

**KELIMPAHAN KEPITING SUNGAI PADA VARIASI PROFIL DAN  
KARAKTER FISIKOKIMIA SUNGAI CODE DAN OPAK, DAERAH  
ISTIMEWA YOGYAKARTA**

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**INTISARI**

Kepiting sungai adalah komponen biotik penting dalam ekosistem sungai tropis. Peran mereka sebagai detritivor, sumber pakan, dan predator meningkatkan urgensi penelitian terkait kehidupan mereka demi memahami kinerja ekosistem dan mendukung dasar-dasar keputusan dalam melakukan konservasi ekosistem sungai secara menyeluruh. Sungai Code dan Opak merupakan sungai yang memiliki keterikatan dengan aktivitas manusia yang berpotensi mengancam keberadaan kepiting sungai endemik di dalamnya. Di sisi lain, Sungai Code dan Opak memiliki berbagai wacana penjagaan kelestarian alam. Penelitian ini bertujuan untuk menyediakan informasi ekologis kepiting sungai sebagai dasar penelitian ke depan dan pemanfaatan Sungai Code dan Opak secara berkelanjutan. Stasiun penelitian ditentukan berdasarkan dominasi penggunaan lahan sekitar sungai: perumahan dan persawahan. Tiap daerah tersebut dibagi berdasarkan panjang garis sempadan, sehingga terbagi menjadi daerah dengan garis sempadan >15 m dan <15 m. Kelimpahan kepiting diukur menggunakan metode plot. Parameter yang diukur adalah kadar *dissolved oxygen* (DO), pH air, suhu air, kecepatan arus, biomassa detritus, dan komposisi substrat. Pengaruh parameter fisikokimia terhadap kelimpahan kepiting sungai dianalisis menggunakan analisis *multiple regression* dan signifikansi perbedaan kelimpahan dianalisis menggunakan *Nested Analysis of Variance* (*Nested ANOVA*). Penelitian ini hanya menemukan spesies *Parathelphusa convexa*, diasumsikan karena adaptabilitas mereka. Kelimpahan tertinggi ditemukan di stasiun persawahan dengan garis sempadan <15 m. Parameter fisikokimia yang berkorelasi positif dengan kelimpahan *P. convexa* adalah suhu, DO, biomassa detritus, substrat lempung, tanah liat, pasir halus, pasir kasar, kerikil, dan batu kecil. Di sisi lain, parameter fisikokimia yang berkorelasi negatif dengan kelimpahan *P. convexa* adalah kecepatan arus, pH, dan substrat pasir.

Kata kunci: Adaptasi, aliran nutrien, degradasi lingkungan, densitas, tingkat toleransi.

***ABUNDANCE OF FRESHWATER CRABS IN THE CODE AND OPAK RIVERS, SPECIAL REGION OF YOGYAKARTA ALONG DIFFERENT RIVER PROFILES AND PHYSICOCHEMICAL PROPERTIES***

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***ABSTRACT***

*Freshwater crabs are important biotic components in tropical river ecosystems, playing roles as varied as detritivores, predators, and food sources. Understanding their ecology is thus important to strengthen conservation efforts in river ecosystems. In the Code and Opak Rivers, conservation has been an ongoing concern, but little comparative attention has been paid to their crab populations, which may be threatened by human activities. This study therefore aimed to provide foundational information on the crab species and populations of these rivers, which will serve as a basis for future research, as well as for supporting sustainable management of the Code and Opak Rivers. Research stations were determined based on dominant land use types around the rivers, namely residential areas and rice fields. Each area was further delineated based on the width of the river border, and divided into river borders of >15 m and <15 m. Abundance was measured using the plot method. The parameters measured were DO level, water pH, water temperature, current velocity, detritus biomass, and substrate composition. The influence of these parameters on freshwater crab abundance was analyzed using multiple regression and the significance of abundance difference was analyzed using nested ANOVA. This study only found the species *Parathelphusa convexa*, which is assumed to be due to the species' adaptability. The highest abundance was found in rice field stations with a river border of <15 m. Their abundance was positively correlated with temperature, DO, detritus biomass, and clay, silt, fine sand, coarse sand, gravel, and pebble substrates. Conversely, there was a negative correlation with current velocity, pH, and medium sand.*

*Keywords:* Adaptation, density, environmental degradation, nutrient cycling, tolerance level.