

ABSTRAK

Lobster pasir (*Panulirus homarus* Linnaeus, 1758) merupakan komoditas perikanan bernilai ekonomi tinggi yang tersebar di perairan tropis, termasuk Teluk Penyu, Kabupaten Cilacap. Penelitian ini bertujuan membandingkan produksi telur lobster pasir pada musim kemarau dan musim penghujan, serta menganalisis hubungan dan perbedaan parameter morfometrik tubuh dengan produksi telur lobster pasir. Sampel lobster pasir bertelur dikoleksi secara *purposive sampling* dari nelayan setempat, dengan parameter yang diamati meliputi berat tubuh, panjang karapas, panjang abdomen, dan jumlah telur. Produksi telur dihitung menggunakan metode gravimetrik, yaitu dengan menimbang total massa telur, mengambil sub-sampel seberat 1 g menghitung jumlah telur dalam sub-sampel secara manual, dan menghitung total berdasarkan berat keseluruhan. Penelitian dilaksanakan pada Juni dan Desember 2024, sedangkan analisis data dilakukan di Laboratorium Pescica Marina Fakultas Perikanan dan Ilmu Kelautan, Universitas Jenderal Soedirman. Hasil penelitian diperoleh produksi rata-rata telur pada musim penghujan lebih tinggi yaitu 128.401 butir dibanding musim kemarau yaitu 101.630 butir. Pada musim kemarau, panjang karapas dan berat tubuh berkorelasi negatif terhadap produksi telur, sedangkan panjang abdomen berkorelasi positif. Sebaliknya, pada musim penghujan semua parameter morfometrik berkorelasi positif dengan produksi telur. Uji *independent sample t-test* diperoleh tidak terdapat perbedaan antara kedua musim ($p = 0,186 > 0,05$). Guna menjaga stok dapat diakses jangka panjang maka lobster bertelur di musim kemarau tidak ditangkap sehubungan musim ini kondisi lingkungan kurang mendukung lobster dalam produksi telur dibanding musim penghujan.

Kata kunci: lobster pasir, morfometrik, produksi telur, Teluk Penyu.

ABSTRACT

The scalloped spiny lobster (*Panulirus homarus* Linnaeus, 1758) is a high-value fishery commodity distributed in tropical waters, including Teluk Penyu, Cilacap Regency. This study aimed to compare egg production of *P. homarus* between the dry and rainy seasons, as well as to analyze the relationships and differences between body morphometric parameters and egg production of scalloped spiny lobsters. Berried scalloped spiny lobster samples were collected using purposive sampling from local fishermen, with observed parameters including body weight, carapace length, abdomen length, and egg production. Egg numbers were determined using the gravimetric method by weighing the total egg mass, taking a 1 g subsample, manually counting the eggs in the subsample, and extrapolating the total based on overall weight. The study was conducted in June and December 2024, and data analyses were performed at the Pescica Marina Laboratory, Faculty of Fisheries and Marine Sciences, Jendral Soedirman University. Results showed that average egg production was higher in the rainy season namely 128,401 eggs compared to the dry season namely 101,630 eggs. In the dry season, carapace length and body weight showed a negative correlation with egg production, while abdomen length was positively correlated. Conversely, in the rainy season, all morphometric parameters were positively correlated with egg production. An independent sample t-test indicated no significant difference between the two seasons ($p = 0.186 > 0.05$). To ensure sustainable stock availability, it is recommended that berried females in the dry season should not be harvested, as environmental conditions during this period are less favorable for egg production compared to the rainy season.

Keywords: fecundity, morphometrics, scalloped, Turtle bay beach.