Dinoflagellata Epifitik Potensial Penyebab Ciguatera Fish Poisoning pada Lamun Thalassia hemprichii di Wilayah Perairan Pulau Pramuka, Kepulauan Seribu = Epiphytic Dinoflagellates as Potential Causes of Ciguatera Fish Poisoning on Seagrass Thalassia hemprichii in Pramuka Island Waters, Kepulauan Seribu

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Abstrak

Dinoflagellata epifitik yang hidup pada lamun Thalassia hemprichii berpotensi menyebabkan Ciguatera Fish Poisoning (CFP) melalui produksi ciguatoxin atau asosiasi dengan dinoflagellata penghasilnya. Lamun Thalassia hemprichii memiliki kelimpahan tinggi di perairan Pulau Pramuka. Penelitian mengenai kelimpahan dinoflagellata epifitik pada lamun Thalassia hemprichii beserta hubungannya dengan parameter lingkungan dilakukan di empat sisi perairan Pulau Pramuka, Kepulauan Seribu. Sampel lamun Thalassia hemprichii dari keempat sisi pulau diambil secara purposive random sampling ke dalam botol, dikocok kuat selama beberapa menit, dan biofilm pada daun dikerik. Daun lamun dipisahkan dan diukur luas permukaannya. Sampel air hasil kocokan kemudian disaring menggunakan saringan bertingkat 125 dan 25 Î¼m, dan diamati menggunakan mikroskop cahaya. Ditemukan empat genus dinoflagellata epifitik toksik, yaitu Coolia, Gambierdiscus, Ostreopsis, dan Prorocentrum. Genus Coolia memiliki rata-rata kelimpahan tertinggi, yaitu 8 sel/cm2, yang menunjukkan kemampuan adaptasi Coolia di setiap stasiun dengan faktor lingkungan yang berbeda. Faktor lingkungan yang mencirikan di tiap stasiun dianalisis menggunakan Analisis Komponen Utama (AKU) dan kemudian dihubungkan secara deskriptif dengan kelimpahan dinoflagellata. Bagian selatan dan barat pulau dicirikan oleh salinitas dan kecepatan arus, bagian utara oleh intensitas cahaya, dan bagian timur oleh nitrat, oksigen terlarut, dan pH.
.....Epiphytic dinoflagellates living on Thalassia hemprichii seagrass have the potential to cause Ciguatera Fish Poisoning (CFP) through ciguatoxin production or association with dinoflagellate producers. Thalassia hemprichii seagrass has a high abundance in the waters of Pramuka Island. Research on the abundance of epiphytic dinoflagellates in seagrass Thalassia hemprichii and its relationship with environmental parameters was conducted on four sides of the waters of Pramuka Island, Kepulauan Seribu. Seagrass Thalassia hemprichii samples from the four sides of the island were taken by purposive random sampling into bottles, shaken vigorously for several minutes, and the biofilm on the leaves was scraped off. Seagrass leaves were separated and their surface area measured. The shaken water samples were then filtered using 125 and 25 Î¼m graduated sieves, and observed using a light microscope. Four genera of toxic epiphytic dinoflagellates were found, namely Coolia, Gambierdiscus, Ostreopsis, and Prorocentrum. The genus Coolia had the highest average abundance, 8 cells/cm2, which indicates the adaptability of Coolia at each station with different environmental factors. Characteristic environmental factors at each station were analyzed using Principal Component Analysis (PCA) and then descriptively correlated with dinoflagellate abundance. The southern and western parts of the island were characterized by salinity and current velocity, the northern part by light intensity, and the eastern part by nitrate, dissolved oxygen, and pH.