

## Intisari

### STRUKTUR KOMUNITAS PLANKTON DI RAWA PENING PERIODE MARET-SEPTEMBER 2021

Rawa Pening adalah danau yang terletak di Kabupaten Semarang Provinsi Jawa Tengah dan mempunyai arti penting secara ekonomi, sosial budaya, dan lingkungan bagi masyarakat lokal. Tujuan dari penelitian ini adalah untuk mengetahui struktur komunitas plankton periode Maret-September 2021. Menginvestigasi struktur komunitas plankton di Rawa Pening merupakan salah satu cara untuk mengetahui kondisi lingkungan ekosistem air tawar tersebut. Pada penelitian ini variabilitas bulanan struktur komunitas plankton diteliti selama tujuh bulan (Maret-September 2021), sehingga diharapkan dapat diketahui variasi dan kondisi terkini kualitas air di Rawa Pening. Pengambilan sampel air dilakukan setiap bulan di lima stasiun, kemudian sampel plankton diidentifikasi dan dihitung nilai indeks ekologi. Hasil penelitian menunjukkan terdapat 19 genus fitoplankton dan 7 genus zooplankton di Rawa Pening, dengan genus fitoplankton yang mendominasi adalah *Aulacoseira*. Tingginya komposisi *Aulacoseira* mengindikasikan ekosistem akuatik Rawa Pening bersifat hipereutrofik. Lebih lanjut lagi, hasil analisis indeks ekologi plankton menunjukkan terdapat genus yang mendominasi pada kelompok fitoplankton dan zooplankton, sehingga menyebabkan komunitas plankton di Rawa Pening tidak seimbang.

Kata kunci: genus, komunitas plankton, kualitas air, nilai ekologis, Rawa Pening.

## Abstract

### PLANKTON COMMUNITY STRUCTURE IN RAWA PENING DURING MARCH-SEPTEMBER 2021

Lake Rawa Pening is a freshwater lake located in the Semarang Regency of Central Java Province. The lake is significant to the local economy, socioculture, and environment. The purpose of this study was to ascertain the plankton community structure in Lake Rawa Pening between March and September 2021. Investigating the plankton community structure enables the determination of the environmental conditions in a freshwater ecosystem. Monthly variability of plankton community structure from March to September 2021 was examined to better understand the variability and current state of water quality in Lake Rawa Pening. Each month, water samples were collected at five stations, and plankton were identified and their ecological index values were calculated. The results showed that there were 19 phytoplankton genera and 7 zooplankton genera in Lake Rawa Pening, with *Aulacoseira* being the most abundant phytoplankton genera. *Aulacoseira*'s high composition indicated that Lake Rawa Pening is hypereutrophic. Additionally, the analysis of the plankton ecology index revealed a dominant genus in both the phytoplankton and zooplankton groups, resulting in an imbalanced plankton community in Rawa Pening.

**Keywords:** ecological value, genera, plankton community, Rawa Pening, water quality.