

**EFFECT OF EUTROPHIC WATER ON COLOR AND  
REPRODUCTION OF COMMON DUCKWEED, *Lemna  
minor* (Araceae: Lemna)**

**NUR SYAFIQAH BINTI ABDUL GHANI**

**BACHELOR OF SCIENCE (Hons.) BIOLOGY  
FACULTY OF APPLIED SCIENCE  
UNIVERSITI TEKNOLOGI MARA**

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This Final Year Project Report entitled “**Effect of Eutrophic Water on Color Changes and Reproduction of Common Duckweed, *Lemna minor* (Araceae: Lemna)**” was submitted by Nur Syafiqah binti Abdul Ghani, in partial fulfillment of the requirements for the Degree of Bachelor of Science (Hons.) Biology, in the Faculty of Applied Sciences, and was approved by

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Dr. Nur Hasyimah binti Ramli  
Supervisor  
Faculty of Applied Sciences  
Universiti Teknologi MARA (UiTM)  
Negeri Sembilan, Kampus Kuala Pilah,  
Pekan Parit Tinggi, 72000 Kuala Pilah, Negeri Sembilan

---

Pn. Siti Norazura Binti Jamal  
Coordinator FSG 661 AS201  
Faculty of Applied Sciences  
Universiti Teknologi MARA (UiTM)  
Negeri Sembilan, Kampus Kuala Pilah,  
Pekan Parit Tinggi,  
72000 Kuala Pilah Negeri Sembilan

---

Dr. Aslizah binti Mohd Aris  
Head School of Biology  
Faculty of Applied Sciences  
Universiti Teknologi MARA (UiTM)  
Negeri Sembilan, Kampus Kuala Pilah,  
Pekan Parit Tinggi,  
72000 Kuala Pilah Negeri Sembilan

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## ABSTRACT

### **EFFECT OF EUTROPHIC WATER ON COLOR AND REPRODUCTION OF COMMON DUCKWEED, *Lemna minor* (Araceae: Lemna)**

A type of water pollution with the excess amount of nutrients is defined as eutrophication. People seem to take the phenomenon inconsequential matters due to rarely news hear about the consequences of eutrophication. *Lemna minor* purify the water contaminant and act as indicator. Since there is small extent to which people know about the effect of eutrophication towards the common duckweed, this study has been conducted. The aim of this research to study the concentration of phosphate that lead to eutrophication from different types of water sources and to determine impact of different type of water sources on the reproduction of new fronds and color of *Lemna minor*. The results revealed that fertilizer run-off has the highest reduction of phosphate concentration with 50 ppm (28.74%). While, the highest removal efficiency of phosphate concentration were found with 55.17% for fertilizer run-off in comparison to the removal efficiency of phosphate concentration 42.85% and 0% in tap water and leachate sample respectively. The observed changes in fronds color of all water samples shows that they lost the chlorophyll due to its maturity and salt stress at different types of water samples. Results showed that tap water produced the highest number of new fronds compared to fertilizer run-off and leachate sample. In conclusion, the concentration of phosphate that lead to eutrophication from different type of water sources and the impact of different type of water sources on the reproduction of new fronds and color of *Lemna minor* were obtained.