

**A comparative study of condition indices and heavy metals in *Perna viridis* populations at Sebatu and Muar, Peninsular Malaysia**

**ABSTRACT**

This study compared some allometric parameters (shell length, shell width, shell height, total dry weight of soft tissues, condition index and heavy metals (Cd, Cu, Pb and Zn) in the different soft tissues of *Perna viridis* collected from Sebatu and Muar estuary. It was found that the total dry weight of soft tissues and condition index of mussels collected from Sebatu were significantly ( $p < 0.05$ ) higher than those in Muar. The significantly ( $p < 0.05$ ) higher concentrations of Cu in most soft tissues and some of Cd indicated a higher bioavailability of Cu and Cd at Muar than Sebatu. In addition, the significantly ( $p < 0.05$ ) higher levels of Cu, Cd, Zn and Pb in surface sediments collected from Muar supported the observable anthropogenic impacts at Muar than Sebatu and hence, higher metal contamination at Muar than Sebatu. The higher condition index value in mussels recorded in Sebatu than in Muar was believed to be a result of higher metal contamination at Muar estuary.

**Keyword:** Condition index; Heavy metals; *Perna viridis*