RINGKASAN

JELITA TRI AMANDA GULO. Struktur Komunitas Teripang (Kelas Holothuroidea) di Perairan Pantai Semelur, Desa Berakit, Kabupaten Bintan. Dibimbing oleh SUSIANA dan AHMAD ZAHID.

Pantai Semelur merupakan salah satu wilayah pesisir di Desa Berakit yang memiliki potensi sumber daya laut, salah satunya teripang. Teripang merupakan organisme bentik yang umumnya ditemukan pada ekosistem terumbu karang dan padang lamun serta memiliki nilai ekonomi yang tinggi. Namun, keberadaannya rentan terhadap tekanan akibat aktivitas penangkapan oleh masyarakat. Penelitian ini bertujuan untuk mengidentifikasi jenis teripang, menganalisis kepadatan dan struktur komunitas, serta mengkaji hubungan faktor lingkungan terhadap kepadatan dan struktur komunitas teripang di Pantai Semelur. Penelitian dilaksanakan pada November 2025 hingga Januari 2026 menggunakan metode survei dengan teknik *systematic random sampling* pada 49 titik pengamatan. Data yang dikumpulkan meliputi jenis dan jumlah teripang, kualitas perairan, serta karakteristik substrat. Analisis data dilakukan menggunakan analisis Kluster dengan indeks Canberra, *One-Way Analysis of Variance* (ANOVA), dan *Principal Component Analysis* (PCA). Hasil penelitian menunjukkan bahwa ditemukan tiga jenis teripang, yaitu *Holothuria atra*, *Holothuria leucospilota*, dan *Holothuria scabra*. Berdasarkan karakteristik lingkungannya, lokasi penelitian terbagi menjadi tiga kluster. Kepadatan tertinggi ditemukan pada kluster 1 sebesar 1,04 ind/m², sedangkan kepadatan terendah terdapat pada kluster 3 sebesar 0,45 ind/m². Nilai indeks keanekaragaman berkisar 0,75–0,92, keseragaman 0,68–0,84, dan dominansi 0,44–0,53. Hasil uji ANOVA menunjukkan bahwa tidak ditemukan perbedaan pada kepadatan per jenis, indeks keanekaragaman, indeks keseragaman, dan indeks dominansi. Analisis PCA menunjukkan bahwa parameter lingkungan yang berpengaruh dominan terhadap indeks keanekaragaman, indeks keseragaman, serta kepadatan *Holothuria leucospilota* dan *Holothuria scabra* yaitu suhu, oksigen terlarut, substrat pasir dan substrat kerikil.

Kata kunci: Kepadatan, Pantai Semelur, Struktur Komunitas, Teripang

SUMMARY

JELITA TRI AMANDA GULO. Community Structure of Sea Cucumber (Class Holothuroidea) the Semelur Waters, Berakit Village, Bintan Regency. Supervised by SUSIANA dan AHMAD ZAHID.

Semelur water is one of the coastal areas in Berakit Village with considerable marine resource potential, including sea cucumbers. Sea cucumbers are benthic organisms commonly found in coral reef and seagrass ecosystems and are recognized as high-value fishery commodities. However, their populations are vulnerable to pressure from harvesting activities by local communities. This study aimed to identify sea cucumber species, analyze their density and community structure, and examine the relationship between environmental factors and the density and community structure of sea cucumbers at Semelur Beach. The study was conducted from November 2025 to January 2026 using a survey method with a systematic random sampling technique at 49 sampling points. The data collected included sea cucumber species composition and abundance, water quality parameters, and substrate characteristics. Data were analyzed using Cluster Analysis with the Canberra index, One-Way Analysis of Variance (ANOVA), and Principal Component Analysis (PCA). The results showed that three sea cucumber species were identified, namely *Holothuria atra, Holothuria leucospilota*, and *Holothuria scabra*. Based on environmental characteristics, the study area was classified into three clusters. The highest density was recorded in Cluster 1 (1.04 ind/m²), while the lowest density was observed in cluster 3 (0.45 ind/m²). The diversity index ranged from 0.75 to 0.92, the evenness index from 0.68 to 0.84, and the dominance index from 0.44 to 0.53. The ANOVA results indicated no significant differences in species density, diversity index, evenness index, or dominance index among the clusters. PCA revealed that the environmental variables with the greatest influence on the diversity index, evenness index, and the densities of *Holothuria leucospilota* and *Holothuria scabra* were temperature, dissolved oxygen, sand substrate, and gravel substrate.

Keywords: Community Structure, Density, Sea Cucumber, Semelur Waters