

Intisari

Suatu perairan dapat terjadi pencemaran bahan organik. Salah satu perairan yang rentan terjadi pencemaran bahan organik yaitu perairan mangrove. Penelitian ini bertujuan untuk mengetahui kandungan bahan organik, *Biochemical Oxygen Demand* (BOD), *Chemical Oxygen Demand* (COD), dan *Total Suspended Solid* (TSS), mengetahui tingkat pencemaran berdasarkan parameter tersebut, serta mengetahui komunitas zooplankton yang terdapat di perairan mangrove. Penelitian dilakukan di Taman Pesisir Mangrove Baros, Dusun Baros, Desa Tirtoharjo, Kecamatan Kretek, Kabupaten Bantul dari bulan Desember 2018-Februari 2019. Pengambilan sampel dilakukan setiap dua minggu sekali. Parameter yang diukur yaitu kandungan bahan organik total (*Total Organic Matter*/TOM), BOD, COD, TSS, suhu, salinitas, pH, dan zooplankton. Sampel air diambil sebanyak 600 mL menggunakan botol sampel untuk pengukuran kualitas air. Pengambilan sampel zooplankton dilakukan dengan menyaring 50 L air menggunakan jaring plankton no.25, dimasukkan ke dalam botol sampel 50 mL dan difiksasi menggunakan formalin 4%. Hasil penelitian menunjukkan bahwa kandungan bahan organik total berkisar 35,2-41,6 mg/L, BOD sebesar 3,1-6,0 mg/L, COD sebesar 22,1-32,3 mg/L, dan TSS bernilai 1,3-2,8 mg/L. Nilai suhu diperoleh 29,9-31,9°C, salinitas 9‰-17‰, dan pH 6-6,5. Tingkat pencemaran dihitung menggunakan metode Indeks Pencemaran dan diperoleh hasil Indeks Pencemaran 1,1-1,4 atau perairan masuk dalam kategori tercemar ringan. Komunitas zooplankton diperoleh 56 genera dengan kelimpahan 14.800-222.400 individu/m³ yang didominasi oleh Genus *Astramoeba*. Keanekaragaman zooplankton masuk dalam kategori rendah hingga sedang dengan rentang indeks 0,8-2,5.

Kata kunci : bahan organik, Baros, Indeks Pencemaran, mangrove, zooplankton

Abstract

Water can contaminate by organic matter. One of the waters susceptible to pollution of organic matter is mangrove waters. This study aims to determine the content of organic matter, Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), and Total Suspended Solid (TSS), determine the level of pollution based on these parameters, and determine the zooplankton community found in mangrove waters. The study was conducted in Baros Mangrove Coastal Park, Baros Subvillage, Tirtohargo Village, Kretek District, Bantul Regency from December 2018-February 2019. Sampling was conducted every two weeks. Parameters measured include total organic matter (TOM), BOD, COD, TSS, temperature, salinity, pH, and zooplankton. Water samples were taken as much as 600 mL using sample bottles for measuring water quality. Sampling of zooplankton was carried out by filtering 50 L of water using plankton nets no. 25 and then being put into bottles of 50 mL samples and fixed using 4% formalin. The results showed that the total organic matter content ranged from 35,2-41,6 mg/L, BOD₅ of 3,1-6,0 mg/L, COD of 22,1-32,3 mg/L, and TSS was 1,3-2,8 mg/L. Temperature values were obtained 29,9-31,9°C, salinity 9‰-17‰, and pH 6-6,5. Pollution levels are calculated using the Pollution Index method and the results of the Pollution Index of 1,1-1,4 are obtained or the waters fall into the lightly polluted category. The zooplankton community obtained 56 genera with an abundance of 14.800-222.400 individuals/m³ which was dominated by the Genus Astramoeba. Low to moderate zooplankton diversity with an index of 0,8-2,5.

Key word : Baros, mangrove, organic matter, Pollution Index, zooplankton