

## Kekayaan jenis dan struktur komunitas Copepoda di Perairan Mangrove Cilacap, Jawa Tengah

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### Abstrak

Copepoda merupakan zooplankton yang dominan di lautan, dan mempunyai peranan penting dalam rantai makanan di ekosistem perairan, termasuk perairan mangrove (estuarine). Penelitian mengenai Copepoda di perairan mangrove Cilacap, Jawa Tengah, telah dilakukan pada bulan Oktober 1997 dan April 1998. Dari hasil identifikasi ditemukan sebanyak 25 jenis yang termasuk dalam 17 marga, 12 suku, dan 4 bangsa (ordo). Calanoida merupakan ordo yang paling besar, dengan jumlah anggota 17 jenis. Frekuensi kehadiran tertinggi ditemukan pada *Acartia erythraea* dan *Pseudodiaptomus incisus*, masing-masing 58,34% dan 52,08%. *A. erythraea* paling melimpah pada bulan April (rata-rata 7,81% dan 10,59%) dengan kepadatan maksimal 102 ind./l.; sedangkan *P. incisus* paling melimpah pada bulan Oktober (rata-rata 6,56% dan 14,73%) dengan kepadatan maksimal 62 ind./l.

Keanekaragaman jenis Calanoida berkisar antara 0,424-0,849, kemerataan individu tiap jenis 0,256-0,429, kekayaan jenis 0,610-2,471, kesamaan jenis antara dua lokasi 0,182-0,933. Hasil analisis kluster pada musim dan waktu pengamatan yang berbeda, tidak terbentuk pengelompokan. Meskipun demikian terdapat kecenderungan pada St. 1, 2, dan 3 membentuk kelompok yang terpisah dari St. 4. Penyebaran dan kelimpahan Copepoda sangat dipengaruhi oleh salinitas. Kisaran salinitas pada bulan Oktober 18,1-31,7 ‰ dan 9,2-29,1 ‰ pada bulan April. Selain salinitas, pengaruh musim juga turut menentukan komposisi jenis dan kelimpahan Copepoda.

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Copepods is a dominant group of marine zooplankton, and has an important role in the marine food chain. Copepods lives in various habitats, in freshwater, estuarine, and marine. Information on copepods in Indonesia mostly came from expedition reports on East Indonesian waters. Nevertheless, information concerning copepods in mangrove waters (estuarine) is very limited. The Cilacap mangrove waters has a unique ecosystem. It has high estuarine biodiversity lives, in which of them is copepods. From this fact, a study on the taxonomy and community structure of copepods in Cilacap mangrove waters was conducted on October 1997 and April 1998.

The aims of study is to know the diversity and fluctuation of copepods species, the relationship community structure of copepods with the environmental factors in Cilacap mangrove waters, to available information on description and illustration of copepods that area from two seasons.

Twenty-five species belonging to 12 families was recorded. They include 17 species of Calanoida, three species of Poecilostomatoida, four species of Cyclopoida, and one species of Harpacticoida. Two species showed high frequency of occurrence and abundance, i.e. *Pseudodiaptomus incisus* at dry season, and *Acartia erythraea* at wet season. This indicated that the two species were common and distributed more

widely than others.

The highest diversity and richness indices of copepods species were found in Sapuregel (St. 3) at two seasons, and Teluk Penyu had highest evenness index at dry season. Donan mouth river and Sapuregel had the highest similarity index at dry season. Cluster analysis resulted in one group at all study on October 1997 and April 1998. Stations 1, 2, and 3 had the highest relationship than station 4. The water conditions of Cilacap mangrove waters showed that salinity ranged from 9,2-31,7 ‰ temperature ranged from 25-32°C, pH ranged from 6,58-8,74, turbidity ranged from 0-7 NTU, DHL ranged from 10,4-44,7 mg/l, and DO ranged from 4,40-8,52 mg/l.