ABSTRAK

Waduk Sempor di Kebumen, Jawa Tengah, merupakan habitat penting bagi udang regang (*Macrobrachium sintangense*), yang memiliki peran ekologis dan ekonomi lokal. Penelitian ini menganalisis kelimpahan, hubungan panjang-berat, faktor kondisi, dan laju eksploitasi udang regang selama tiga bulan pengamatan (Juni, September, Desember 2024). Hasil menunjukkan kelimpahan tertinggi pada Juni dan September (>48%), sedangkan Desember hanya 2,89%, mencerminkan pengaruh musim yang signifikan. Hubungan panjang-berat menunjukkan pertumbuhan alometrik negatif (b = 1,775), artinya panjang bertambah lebih cepat dari berat. Faktor kondisi rata-rata (K = 6,41 ± 1,77) menunjukkan kondisi fisiologis yang baik. Namun, laju eksploitasi (E = 0,65) melampaui batas optimal (0,5), mengindikasikan tekanan penangkapan berlebih. Parameter kualitas air seperti suhu (28–32°C), pH (6–8,3), dan kecerahan (1–18,5 m) juga memengaruhi dinamika populasi. Meskipun kondisi biologis udang tergolong baik, tekanan eksploitasi berlebih dapat mengancam keberlanjutan populasi. Diperlukan pengelolaan berkelanjutan, seperti pembatasan penangkapan dan pemantauan berkala terhadap kualitas lingkungan.

Kata kunci: eksploitasi; kelimpahan; *Macrobrachium sintangense;* mortalitas

ABSTRACT

Sempor Reservoir in Kebumen, Central Java, is a crucial habitat for the freshwater prawn (Macrobrachium sintangense), which plays key ecological and economic roles. This study analyzes the species' abundance, length-weight relationship, condition factor, and exploitation rate over three sampling periods (June, September, December 2024). Results show peak abundance in June and September (>48%), while December recorded only 2.89%, indicating significant seasonal influence. The length-weight relationship follows a negative allometric pattern (b = 1.775), suggesting faster length growth than weight. The average condition factor (K = 6.41 ± 1.77) indicates a healthy physiological state. However, the exploitation rate (E = 0.65) exceeds the optimal threshold (0.5), signaling overfishing pressure. Water quality parameters, temperature (28–32°C), pH (6–8.3), and transparency (1–18.5 m), also affect population dynamics. Although the prawns are in good biological condition, the high exploitation rate poses a risk to their sustainability. Sustainable management strategies are recommended, including limiting harvest intensity and conducting regular environmental monitoring.

Keywords*: *abundance; exploitation; Macrobrachium sintangense; mortality