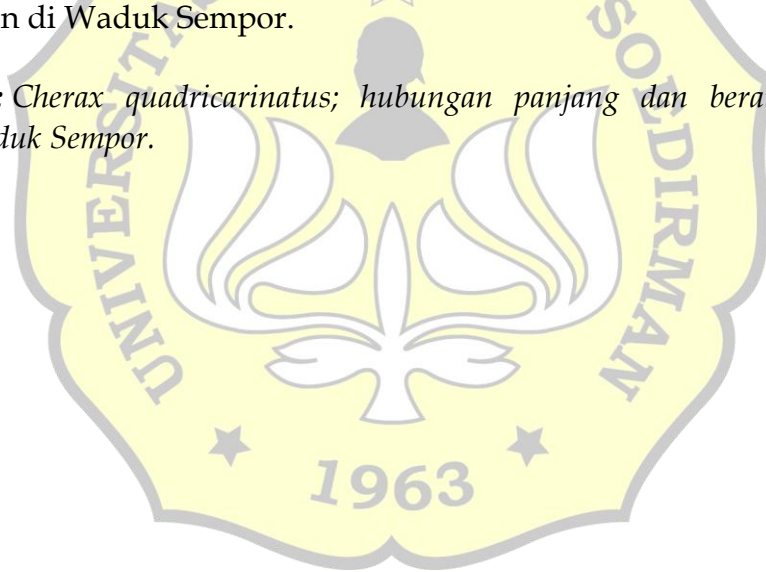


ABSTRAK

Penelitian ini mengkaji populasi lobster air tawar (*Cherax quadricarinatus*) di Waduk Sempor, Kabupaten Kebumen, untuk memahami aspek biologis dan ekologisnya sebagai spesies invasif. Tujuan dari penelitian ini meliputi analisis kelimpahan, sebaran ukuran, rasio kelamin, hubungan panjang-berat, dan faktor kondisi lobster. Pengambilan sampel dilakukan selama tiga bulan (Juni, September, dan Desember 2024) di delapan stasiun dengan metode *random sampling* menggunakan bubu model payung. Hasil menunjukkan kelimpahan tertinggi terjadi pada bulan Juni (0,96 ekor/bubu/jam), yang diduga terkait dengan musim pemijahan. Distribusi ukuran menunjukkan dominasi betina pada rentang panjang 9,6–11,2 cm dan berat 22,1–36,4 g. Rasio kelamin tidak seimbang (1:0,98), dengan jumlah jantan sedikit lebih banyak. Hubungan panjang dan berat menunjukkan pola pertumbuhan alometrik negatif (nilai b jantan = 2,32; betina = 1,90), yang berarti pertambahan panjang lebih cepat dibanding berat. Nilai faktor kondisi (K_n) >1 mengindikasikan kondisi fisiologis lobster yang baik. Kualitas air seperti suhu (28–31°C) dan pH (6–8,58) turut memengaruhi distribusi populasi. Hasil penelitian ini memberikan landasan ilmiah untuk pengelolaan dan pengendalian lobster air tawar secara berkelanjutan di Waduk Sempor.

Kata kunci: *Cherax quadricarinatus*; hubungan panjang dan berat; kelimpahan; populasi; Waduk Sempor.



ABSTRACT

This study investigates the population of freshwater lobster (*Cherax quadricarinatus*) in Sempor Reservoir, Kebumen Regency, to understand its biological and ecological characteristics as an invasive species. The research aims to analyze abundance, size distribution, sex ratio, length-weight relationship, and condition factor of the lobsters. Sampling was conducted over three times (June, September, and December 2024) at eight stations using random sampling methods with umbrella-type traps. Results showed the highest abundance occurred in June (0,98 tail/trap/hour), presumably due to the spawning season. Size distribution revealed that females dominated in the 9.6–11.2 cm length range and 22.1–36.4 g weight class. The sex ratio was unbalanced (1:0.98), with slightly more males. The length-weight relationship indicated negative allometric growth (b value: males = 2.32; females = 1.90), suggesting that length increased faster than weight. The condition factor ($K_n > 1$) indicated good physiological status of the lobsters. Water quality parameters such as temperature (28–31°C) and pH (6–8.58) also influenced population distribution. This study provides a scientific basis for the sustainable management and control of freshwater lobsters in Sempor Reservoir.

Key words: abundance; *Cherax quadricarinatus*; length-weight relationship; population; Sempor Reservoir.

