

ABSTRAK

KEMELIMPAHAN CHIRONOMIDAE SEBAGAI BIOINDIKATOR KUALITAS AIR SUNGAI CODE

Larva Chironomidae merupakan salah satu benthik insekta yang digunakan sebagai bioindikator kualitas perairan. Penelitian ini bertujuan untuk mempelajari pengaruh kualitas air dan sedimen terhadap kemelimpahan larva Chironomidae di Sungai Code. Sungai Code merupakan salah satu sungai di Yogyakarta yang memiliki isu pencemaran. Perbedaan tata guna lahan yang terdapat di sepanjang Sungai Code dapat mempengaruhi input nutrient khususnya bahan organik ke dalam aliran sungai. Input bahan organik ke dalam aliran sungai direspon dengan kemelimpahan larva Chironomidae di setiap stasiun penelitian. Penelitian ini dilakukan pada Bulan Juli hingga bulan November 2022 dan dilakukan pada 5 stasiun penelitian yang mewakili daerah sebelum kota, daerah kota dan setelah kota dengan 3 kali ulangan. Pencuplikan sampel di lapangan dilakukan dengan alat *Surber Sampler* 30 x 30 cm² dan sampel diawetkan dengan formalin 2 %. Terdapat tiga genus larva Chironomidae yang ditemukan di Sungai Code yaitu genus *Chironomus*, genus *Cricotopus*, dan *Ablabsemya*. Selama periode penelitian genus *Chironomus* merupakan genus yang memiliki populasi tertinggi yaitu 635 ind. Puncak kemelimpahan larva Chironomidae berdasarkan bulan pencuplikan terjadi pada bulan Juli dengan densitas 265,92 ind/ m². Berdasarkan stasiun penelitian, stasiun IV memiliki kemelimpahan tertinggi dengan nilai 1911,11 ind/m². Pada taraf uji 0,05, kemelimpahan larva Chironomidae memiliki korelasi signifikan dengan faktor lingkungan BOD dengan nilai kontribusi 44,85% dan faktor lingkungan suhu dengan nilai kontribusi 17,03%

Kata kunci : Chironomidae, larva, kemelimpahan, Sungai Code, kualitas air

ABSTRACT

ABUNDANCE OF CHIRONOMIDAE AS BIOINDICATORS OF CODE STREAM WATER QUALITY

Chironomidae larvae are one of the benthic insects used as bioindicators of water quality. This research aims to study the influence of water and sediment quality on the abundance of Chironomidae larvae in Code Stream. Code Stream is one of the streams in Yogyakarta that has pollution issues. Differences in land use along the Code Stream can affect nutrient inputs, especially organic matter, into the stream. The input of organic matter into the stream flow is responded by the abundance of Chironomidae larvae at each research station. This study was conducted from July to November 2022 and conducted at 5 research stations representing the area before the city, the city area and after the city with 3 replications. Sampling in the field was carried out with a 30 x 30 cm² Surber Sampler tool and samples were preserved with 2% formalin. There were three genera of Chironomidae larvae found in the Code River, namely the genera *Chironomus*, the genera *Cricotopus*, and *Ablabsemya*. During the study period, the genus *Chironomus* had the highest population of 635 ind. The peak abundance of Chironomidae larvae based on the month of sampling occurred in July with a density of 265,92 ind/m². Based on the research station, station IV had the highest abundance with a value of 1911,11 ind/m². At the 0.05 test level, the abundance of Chironomidae larvae had a significant correlation with the BOD environmental factor with a contribution value of 44,85% and the temperature environmental factor with a contribution value of 17,03%.

Keywords: Chironomidae, larvae, Abundance, Code River, water quality