

KEANEKARAGAMAN DAN KELIMPAHAN PLANKTON DI PERAIRAN GUA SANGHYANG KENIT RAJAMANDALA KABUPATEN BANDUNG BARAT

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ABSTRAK

Lingkungan akuatik gua merupakan habitat bagi beragam biota, salah satunya adalah plankton. Gua Sanghyang Kenit adalah gua yang memiliki lingkungan akuatik dan habitat potensial bagi plankton. Plankton dapat menjadi bioindikator suatu perairan karena sensitifitasnya terhadap lingkungan. Tujuan dari penelitian ini adalah untuk mengetahui keanekaragaman, kelimpahan dan keterkaitan plankton dengan faktor lingkungan di perairan Gua Sanghyang Kenit Rajamandala Kabupaten Bandung Barat. Penelitian ini dilakukan pada bulan Agustus 2021 sampai September 2021 dengan metode *Puposive Sampling* juga menentukan tiga zona pengambilan sampel yaitu zona terang, zona remang-remang, zona gelap dan tiga waktu pengambilan sampel yaitu pagi, siang, sore. Pencuplikan sampel dilakukan dengan pengambilan sampel air sebanyak 10 liter kemudian disaring menggunakan plankton net no. 25. Parameter fisik-kimia yang diukur meliputi suhu air, intensitas cahaya, pH air, DO, salinitas, nitrat dan fosfat. Analisis data yang dilakukan meliputi keanekaragaman jenis, keseragaman, dominasi, kelimpahan dan analisa korelasi. Terdapat 4 kelas dengan 12 genus plankton yang berhasil ditemukan. Kelas Bacillariophyceae meliputi *Acanthes* sp., *Coscinodiscus* sp., *Cymbella* sp., *Navicula* sp., *Synedra* sp. Kelas Chlorophyceae meliputi *Cosmarium* sp., *Euastrum* sp., *Spyrogira* sp., *Tetrastrum* sp. Kelas Cyanophyceae meliputi *Merismopedia* sp., *Oscillatoria* sp. Kelas Rotifera meliputi *Notholca* sp. Nilai indeks keanekaragaman pada zona terang (1,10), zona remang-remang (1,08), zona gelap (1,08). Nilai indeks kelimpahan pada zona terang 2.537 sel/l, zona remang-remang 501 sel/l, zona gelap 29 sel/l. Keanekaragaman plankton di perairan Gua Sanghyang Kenit memiliki tingkat korelasi yang sangat kuat dengan suhu air ($r=0,866$), intensitas cahaya ($r=1.000$) dan pH air ($r=-0,866$). Kelimpahan plankton di perairan Gua Sanghyang Kenit memiliki tingkat korelasi yang sangat kuat dengan suhu air ($r=1.000$), intensitas cahaya ($r=0,866$) dan pH air ($r=-1.000$).

Kata Kunci : Faktor lingkungan, gua, keanekaragaman, kelimpahan, plankton

DIVERSITY AND ABUNDANCE OF PLANKTON IN THE WATERS OF SANGHYANG KENIT CAVE RAJAMANDALA WEST BANDUNG DISTRICT

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ABSTRACT

Cave's aquatic environment is a habitat for a variety of biota, one of which is plankton. Sanghyang Kenit Cave is a cave that has an aquatic environment and a potential habitat for plankton. Plankton can be a bioindicator of a waters because of its sensitivity to the environment. The purpose of this study was to determine the diversity, abundance and relationship of plankton with environmental factors in the waters of Sanghyang Kenit Rajamandala Cave, West Bandung Regency. This research was conducted from August 2021 to September 2021 with the Puposive Sampling method which also determined three sampling zones, namely the bright zone, the dim zone, the dark zone and three sampling times, namely morning, afternoon, and evening. Sampling was carried out by taking 10 liters of water and then filtered using plankton net no. 25. The measured physico-chemical parameters include water temperature, light intensity, water pH, DO, salinity, nitrate and phosphate. The data analysis carried out includes species diversity, similarity, dominance, abundance and correlation analysis. There are 4 classes with 12 plankton genera that have been found. Bacillariophyceae class includes *Acanthos* sp., *Coscinodiscus* sp., *Cymbella* sp., *Navicula* sp., *Synedra* sp. Chlorophyceae class includes *Cosmarium* sp., *Euastrum* sp., *Spyrogira* sp., *Tetrastrum* sp. Cyanophyceae class includes *Merismopedia* sp., *Oscillatoria* sp. Rotifera class includes *Notholca* sp. Diversity index values in the light zone (1.10), dim zone (1.08), dark zone (1.08). The abundance index value in the light zone was 2.537 cells/l, the dim zone was 501 cells/l, and the dark zone was 29 cells/l. The diversity of plankton in the waters of Sanghyang Kenit Cave has a very strong correlation with water temperature ($r=0.866$), light intensity ($r=1.000$) and water pH ($r=-0.866$). The abundance of plankton in the waters of Sanghyang Kenit Cave has a very strong correlation with water temperature ($r=1,000$), light intensity ($r=0,866$) and water pH ($r=-1,000$).

Keywords: Abundance, cave, diversity, environmental factors, plankton