on eight sampling occasions. Macrobenthos samples were collected using a Surber net and preserved in a 4% formalin solution for further analysis. The water quality parameters measured included substrate type, water temperature, current velocity, water depth, pH, dissolved oxygen, and organic matter content. The results showed that 17 species of macrobenthos organisms were identified in the Winongo River within Yogyakarta City, with a total abundance of 2,754 individuals. The most abundant species was *Sulcospira testudinaria* (715 individuals), whereas the least abundant was *Palaemonetes paludosus* (3 individuals). The average macrobenthos density was 512 individuals/m^2, the diversity index (H') was 1.04 (indicating moderate diversity), the dominance index (C) was 0.53 (indicating moderate dominance), and the evenness index (E) was 0.54 (indicating moderate evenness and a relatively stable community structure). The water quality assessment revealed that the Winongo River was characterized by a mixed substrate composed of sand, rocks, gravel, and mud. The average water temperature was 27.7°C, current velocity was 0.42 m/s, water depth was 22 cm, dissolved oxygen (DO) concentration was 4.0 mg/L, and organic matter content was 9.86 mg/L.

Keyword: diversity, species, water quality, macrobenthos, Winongo River