ABSTRACT – Fingerlings of Tilapia zillii (5.20± 0.03g) were exposed to sap extract of Euphorbia tirucalli at concentrations of 6.00, 3.00, 1.50, 0.75, and 0.38mg⁻¹ with control as 0.00mg⁻¹ for 96 hours. The static bioassay showed that the 96-hour LC₅₀ was 1.20mg⁻¹ with lower and upper confidence limits of 0.78 and 1.85mg⁻¹ respectively. Erratic swimming, loss of balance, respiratory distress, air gulping was observed before eventually death of the fish. Opercular ventilation and tail fin counts increased with increasing concentrations of the sap extract. Histopathological examination of the gills and liver revealed damages to these organs which were directly proportional to the concentration of the sap extract while those in the control tanks remained unchanged. Phytochemical analysis of the sap extract showed the presence of alkaloid, tannin, saponin, cardiac glycoside, rotenone, phenols, volatile oil, balsam, and steroids. Water quality parameters monitored showed no significant difference (P>0.05) in temperature and pH while there was significant difference (P<0.05) in values obtained in dissolved oxygen, free carbon oxide and alkalinity. The implications of the findings as they affect the exposed fish and the aquatic ecosystem are discussed.

Key Words : Euphorbia tirucalli, toxicity, fingerlings, Tilapia zillii.