

## **KEANEKARAGAMAN JENIS CHLOROPHYTA TERESTRIAL DI LINGKUNGAN KAMPUS UGM, STASIUN PENELITIAN KARANGGAYAM DAN SAWITSARI**

Dita Rahmadani 19/444676/BI/10354

Dosen Pembimbing: Ludmilla Fitri Untari, S.Si., M.Sc.

### **ABSTRAK**

Algae dapat ditemukan pada berbagai habitat, salah satunya adalah habitat terestrial. Chlorophyta adalah algae yang sering ditemukan sebagai konstituen utama populasi algae terestrial. Data molekuler juga menjelaskan bahwa keanekaragaman algae terestrial jauh lebih tinggi dari yang lainnya. Akan tetapi, terdapat beberapa permasalahan dalam studi mengenai algae terestrial yang menjadikan penelitian mengenai algae hijau terestrial menjadi sulit untuk dilakukan. Akibatnya data mengenai algae hijau terestrial sulit untuk ditemukan, begitu pula dengan keanekaragaman jenisnya, terutama di Indonesia. Di Indonesia sendiri, masih belum banyak penelitian mengenai keanekaragaman jenis Chlorophyta terestrial. Oleh karena itu, penelitian ini dilakukan untuk mengetahui keanekaragaman jenis Chlorophyta terestrial di Indonesia, khususnya di Lingkungan Kampus UGM, Stasiun Penelitian Karanggayam dan Sawitsari. Penelitian ini dilakukan pada bulan Januari-Juni untuk pengambilan sampel di beberapa lokasi dan analisis data. Pada saat pengambilan sampel, dilakukan juga pengukuran parameter lingkungan tumbuhnya. Setelah itu, sampel algae dianalisis di bawah mikroskop, lalu dicocokkan morfologinya dengan beberapa buku dan jurnal terkait. Analisis data berupa Indeks Keanekaragaman dan Kemerataan, serta Nilai Penting dihitung menggunakan *software Microsoft Excel* dan disajikan dalam bentuk tabel. Hasil penelitian menunjukkan bahwa terdapat 21 spesies dari 11 Family algae hijau terestrial yang ditemukan pada beberapa substrat yang berbeda, seperti kulit pohon, dinding bangunan, besi, batu, dan juga tanah. Faktor lingkungan pada pertumbuhan dan densitas algae terestrial meliputi suhu, kelembaban, kecepatan angin, dan intensitas cahaya. Akan tetapi, setiap jenis algae terestrial memiliki toleransi yang berbeda-beda akan faktor lingkungan tersebut.

Kata kunci: *Algae, Chlorophyta, Keanekaragaman, Terrestrial*

## DIVERSITY OF TERRESTRIAL CHLOROPHYTA IN THE UGM CAMPUS, KARANGAYAM AND SAWITSARI RESEARCH STATIONS

Dita Rahmadani 19/444676/BI/10354

Supervisor: Ludmilla Fitri Untari, S.Si., M.Sc.

### ABSTRACT

Algae can be found in various habitats, one of which is terrestrial habitat. Chlorophyta are algae that are often found as the main constituents of terrestrial algae populations. Molecular data also explains that the diversity of terrestrial algae is much higher than the others. However, there are several problems in the study of terrestrial algae that make research on terrestrial green algae difficult to carry out. As a result, data regarding terrestrial green algae is difficult to find, as well as the diversity of its species, especially in Indonesia. In Indonesia itself, there is still not much research on the diversity of terrestrial Chlorophyta species. Therefore, this research was conducted to determine the diversity of terrestrial Chlorophyta species in Indonesia, especially in the Universitas Gadjah Mada Campus Environment, Sawitsari and Karanggayam Research Stations. This research was conducted in January-July for sampling at several locations and data analysis. At the time of sampling, measurements of the physicochemical parameters of the growth environment were also carried out. After that, the algae samples were analyzed under a microscope, then their morphology was compared with several related books and journals. Data analysis in the form of Diversity and Evenness Indices, as well as Importance Values were calculated using Microsoft Excel software and presented in tabular form. Twenty-one species grouped onto eleven families were reported here which were found in different substrates, such as tree bark, wall building, rock, metal, and soil. The environmental factors affect the growth and density of terrestrial algae such as temperature, humidity, wind velocity, and light intensity. However, each type of terrestrial algae has different tolerances to these environmental factors.

Key words: *Algae, Chlorophyta, Diversity, Terrestrial*