Aisyah, Siti Nuur. 2011. Shell Morphological Characteristics of Freshwater Mussels (Unionidae) in Brantas River. This study was under guidance Drs. Moch. Affandi, M.Si., and Dr. Bambang Irawan, M.Sc., Departement of Biology, Faculty of Science and Technology, Airlangga University Surabaya.

ABSTRACT

The objectives of this research were to reveal the species of Unionidae, to describe the characteristics of shells, and to analyze the relationhips between environmental factors and shells characteristic of Unionidae in Brantas river. Sampling of Unionidae, substrates and measurement some parameters environment were taken at 15 stations along the Brantas River. Mussel samples were taken for identification of each type and characteristic morphological description of Unionidae shells then were arranged their determination keys. To determine the relationship between environmental factors and differences in the characteristics of shell morphometry were analyzed by Pearson correlation test and Mann-Whitney test. There were three species of Unionidae in Brantas River, such as ***Contradens contradens, Elongaria orientalis,*** *and* ***Rectidens sumatrensis. C. contradens*** *shell-shapeds was irregular ellipse and rounded; in posterior shell rounded blunt.* ***R. sumatrensis*** *shell-shapeds was ellipse and elongated; dorso-posterior side was rounded and elongated; which had a same angle place and opposite.* ***E. orientalis*** *shell-shapeds was trapezoidal and elongated; tapered angle. Based on Pearson's correlation test, morphometry of Unionids shells had a significant relationship to certain of environmental factors. Based on the Mann-Whitney test results, only* ***C. contradens*** *shells that had different morphometric on different substrates while* ***E. orientalis*** *and* ***R. sumatrensis*** *morphometric shell had same relative size on different substrates.*

Keywords*: **Contradens contradens, Elongaria orientalis, Rectidens sumatrensis,** Unionidae, morphometric, shell, Brantas river.*