Amemboa

News and Results on Heteroptera of Thailand

Number 1

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From the Editor's view ...

We are studying details, but we must see things in context.

Thailand is situated in the center of the Southeast Asian landmass. This area is together with the Amazonean and African rain forests and the Malayan-Papuan Archipelago - one of the hot spots of biodiversity on earth. But because Thailand always has been independent from colonialism, Western scientists did not pay enough attention to the richness of the fauna and flora of Thailand during the last two centuries. This changed during the last twenty years when biologists started to "discover" the high biodiversity - attracted by an enforced tourism, an examplary enforcement of Thai nature protection, and the willingness of Thai scientists to undertake co-operative projects.

Only two examples - taken from semiaquatic and aquatic Heteroptera - will demonstrate the diversity of the Thai fauna: The Oriental waterstrider genus *Amemboa* (Gerridae) contains 25 described species, of which 10 are recorded from Thailand. Two more species from Thailand are known, but undescribed, and probably further new species will be discovered in the future. This means that more than 40 % of the known species live in Thailand. The richness of Thai *Amemboa* is the reason for the name of this newsletter! - In the genus *Helotrephes* (Helotrephidae) only four species are described from China and Taiwan, but recently collected material from Thailand contains eight undescribed species.

Because of its geographical position, the Thai fauna is very interesting for a zoogeographical analysis of the Southeast Asian region. As far as we know there are some centres of endemism within this area, e.g. the southern part of Thailand forms together with Peninsular Malaysia a zoogeographical area which is very different from other parts of the country; the Northeast of Thailand has some similarities with the fauna of Viet Nam; the fauna of North Thailand shows close connections with those of Myanmar and Yunnan Province in China.

Today, "Biodiversity Projects" are the main arguments for a global nature protection. But so far nature protection is mainly based on diversity of plants, birds, mammals, reptiles and amphibians. Insects (although containing four-fifths of described species of the world) play an unimportant part, except for some colourful butterflies and beetles. Reasons are restricted knowledge and the less popular reputation of insects. Therefore it is a bold but exciting idea of Pingping Chen to start a project called "Heteroptera of Thailand". Perhaps there will not be strong public support for the study of Thai bugs. But on the other hand Heteroptera show a high diversity in species and life forms; so they are ideal objects for a biodiversity project with the goal of secondary applied use.

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Due to a rapid increase of knowledge during the last twenty years (especially by Nils Møller Andersen, John T. & Dan A. Polhemus, Nico Nieser, Antti Jannson, Pingping Chen, and many others) aquatic and semiaquatic Heteroptera are among the best-known insect groups. Although there are still numerous undescribed species, there is an excellent base for research. Scientists are working on the Oriental fauna in a fruitful competition. That is why it is easy to find contributors to these groups. And that is why this issue deals only with aquatic Heteroptera. We hope that soon studies on terrestrial bugs will follow!

Issue 1 will demonstrate the intended purpose of *Amemboa*: To keep contact between co-operators of the project; to offer information to interested scientists; to provide co-operators and applied scientists with simple keys; and last but not least to ask questions!

Herbert Zettel

Exploring Thailand ...

During a collecting trip (November 1994 February 1995) in Thailand, and after discussion with Thai biologists at several universities and in the Department of Agriculture, I have been working out a plan to study the aquatic and semi-aquatic Heteroptera in Thailand. Urbanization has become a major problem in the country, and Thai biologists have been using aquatic insects as bioindicators of water quality. A series of handbooks has been and is being published: two on Thai odonates in 1995, from cooperative work between Thai and Japanese scientists; and Thais in the north and northeast are working with American and Austrian collaborators on the caddis flies of Thailand.

About 30 years ago a small brochure on aquatic bugs of Thailand was published, in the Thai language; unfortunately, it is incomplete, and contains misidentifications and some wrong names. Recently, revisionary works on semi-aquatic bugs by such people as N.M. Andersen and J.T. and D.A. Polhemus have used Thai material; and in general the Thai semi-aquatic bug fauna may be better known than many others of the country's faunas.

The plan is to work out the aquatic and semi-aquatic bug fauna of Thailand. The plan has been enthusiastically endorsed by several research departments in the country (Phitsanulok Univ., Khon Kaen Univ., Chulslongkhon Univ., Chiang Mai Univ., Department of Agriculture [national], and Biological Science Society of Thailand). Later, it is planned to expand the project to include various groups of terrestrial Heteroptera. The aim is to increase knowledge of the fauna, both by world scientists and by local people. Thus taxonomists interested in the Oriental bug fauna will have access to collections, and will have a manual(s) useful when collecting in the country. Perhaps more important, local people will be able to know, to use, and to learn from their own fauna.

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