

RINGKASAN

Penurunan populasi teripang terjadi di sebagian besar negara eksportir, termasuk Indonesia. Hal ini menyebabkan timbul wacana untuk memasukkan teripang dalam Apendiks II CITES (*The Convention on Trade in Endangered Species of Wild Fauna and Flora*). Namun, penentuan status Apendix CITES teripang masih sulit dilakukan akibat minimnya data biologi dan ekologi teripang dari negara-negara eksportir. Penelitian ini bertujuan untuk mendapatkan data struktur komunitas teripang di Pulau Matakus, Kepulauan Tanimbar, Maluku Tenggara Barat (MTB) dan faktor lingkungan yang diduga mempengaruhi struktur komunitas tersebut. Metode Penelitian yang digunakan adalah metode survey lapangan dengan pengambilan sampel secara langsung dan sistematis menggunakan transek 10 x 10 m dengan 3 kali ulangan tempat. Analisis data yang digunakan adalah analisis kepadatan (ind.100m^{-2}) dan kepadatan relatif (%), indeks keanekaragaman shannon-wiener (H'), indeks kemerataan shannon-wiener (e), dan indeks dominansi simpson (D). Parameter faktor lingkungan yang diukur ialah suhu, salinitas, pH, kedalaman air, penetrasi cahaya, dan kandungan C-organik substrat. Hasil penelitian menemukan 9 spesies teripang dengan jumlah 320 individu teripang. Komunitas teripang di Pulau Matakus memiliki kepadatan yang rendah, yaitu $9,7 \text{ ind.100m}^{-2}$. Keanekaragaman teripang tergolong rendah ($H' = 1,17$) dengan kemerataan spesies yang sedang ($e = 0,64$) dan dominansi spesies yang relatif rendah ($D = 0,36$). Pengelompokan *hierarchical cluster* dan MDS (*non-metric multidimensional scaling*) digunakan untuk mengamati pola pengelompokan struktur komunitas teripang dan faktor lingkungan yang diperoleh. Hasil pengelompokan menunjukkan bahwa parameter faktor lingkungan yang diamati tidak mempengaruhi struktur komunitas teripang di Pulau Matakus, Kepulauan Tanimbar, MTB.

Kata Kunci : Teripang, Struktur Komunitas, Pulau Matakus

SUMMARY

The population of sea cucumber was reported to decline in all sea cucumber exporting countries including Indonesia. This condition has led CITES (The Convention on Trade in Endangered Species of Wild Fauna and Flora) to include sea cucumbers in Appendix II. However, the rationale of the inclusion of sea cucumbers in the list of Appendix II is rather difficult due to the lack of biological and ecological data of sea cucumber populations from exporting countries, including Indonesia. This research aimed to obtain baseline data on the sea cucumber community structure and their environmental factors in Matakus Island, Tanimbar Islands, Maluku Tenggara Barat. This research was a survey with direct and systematic sampling technique was applied to collect samples from 4 pre-designated sites encircled the Matakus Island. This technique laid 3 line transects on each site, and three plots of 10 x 10 m size-quadrat were placed across each line transect. This study calculated sea cucumber data and presented as abundance (ind.100 m⁻²) and relative abundance (%), Shannon-Wiener diversity index (H'), Shannon-Wiener evenness index (e), and Simpson dominance index (D). The environmental factors were measured from the water including temperature, salinity, pH, depth, light penetration, and total organic carbon of the substrate. This study further analyzed the data using Cluster Analysis to determine the grouping pattern based on Bray-Curtis similarity index for sea cucumber community structure and based on Euclidean similarity index for environmental factors. This study identified 9 species of sea cucumbers from a total sample of 320 individuals. The Matakus Island has sea cucumber density counted at 9,7 ind.100 m⁻², the diversity index measured was $H' = 1.17$, the evenness index was $e = 0.64$, and the species dominance index was $D = 0.36$. The cluster analysis found that the environmental factors did not contribute to the establishment of sea cucumber community structure on Matakus Island.

Keyword : Sea Cucumber, Community Structure, Matakus Island