

Hisful Aziz. 2010. DIVERSITAS MAKROINVERTEBRATA YANG BERASOSIASI DENGAN SISTEM PERAKARAN ECENG GONDOK (*EICHHORNIA CRASSIPES*) DI PERAIRAN SUNGAI. Skripsi ini di bawah bimbingan Drs. Trisnadi Widyaleksono C.P., M.Si. dan Drs. Moch. Affandi, M.Si., Departemen Biologi, Fakultas Sains dan Teknologi, Universitas Airlangga Surabaya.

ABSTRAK

Eceng gondok (*Eichhornia crassipes*) merupakan tanaman air yang sangat mudah tumbuh dan *blooming* di suatu perairan yang mengalami penyuburan. Penelitian ini bertujuan untuk mengetahui diversitas, kelimpahan, dan karakteristik makroinvertebrata yang berasosiasi dengan sistem perakaran eceng gondok di perairan sungai. Sampling dilakukan di 5 plot berukuran 0,5 m x 0,5 m di empat stasiun penelitian yaitu di sungai Kramat di daerah Wiyung (A), sungai Kali Surabaya di daerah Gunung Sari (B), sungai Kali Mas di daerah Semampir—Rungkut (C), dan sungai Kali Rungkut di daerah Rungkut Madya (D). Sampel makroinvertebrata didapatkan dengan cara mengangkat eceng gondok dari permukaan air dan secepatnya menaruhnya ke dalam bak kecil, dan selanjutnya memindahkan eceng gondok ke dalam bak besar berisi larutan formalin $\pm 5\%$ dan mengguncang-guncangkan eceng gondok sehingga seluruh makroinvertebrata yang menempel di perakaran lepas dan jatuh ke dalam bak. Sampel hewan yang telah diperoleh ditempatkan dalam botol berisi larutan formalin $\pm 5\%$, kemudian diidentifikasi dan didata kelimpahan masing-masing jenis. Data disajikan dalam bentuk tabel dan gambar, serta dianalisis secara deskriptif analitik. Ada 35 macam jenis makroinvertebrata, yaitu *Chironomus sp.*, X famili Ceratopogonidae, X famili Ephydriidae, X famili Hydrophyllidae, X famili Stratiomyidae, *Coxelmis sp.*, X famili Coccinellidae, X famili Staphylinidae, X famili Corixidae, X famili Libellulidae, X famili Hydrachnidae, X famili Atyidae, X famili Parathelphusidae, *Geosesarma sp.*, X famili Grapsidae, *Dikerogammarus fasciatus*, X famili Cirolanidae, *Indoplanorbis exustus*, *Gyraulus convexiusculus*, *Polypylis kennardi*, *Wattebledia sp.*, *Digoniosstoma truncatum*, *Melanoides tuberculata*, *Melanoides sp.2*, X famili Thiaridae, *Physa sp.*, *Anentome helena*, *Syncera sp.*, *Lymnaea rubiginosa*, *Pomacea sp.*, *Nephtys sp.*, *Tubifex sp.*, *Branchiura sp.*, *Glossiphonia sp.*, dan *Hirudo sp.* Tiga macam jenis makroinvertebrata yang memiliki kelimpahan tertinggi adalah *Tubifex sp.* (773,6 individu/m² atau 44,85%), *Chironomus sp.* (435,2 individu/m² atau 25,23%), dan X famili Ephydriidae (216,8 individu/m² atau 12,57%) yang seluruhnya terdapat di stasiun yang memiliki kualitas perairan yang kurang baik untuk mendukung kehidupan organisme di dalam perairan. Makroinvertebrata yang berasosiasi dengan sistem perakaran eceng gondok di perairan sungai sebagian besar merupakan kelompok makroinvertebrata yang seluruh fase hidupnya berhabitat di dalam air.

Kata kunci: *Eichhornia crassipes*, diversitas, makroinvertebrata, sungai.

Hisful Aziz. 2010. DIVERSITY OF MACROINVERTEBRATES THAT ARE ASSOCIATED WITH ROOT'S SYSTEM OF WATER HYACINTH (*EICHHORNIA CRASSIPES*) IN RIVERS. This study was guided by Drs. Trisnadi Widyaeksono C.P., M.Si. and Drs. Moch. Affandi, M.Si., Department of Biology, Faculty of Science and Technology, Airlangga University Surabaya.

ABSTRACT

*Water hyacinth (**Eichhornia crassipes**) is aquatic plant that is very easy to grow and bloom in water with eutrophication. The purpose of this research was to understand the diversity, abundance and characteristic of macro invertebrates that are associated with root's system of water hyacinth in rivers. Sampling was done at five 0,5 x 0,5 m plots located at four research stations : Kramat river at Wiyung (A), Kali Surabaya river at Gunung Sari (B), Kali Mas river at Semampir—Rungkut (C), and Kali Rungkut river at Rungkut Madya (D). Sample was got by removing water hyacinth from the surface and quickly putting it on the little box. Furthermore, the water hyacinth was put and shacked in a big box containing 5% formalin until all of its macro invertebrates fallen down to the box. The sample then was placed at a bottle containing 5% formalin and analyzed about each spesies' The data were presented in the form of tables and pictures, and analyzed using analytical descriptive. There were 35 kinds of macro invertebrate species namely **Chironomus sp.**, X famili Ceratopogonidae, X famili Ephydriidae, X famili Hydrophylidae, X famili Stratiomyidae, **Coxelmis sp.**, X famili Coccinellidae, X famili Staphylinidae, X famili Corixidae, X famili Libellulidae, X famili Hydrachnidae, X famili Atyidae, X famili Parathelphusidae, **Geosesarma sp.**, X famili Grapsidae, **Dikerogammarus fasciatus**, X famili Cirolanidae, **Indoplanorbis exustus**, **Gyraulus convexiusculus**, **Polypylis kennardi**, **Wattebledia sp.**, **Digoniostoma truncatum**, **Melanoides tuberculata**, **Melanoides sp.2**, X famili Thiaridae, **Physa sp.**, **Anentome helena**, **Syncera sp.**, **Lymnaea rubiginosa**, **Pomacea sp.**, **Nephtys sp.**, **Tubifex sp.**, **Branchiura sp.**, **Glossiphonia sp.**, and **Hirudo sp.** There were three kinds of macro invertebrate species having the highest abundance: **Tubifex sp.** (773,6 individu/m² or 44,85%), **Chironomus sp.** (435,2 individu/m² or 25,23%), and X famili Ephydriidae (216,8 individu/m² or 12,57%) which were found in stations in which the water quality was not good to support water's organism. Macro invertebrates that are associated with root's system of water hyacinth in rivers are mainly macro invertebrates whose whole life stage is in waters habitat.*

Keywords: ***Eichhornia crassipes**, diversity, macroinvertebrate, rivers.*