ABSTRAK

Lobster pasir *Panulirus homarus* (Linnaeus, 1758) merupakan komoditas perikanan yang penting, memiliki nilai ekonomi tinggi dan bahkan merupakan produk ekspor andalan Indonesia serta berperan secara ekologi. Dengan demikian lobster merupakan target utama penangkapan nelayan karena nilai jualnya yang tinggi dan dalam aspek biologi lobster mendapat gangguan dalam regenerasi. Penelitian ini bertujuan untuk menganalisis ukuran tubuh, produksi telur, hubungan dan perbedaan keduanya pada lobster pasir *P. homarus* (Linnaeus, 1758) bertelur yang hidup di perairan Kebumen. Penelitian ini dilaksanakan pada Januari sampai Desember 2024. Pengukuran dilakukan dengan kaliper untuk panjang tubuh yaitu panjang total (TL), panjang karapas (CL), dan panjang perut (AL) dan timbangan analitik untuk menimbang berat (W) lobster dengan akurasi 0,01 g. Analisis fekunditas menggunakan metode gravimetrik, yaitu menghitung jumlah telur sub sampel 1 g yang dikalikan dengan total berat telur. Data dianalisis uji korelasi Pearson dan regresi linier sederhana serta uji beda pada p = 0,5 dengan *software* IBM SPSS versi 25. Hasil penimbangan berat lobster diperoleh 98,7-372,1 g dan W rataan 271 g. Panjang total didapat 17-23,6 cm dan TL rataan 20,31 cm. Panjang karapas diperoleh 5,5-10,5 cm dan CL rataan 8,37 cm. Panjang perut didapat 8-9,2 cm dan AL rataan 8,58 cm. Fekunditas diperoleh 44.159,80 – 212.282,4 butir dan F rataan 105.381,31 butir. Hubungan antara ukuran tubuh dan berat lobster dengan fekunditas diperoleh hubungan yang kuat kecuali panjang total dengan berat diperoleh hubungan sedang. Perbedaan berat, panjang karapas, panjang total, panjang perut didapatkan tidak berbeda (sig > 0,05). Perbedaan yang nyata diperoleh antara panjang karapas dengan fekunditas, yaitu semakin panjang karapas maka fekunditas semakin tinggi. Penting untuk menentukan kisaran panjang karapas potensial sebagai induk untuk memproduksi benih bening lobster (bbl).

Kata kunci: fekunditas, *Panulirus homarus*, ukuran tubuh, kebumen.

ABSTRACT

The schalloped lobster Panulirus homarus (Linnaeus, 1758) is an important fishery commodity with high economic value and is even a key export product of Indonesia, as well as playing an ecological role. As such, lobsters are a primary target for fishermen due to their high market value, and biologically, lobsters face disturbances in their regeneration. This study aims to analyze body size, egg production, and the relationship and differences between the two in barried schaloped lobsters P. homarus (Linnaeus, 1758) inhabit in Kebumen waters. The study was conducted from January to December 2024. Measurements were taken using a caliper for body length, including total length (TL), carapace length (CL), and abdominal length (AL), and an analytical scale to weigh the lobsters' weight (W) with an accuracy of 0.01 g. Fecundity analysis was conducted using the gravimetric method, which involves counting the number of eggs in a 1-g subsample and multiplying it by the total egg weight. Data were analyzed using Pearson correlation and simple linear regression tests, as well as difference tests at p = 0.5 using IBM SPSS version 25 software. The results of lobster weight measurements were obtained 98.7 to 372.1 g, with an average weight was 271 g. Total length were found between 17 to 23.6 cm, with an average TL was 20.31 cm. Carapace length were found between 5.5 to 10.5 cm, with an average CL was 8.37 cm. Abdominal length were obtained between 8 to 9.2 cm, with an average AL was 8.58 cm. Fecundity were found between 44,159.80 to 212,282.4 eggs, with an average fecundity was 105,381.31 eggs. A strong correlation was found between body size and lobster weight to fecundity, except for total length and weight, which showed a moderate correlation. Differences in weight, carapace length, total length, and abdominal length were not found significant difference (sig > 0.05). A significant difference was found between carapace length and fecundity, with longer carapaces resulting in higher fecundity. It is important to determine the potential range of carapace length for use as broodstock for producing clear lobster larvae (bbl).

***Keywords**: fecundity, Panulirus homarus, body size, Kebumen.*