STRUKTUR KOMUNITAS FITOPLANKTON DI MUARA OPAK-OYO KABUPATEN BANTUL

Intisari

Penelitian ini bertujuan untuk mengetahui struktur komunitas fitoplankton di Muara Opak-Oyo Kabupaten Bantul. Penelitian dilaksanakan pada bulan FebruariAgustus 2019. Pengambilan sampel air dilakukan setiap bulan sekali di tiga stasiun yang berbeda. Sampel air diambil sebanyak 20 L dengan pemadatan sampel air 50 ml. fitoplankton yang diperoleh kemudian diidentifikasi sampai pada tingkat genus dengan menggunakan buku "*The Plankton of South Vietnam: Fresh Water and Marine Plankton by Dr. Akihiko Shirota*". Hasil pengamatan fitoplankton digunakan untuk menentukan kelimpahan, indeks keanekaragaman (H'), indeks keseragaman (E), dan indeks dominansi (D) fitoplankton. Parameter fisik-kimia yang diukur yaitu suhu, kecerahan air, oksigen terlarut (DO), salinitas, dan pH. Hasil penelitian menunjukkan bahwa fitoplankton yang ditemukan di Muara Opak-Oyo terdiri dari 7 kelas, 33 famili, dan 46 genus. Synedra merupakan fitoplankton paling dominan dengan kelimpahan rata-rata 10,83-410 sel/L. Sebagian besar fitoplankton yang ditemukan termasuk dalam kelas Bacillariophyceae (83,48%). Rata-rata kelimpahan fitoplankton per bulan mencapai 38,33-778,33 sel/L. Rata-rata kelimpahan fitoplankton tertinggi pada bulan Agustus dan terendah pada bulan Februari. Indeks keanekaragaman berkisar 0,96-1,66 tergolong rendah hingga sedang; indeks keseragaman berkisar 0,16-0,43 tergolong rendah, dan indeks dominansi berkisar 0,25-0,65 tergolong rendah hingga sedang.

Kata kunci: Bacillariophyceae, fotosintesis, kecerahan, Opak-Oyo, Synedra

THE STRUCTURE OF PHYTOPLANKTON COMMUNITIES IN OPAK-OYO ESTUARY BANTUL REGENCY

Abstract

The purpose of this study was to determine the structure of the phytoplankton community at Opak-Oyo Estuary, Bantul Regency. The research was conducted in February-August 2019. Water sampling was conducted once a month at three different stations. The water sample was taken as much as 20 L with the water sample compaction of 50 ml. The phytoplankton obtained were then identified at the genus level using the book "*The Plankton of South Vietnam: Fresh Water and Marine Plankton by Dr. Akihiko Shirota*". Samples were calculated abundance, the diversity index (H'), uniformity index (E), and phytoplankton dominance index (D). The physical-chemical parameters measured were temperature, water transparency, dissolved oxygen (DO), salinity, and pH. The results showed that the phytoplankton found in Opak-Oyo Estuary consisted of 7 classes, 33 families, and 46 genera. Synedra is the most dominant phytoplankton with an average abundance of 10.83-410 cells / L. Most of the phytoplankton found belonged to the Bacillariophyceae class (83.48%). The average abundance of phytoplankton per month was 38.33-778.33 cells / L. The highest phytoplankton abundance was in August and the lowest was in February. Diversity index ranges from 0.96-1.66 which are classified as low to moderate; The uniformity index ranges from 0.16-0.43 which is low, and the dominance index ranges from 0.25-0.65 which are low to moderate.

Keywords: Bacillariophyceae, Opak-Oyo, photosynthesis, Synedra, transparancy