

Qurrotul Aini NPM. 22.03.4.1.1.00007. Analisis Mikroplastik Pada Teripang Bola (*Phyllophorus sp.*) dan Teripang Berunok (*Paracaudina australis*) Di Perairan Tanjung Wido, Selat Madura Bagian Utara. Dibawah bimbingan **Prof. Insafitri, S.T, M.Sc, Ph.D**

ABSTRAK

Mikroplastik merupakan partikel plastik berukuran <5 mm yang bersifat persisten dan berpotensi mencemari ekosistem perairan serta terakumulasi dalam organisme laut. Penelitian ini bertujuan untuk menganalisis keberadaan mikroplastik pada teripang bola (*Phyllophorus sp.*) dan teripang berunok (*Paracaudina australis*) dan mengetahui kelimpahan mikroplastik yang ada pada teripang bola (*Phyllophorus sp.*) dan teripang berunok (*Paracaudina australis*) di Perairan Tanjung Wido Selat Madura Bagian Utara sebagai indikator pencemaran lingkungan dan dapat dikonsumsi oleh masyarakat sekitar. Metode penelitian dilakukan melalui pengambilan masing-masing 20 individu dan analisis saluran pencernaan menggunakan preparasi kimia serta pengamatan mikroskopis. Hasil penelitian menunjukkan bahwa mikroplastik ditemukan pada kedua spesies dengan jenis utama fiber, fragmen, dan film. Kelimpahan mikroplastik pada teripang bola lebih tinggi (15,40 partikel/individu) dibandingkan teripang berunok (11,45 partikel/individu). Secara karakteristik, mikroplastik didominasi oleh bentuk fiber, warna hitam dan biru, serta ukuran <50 µm dan >250 µm. Penelitian ini menunjukkan bahwa kedua spesies teripang berpotensi sebagai bioindikator pencemaran mikroplastik di perairan pesisir.

Kata kunci: Mikroplastik, Teripang Bola (*Phyllophorus sp.*), Teripang berunok (*Paracaudina australis*), Kelimpahan Mikroplastik, Bentuk Mikroplastik, Warna Mikroplastik, Ukuran Mikroplastik

Qurrotul Aini NPM. 22.03.4.1.1.00007. *Analysis of Microplastics in the Ball Sea Cucumber (Phyllophorus sp.) and the Berunok Sea Cucumber (Paracaudina australis) in the Waters of Tanjung Wido, Northern Part of the Madura Strait. Under the supervision of Prof. Insafitri, S.T, M.Sc, Ph.D*

ABSTRACT

Microplastics are plastic particles smaller than 5 mm that are persistent and have the potential to contaminate aquatic ecosystems and accumulate in marine organisms. This study aims to analyze the presence of microplastics in ball sea cucumbers (Phyllophorus sp.) and spiny sea cucumbers (Paracaudina australis) and to determine the abundance of microplastics in ball sea cucumbers (Phyllophorus sp.) and the beaked sea cucumber (Paracaudina australis) in the waters off Tanjung Wido in the northern part of the Madura Strait as an indicator of environmental pollution and as a food source for the local community. The research method involved collecting 20 individuals of each species and analyzing their digestive tracts using chemical preparation and microscopic observation. The results showed that microplastics were found in both species, primarily in the form of fibers, fragments, and films. The abundance of microplastics in the ball sea cucumber was higher (15.40 particles/individual) than in the bearded sea cucumber (11.45 particles/individual). In terms of characteristics, the microplastics were predominantly in fiber form, black and blue in color, and sized <50 μm and >250 μm . This study indicates that both sea cucumber species have the potential to serve as bioindicators of microplastic pollution in coastal waters..

Keywords: *Microplastics, Ball Ea Cucumber (Phyllophorus sp.), Berunok Sea Cucumber (Paracaudina australis), Microplastic Abundance, Microplastic Morphology, Microplastic Color, Microplastic Size*