## INVERTEBRATE DIVERSITY RESEARCH AND CONSERVATION IN ESTONIA: OUR OVERLOOKED MAJORITY

Tõnu Talvi

Environmental Board

Relative to the vast taxonomic and ecological diversity of invertebrate animals, their conservation biology has been long time neglected in Estonia. The typical reflection for invertebrates is that they are small but abundant creatures that cannot be exterminated. Although invertebrates make up over 50% of the identified biota in country (but 80% of known species globally), their diversity research, authorized conservation and national Red List assessment is generally ignored when compared with the funding and publicity provided to the widely established vertebrate animal and vascular plant factions. Only some charismatic invertebrate taxa can be distinguished in nature conservation.

Several potential factors can be stressed to threat invertebrate diversity knowledge and conservation. Taxonomic bias in academic research and funding is extensive. It has been recognised that taxonomic predominance within biodiversity research is widespread and skewed towards vascular plants and birds, extending to the detriment of invertebrates during the last decades. There exists an historic bias in nature conservation traditions in Estonia, supporting natural monuments (ancient trees, erratic boulders etc) and flagship species (several birds, mammals and plants). Public support and acceptance for more fascinating objects is comprehensible. However, it is hard to imagine how we can sustain all the biodiversity continuing our taxonomic impediment. Thirdly, critically insufficient natural history formal training in general and in invertebrate taxonomy particularly severely influence nature conservation targets achievement. Without people able to identify living specimens *in situ*, it is unfeasible to make proper inventories or decisions for conservation purposes. Estonia has a reliable number of amateur naturalists, some of whom are the acknowledged taxonomic experts also on certain invertebrate groups, but such a situation is inadequate. Amateurs follow their own interests, and they do not necessarily train successors. The shortage of professional taxonomists and taxonomic incapacity of conservation practitioners is causing fatal developments in nature conservation.

Resolving these issues is going to be a challenge for different institutions and will require certain collaboration between environmental administrators, conservation biologists and academic taxonomists. Following steps will need to be accomplished before general progress in nature conservation can be made:

- Invertebrates should be integrated into mainstream biodiversity and conservation biology research, practice and legislation;

- A strong improvement of taxonomic training and expertise with shared standards is essential to support conservation activities at all levels;

- Great need for empirical data on diversity, ecology, distribution in most taxa of invertebrates.

Tõnu Talvi, Environmental Board, Viidumäe 93343, Saaremaa, Estonia, tonu.talvi@keskkonnaamet.ee