

2-8. Biology and Conservation of the Giant Water Bug (*Lethocerus deyrolli*: Belostmatidae, Hemiptera) in Korea

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The giant water bug (*Lethocerus deyrolli*) is the largest aquatic insect in Korea ranging 50~70 mm in body length. The body is flat and elongate oval in shape. The front legs are enlarged and pincer-like, resembling to the forelegs of preying mantis. They feed on other aquatic insects, snails, tadpoles, and small fishes. They live in lakes, ponds, and pool areas of streams, but they are strong fliers. They are attracted to lights, and often are found a considerable distance from water. Due to their habitat loss and general environmental degradation, they are getting rare in Korea. The species was listed under the red list Endangered and Rare Species for Special Care by the Ministry of Environment of Korea, and has been protected by law since 1997.

This study has been conducted not only to survey research status of the giant water bug in Korea but also to provide biological and ecological data for the conservation of the species. Since few studies have been conducted in Korea regarding this insect species, e.g. Cho (1946) and Chun (1961), basic biological and ecological studies are the priority needs for the further studies.

To accomplish these purposes, field investigations have been carried out from ponds and various wetlands throughout South Korea since 1999. Their distributions and microhabitats were checked. Monthly observations and samplings have been taken with monitoring water temperature and other environmental factors from natural ponds in Ganghwa-do (Island) and Jeju-do (Island). Biology and behavior have been studied in the laboratory in terms of their egg hatching, larval growth, reproductive behavior, oviposition, and parental care. Part of the results is presented herein. Further studies and conservation strategies are needed in comparison with the populations of the species from other countries, e.g. Japan and China.