Komunitas Mikroalga Epiplastik Pada Sampah Plastik Kemasan Makanan Jenis Polypropylene di Perairan Pulau Pramuka, Kepulauan Seribu = Epiplastic Microalgae Community in Polypropylene Plastic Food Packaging Waste in Pramuka Island Waters, Seribu Islands

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Abstrak

Mikroalga merupakan mikroorganisme eukariotik yang hidup di laut atau air tawar. Beberapa mikroalga dapat menempel pada kemasan plastik, yang umumnya ditemukan di perairan yang tercemar, dan dikenal sebagai mikroalga epiplastik. Penelitian yang dilakukan untuk mengidentifikasi keragaman serta perhitungan kelimpahan mikroalga epiplastik di kemasan makanan jenis Polypropylene dengan metode purposive sampling di Perairan Pulau Pramuka, Kepulauan Seribu. Pengambilan sampel dilakukan dari tiga titik stasiun, yaitu Utara, Barat, dan Timur Pulau Pramuka kemudian sampel diamati di bawah mikroskop. Tujuh genus mikroalga epiplastik ditemukan dari tiga kelas, yaitu Bacillariophyceae (5 genus), Dinophyceae (1 genus), dan Cyanophyceae (1 genus) yang berpotensi toksik. Genus yang ditemukan dari kelas Bacillariophyceae, yaitu Cymbella, Navicula, Nitzschia, Pleurosigma, Synedra. Cyanophyceae ditemukan dari genus Chroococcus dan Dinophyceae ditemukan dari genus Prorocentrum. 2 genus ditemukan yang memiliki potensi toksik pada perairan, yaitu Chroococcus dan Prorocentrum. Kelimpahan tertinggi ditemukan pada genus Nitzschia sebesar 3.468 sel/L, sedangkan kelimpahan terendah ditemukan pada genus Chroococcus sebesar 680 sel/L.

.....Microalgae are eukaryotic microorganisms that live in the sea or fresh water. Some microalgae can stick to plastic packaging, which is commonly found in polluted waters, and are known as epiplastic microalgae. The study was conducted to identify the diversity and calculate the abundance of epiplastic microalgae in Polypropylene food packaging using the purposive sampling method in the waters of Pramuka Island, Seribu Islands. Sampling was carried out from three station points, namely North, West, and East of Pramuka Island, then the samples were observed under a microscope. Seven genera of epiplastic microalgae were found from three classes, namely Bacillariophyceae (5 genera), Dinophyceae (1 genus), and Cyanophyceae (1 genus) which are potentially toxic. The genera found from the Bacillariophyceae class, namely Cymbella, Navicula, Nitzschia, Pleurosigma, Synedra. Cyanophyceae were found from the genus Chroococcus and Dinophyceae were found from the genus Prorocentrum. 2 genera were found to have toxic potential in waters, namely Chroococcus and Prorocentrum. The highest abundance was found in the genus Nitzschia at 3,468 cells/L, while the lowest abundance was found in the genus Chroococcus at 680 cells/L.