

# A PRELIMINARY STUDY ON PHYTOPLANKTON IN SEVERAL LAKES OF SERUYAN RIVER SYSTEM

## STUDI AWAL FITOPLANKTON DI BEBERAPA DANAU DI DAERAH ALIRAN SUNGAI SERUYAN

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### ABSTRAK

Tujuan penelitian ini adalah untuk menambah informasi tentang fitoplankton sebagai salah satu komponen perairan tawar di Kalimantan Tengah. Penelitian dilakukan di beberapa danau di DAS Seruyan, Kalimantan Tengah. Waktu observasi yaitu pada tanggal 18 – 23 Mei dan 6 – 9 Juni 2003.

Dari hasil studi teridentifikasi sebanyak 54 genera fitoplankton, terdiri dari 5 kelas yaitu Chlorophyceae (26 genera), Chrysophyceae (12 genera), Bacillariophyceae (8 genera), Chyanophyceae (5 genera) dan Euglenophyceae (3 genera). Genus yang dominan ditemukan adalah *Staurastrum*, *Scenedesmus*, *Marssoniella* and *Mougeotia*. Kelimpahan fitoplankton tertinggi dijumpai di Danau Jahitan (2606 ind./l) dan terendah yaitu Danau Bahaya (54 ind./l). Hubungan antara nilai klorofil-a dan kelimpahan fitoplankton terlihat tidak berbeda nyata pada taraf kepercayaan 95% ( $p=0.156$ ). Secara statistik hubungan antara parameter fisika-kimia (kecerahan, fosfat dan Nitrat) dengan konsentrasi klorofil-a maupun kelimpahan fitoplankton tidak nyata. Dengan mengelompokkan nilai similaritas antar danau berdasarkan nilai parameter fisika-kimia, klorofil-a dan fitoplankton ditemukan 3 kelompok danau yaitu Danau Papudak dan Bahaya; Danau Seluluk, Jahutan dan Bahaya; dan Danau Sembuluh.

*Kata Kunci : fitoplankton, gambaran limnologi*

### ABSTRACT

The Objectives of this study were to collect more information on phytoplankton as one of the limnological features of Central Kalimantan. Research site was in several lakes of catchment area of Seruyan River; Observation was done on 18 – 23 May and 6 – 9 June 2003.

A total of 54 phytoplankton genera were found consisting of 5 classes, viz. Chlorophyceae (26 genera), Chrysophyceae (12 genera), Bacillariophyceae (8 genera), Chyanophyceae (5 genera) and Euglenophyceae (3 genera). Dominant genus were *Staurastrum*, *Scenedesmus*, *Marssoniella* and *Mougeotia*. Based on the abundance of phytoplankton, Lake Jahitan was the highest (2606 inds./l) while Lake Bahaya was lowest (54 inds./l). By comparing the chlorophyll-a value to abundance of phytoplankton, it revealed no significant different ( $p=0.156$ ). There were neither clearly correlation among physico-chemical parameters ( particularly transparency, phosphate and nitrate) and phytoplankton abundance nor chlorophyll-a, statistically. By clustering the similarities among lakes based on physico-chemical parameters, phytoplankton abundance and chlorophyll-a content, there were found 3 clusters as a result. Of PCA, Lake Papudak and Lake Bahaya were characterized by turbidity, phytoplankton and chlorophyll-a with eigenvalue of 1523.6 (proportion = 100%). The group of Lake Seluluk, Jahitan and Bakung were by transparency, turbidity, phytoplankton abundance and chlorophyll-a with eigenvalue and proportion of 1286878 and 99.8%. The third cluster was lake Sembuluh.

*Key words : phytoplankton, limnological features*

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