Distribusi dan kemelimpahan fitoplankton di ekosistem perairan hutan bakau Segara Anakan Cilacap

INTISARI

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Penelitian ini bertujuan mempelajari distribusi dan kemelimpahan komunitas fitoplankton di ekosistem perairan hutan bakau. Hutan bakau Segara Anakan mengalami kerusakan akibat penebangan pohon bakau. Lokasi kajian meliputi perairan Bondan, Klaces dan Kali Gatal. Pencuplikan sampel plankton menggunakan modifikasi Van Dorn 5 liter dengan ulangan 5 kali. Sampel yang dicuplik merupakan sampel komposit 20 liter air. Parameter fisiko – kimia yang diukur adalah kecepatan arus dan angin, suhu air dan udara, kelembaban udara, jeluk dan jeluk secchi, intensitas cahaya, pH, salinitas, turbiditas dan nutrient perairan. Hasil menunjukan bahwa kehadiran cacah spesies fungsional grup diatom banyak bervariasi antara 4-25 spesies per 100 liter merupakan 6%-36% cacah spesies di seluruh lokasi kajian. Akan tetapi cacah individunya sangat sedikit. Sebaliknya cacah spesies algae unisel sedikit tetapi cacah individunya banyak. Di perairan Bondan, Klaces dan Kali Gatal tejadi peledakan *Synecocystis aquatilia* dan *Aphanocapsa pulchra* sebanyak 581.309; 320.757 cacah individu per 100 liter, merupakan 64%; 56% dari cacah individu di seluruh lokasi kajian. Peledakan tersebut merupakan respon dari nutrien rendah di perairan. Keadaan ini mencerminkan perairan buruk.

Kata kunci : fitoplankton, *Synecocystis aquatilia*, *Aphanocapsa pulchra*, salinitas.

Distribution and abundance of phytoplankton in aquatic mangrove ecosystem Segara Anakan Cilacap

ABSTRACT

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The aim of this research to study the distribution and abundance of phytoplankton community in aquatic mangrove ecosystems Segara Anakan. Research site involves Bondan, Klaces and Kali Gatal water. Sampling plankton samples using a modified Van Dorn 5 litre with 5 repeated. Samples is a composite sample 20 liter of water. Physic - chemical parameters being measured include stream and wind velocity, water and air temperature, air humidity, Secchi and transparency, light intensity, pH, salinity, turbidity and nutrient of waters. The results obtained the functional groups of phytoplankton community were present at each location consists of diatom centric, diatoms pennate, algae unicellular, algae colonies, algae filaments, and dinoflagellates. Phytoplankton community were present at each study site is a community of freshwater, brackish water and seawater. Phytoplankton community were present at each location dominated of freshwater community. This condition is a response of the phytoplankton community to the freshwater discharge from the river which 0 ‰ of salinity. The high density of phytoplankton is algae unicellular (*Synecocystis aquatilia)*and algae colonies (*Aphanocapsa pulchra).* The density of Synecocystis aquatilia and Aphanocapsa pulchra is 581309 individual per 100 litre and 320757 individual per 100 litre were present at Kali Gatal surface. In Kali Gatal bottom, the salinity of 12‰ was responded by the presence of marine communities (*Asterionellopsis gracilis, Diversus Chaetoceros*, *Skeletonema costatum* and *Thalasionemanitzchioides*). Distribution and abundance of phytoplankton community responded by salinity waters.

Keywords: phytoplankton, *Synecocystis aquatilia*, *Aphanocapsa* pulchra, salinity.