

## News on the "Philippine Water Bug Inventory Project", with additions to bibliography

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*"There is still time to assure a prosperous future for most of the people of the Philippines  
and most of the remarkable fauna that is their natural heritage,  
and to prevent irreparable environmental damage  
- but their is not much time, and it is slipping away."*

Lawrence R. Heaney, "Vanishing Treasures of the Philippine Rain Forest", 1998

### Abstract

News on the "Philippine Water Bug Inventory Project", a research cooperation between scientists of the Museum of Natural History and the Department of Entomology of the University of the Philippines Los Baños, and the Natural History Museum Vienna, Austria, are reported. The progress on research activities, support of nature protection activities, and entomological education during the last three years are summarized.

**Key words:** Philippine Water Bug Inventory Project, Heteroptera, Nepomorpha, Leptopodomorpha, Gerromorpha, research, nature protection, education, biogeography, bibliography, Philippines

### Zusammenfassung

Neue Informationen über das "Philippine Water Bug Inventory Project", eine Forschungs-Kooperation von Wissenschaftlern des Museum of Natural History und des Department of Entomology der University of the Philippines Los Baños sowie des Naturhistorischen Museums in Wien (Österreich) werden präsentiert. Fortschritte bei Forschungsaktivitäten, Unterstützung von Naturschutzarbeit und entomologischer Fortbildung auf den Philippinen während der letzten drei Jahre werden zusammengefaßt.

The first volume of papers (Annalen des Naturhistorischen Museums in Wien 101B [1999]: pp. 33-161) dealing with scientific results on the Philippine water bug fauna has recently been acknowledged by the scientific community. However, soon after its publication, it was clear to us that there will be a second part, because only a few taxonomic groups have been treated comprehensively. Now, after three years, we present a second part, also containing several revisions and some smaller taxonomic studies, and we hope that a third part will be possible in the next few years. Despite past efforts, only a small portion of the tremendous water bug diversity has been published and much more work needs to be accomplished.

Aside from our taxonomic studies, we soon realized that we had another duty: To offer our results to those people who try to protect the last natural resources in the Philippines.

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We recognized that it was not good to hide behind our boxes containing the described and undescribed bugs and just passively observe what would happen to them in the wild, but that it was now necessary to inform the public about solid scientific results. Before, arthropods were hardly used for evaluation of habitat status and biodiversity loss in the Philippines. However, the enormous number of endemic insect species has generated excellent arguments for its inclusion in the discussion of regional "biodiversity hotspots". When Victor P. Gapud was assigned as the Team Leader for the "Arthropod Working Group" in the "National Biodiversity Conservation Priority-Setting Workshop", this was the first opportunity to present our data to a forum of biologists and environmentalists. The workshop, which was organized by Conservation International Philippines, Protected Areas and Wildlife Bureau (DENR), and the University of the Philippines (BCP-CIDS), was held in Subic, Zambales, on December 4 - 8, 2000. Herbert Zettel has been invited to be a plenary guest speaker, who spoke on the rich diversity and high endemism of Philippine water bugs and the need to conserve them. The workshop also discussed many aspects of zoogeography in relation to the threat status of selected groups of vertebrates and arthropods. A strong correlation between all land and freshwater animals was unanimously recognized by the vertebrate and arthropod working groups in terms of the six biogeographic regions of the Philippines. A significant output of the workshop was the identification of 70 priority sites for conservation and 83 priority sites for research by the arthropod working group, based on existing knowledge of selected groups, namely, butterflies, damselflies and dragonflies, tetrigids, stick insects, water bugs, hispine beetles, pachyrrhynchine weevils, caddisflies, craneflies, mites, and spiders. In June, 2001, a composite map of priority sites for conservation of Philippine flora and fauna was produced. In September 2002, the final output of the workshop was launched in a publication "Philippine Biodiversity Conservation Priorities" together with composite maps and a CD version of the final report for dissemination to all stakeholders of Philippine biodiversity conservation and protection.

We also realize that the small number of entomologists involved in the PWBIP, could not possibly work on all water bugs of the whole country. This is especially true for the field work needed to assessing the existing biodiversity on the ground. An excellent opportunity to enlarge the number of "those in the know" was offered to Herbert Zettel by the Leyte State University (formerly Visayas College of Agriculture) in Baybay, Leyte. The President of LSU, Prof. Dr. Paciencia Milan, and the Director of the Institute of Tropical Ecology, Prof. Dr. Juliet Ceniza, sponsored and organized the "Short Course on the Identification of Philippine Aquatic and Semi-aquatic Heteroptera" on March 5 - 9, 2001. Herbert Zettel conducted lecture sessions, taxonomic identification training in the laboratory, and field work for familiarization with the diverse habits and habitats of water bugs. Twenty-one individuals from fourteen institutions (twelve from the Philippines, one from Germany, and one from Austria) participated in the course.

One of the most ambitious participants in this "Short Course", Professor Raul B. Ruiz, soon thereafter organized a research group in the Camarines Sur State College of Agriculture, Pili. The target of this research group, which consists of graduates and undergraduates, was to undertake a detailed inventory and faunistical survey of the water bugs in the Bicol Region, especially in Camarines Sur Province. During a short meeting with Herbert Zettel in February 2002, the first results and plans for the future were discussed. Some collecting results are already treated in the publications below.

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