

## Biodiversity and succession of freshwater algae in Hutan Simpan Ayer Hitam Forest Reserve, Puchong Selangor

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The succession and dominant of freshwater algae were studied in the north lake of Ayer Hitam Forest Reserve. Sampling was performed for thirteen weeks, from the end of the November 2013 to the end of the February 2014. Water sampling for biological analysis was done during the thirteen weeks. The structural community was determined by population density, class of algae and diversity indices. The community of freshwater algae consisted of 15 species from 5 different phyla which are Ochrophyta, Dinophyta, Charophyta, Cyanophyta and Chlorophyta. The Dinophyta had the highest total density in the thirteen weeks and two species from three species of Dinophyta were the most conspicuous species in the succession which are *Gonyaulax apiculata* and *Gymnodinium palustre*. The dominance of Dinophyta was during week 2, 3, 6, 7, 10 and 11. Dinobryon sertularia from phylum Ochrophyta had the highest density and being dominant during week 1, 4 and 5. For the Cyanophyta, *Anabaena subcylindrica* had the highest density as compared to the other species of Cyanophyta. *Anabaena subcylindrica* was being dominant during week 8, 9 and 13. For diatom *Navicula* sp. (Ochrophyta), the highest density was obtained during week 12. The Shannon-Weaver index had the highest during week 12 and the lowest during week 4. The highest Evenness index occurred during week 3 and the lowest during week 4. The pattern of succession and dominant of freshwater algae in a north lake of AHFR was associated with the physico-chemical parameter especially nutrient status, pH, temperature and light intensity.

**Keywords:** Algae, freshwater, succession, dominant, north lake of Ayer Hitam Forest Reserve, physico-chemical parameter