

ABSTRACT

Syahfitri Dwi Yansi. 24020117130064. Comparison of Epipellic and Epiphytic Diatoms on Litter of Stems in the "Jembatan Merah" Rembang Mangrove Forest Conservation Area. Under the guidance of Riche Hariyati and Tri Retnaningsih Soeprbowati.

*The "Jembatan Merah" Rembang Mangrove Forest Conservation Area is one of the many mangrove ecosystems in Indonesia. This ecotourism site is formed in a location protected from ocean waves, creating a mudflat derived from river and sea sediment deposits. Diatoms are one of the aquatic organisms living in the mangrove ecosystem, characterized by their silica cell walls, and they vary in size and shape. They can live attached to plants, animals, rocks, and sediment surfaces. This study aims to compare epipellic and epiphytic diatom communities. Samples of epipellic and epiphytic diatoms were taken from sediment mud and by brushing the litter of mangrove stems, then digested using 10% HCl and 10% H₂O₂ methods, observed, and identified. Data analysis utilized diversity, evenness, dominance, and similarity indices. Thirty-two genera and 64 species of epipellic diatoms and 21 genera and 41 species of epiphytic diatoms were found. The genus *Nitzschia* showed diverse species and was found in both epipellic and epiphytic diatom communities. *Amphora coffeaeformis* and *Navicula salinarum* were found at all sampling stations. Both epipellic and epiphytic diatoms exhibited moderate species diversity, with the epipellic diatom community showing less even to even distribution, while the epiphytic community was evenly distributed. No species dominated either community. The species similarity between the two communities was high, reaching 59.05%. The presence of several species such as *Nitzschia palea*, *Tryblionella granulata*, and *Navicula salinarum* indicates environmental stress.*

Keywords : mangrove, diatoms, epipellic and epiphytic, comparison, water quality