LifeWatch Data Grant 2015

Filling the gaps in the World Register of Marine species (WoRMS)

Non-marine Amphipoda

Final Report

Risto Väinölä, Mikhail Daneliya & Tammy Horton

1. Data grant background

A grant application was made to LifeWatch in order to promote updating and editing of the World Amphipoda Database, WAD, and an associated effort to produce a comprehensive world checklist of continental (non-marine) amphipods, which will be directly linked to these databases and also linked with FADA (Freshwater Animal Diversity Assessment). The checklist is a multi-author effort, as non-marine amphipods are spread among numerous families and the WAD editorial responsibility has been distributed among several editors on a family basis. Nevertheless there are several families that have been recently unattended owing to a lack of active specialist editors. The purpose of this grant was to contribute to filling those unattended gaps, which constitute about 30 % of the non-marine amphipod taxa.

2. Agreed deliverables (as specified in the Data Grant contract)

It was agreed to clarify the data on approximately 250 valid species of non-marine Amphipoda, and complete them with distributional information and references. Including the additional basionyms, synonyms and generic names, this would involve documenting at least 400 names in total with full information, comprising:

- Documentation of the basionym (original name).
- Documentation of the original description (preferably with pdf).
- Documentation of the status reference [basis of current taxonomy].
- Documentation of the type locality.
- Documentation of the type species.
- Documentation of the environment [freshwater/brackish/marine].
- Documentation of the habitat (hypogean/troglophilic vs. epigean).
- Documentation of distributions (FADA biogeographical region; closer distribution in TDWG terms).
- Back up of distributions with published sources.
- Addition of identification resources.

3. Results of the project:

Data were revised and added according to the above standards for all taxa within the families Bogidiellidae, Artesiidae, Hadziidae and Metacrangonyctidae, for a part of the family Crangonyctidae, and for a number of very small families. These comprise c. 250 valid non-marine species, 45 additional marine species from the same families, and about 560 names in total including basionyms, and synonyms and genus-group names (about 100). The progress corresponds to about 40 % of the unattended groups that need to be covered for the non-marine amphipod checklist project. During the project, new database editors have been recruited for these groups.

4. (Brief) description of the work/methodology

As specified in the contract, most of the work was carried out by Dr. Mikhail Daneliya under a subcontract to Taxonomicum.com. We worked on the basis of a previous 2005 backbone checklist compiled for the FADA project (Freshwater Animal Diversity Assessment), and verified the taxonomical and distributional information from the original descriptions, revisions and recent faunal accounts. At the end, these data were matched with data exported from the current WoRMS database and further checked and harmonized, and provided to the WoRMS Data Management Team for (re)upload. The distributions were recorded in terms of the broad FADA biogeographical regions, but instead of further country-wise TDWG entries, the closer information was now only reported in the note field under the main distribution entry. The completeness of taxon coverage was backed up by the continued recording of new amphipod taxa in the annual Amphipod Newsletter through the past 40 years, mostly by Prof. Wim Vader.

With an available electronic archive of pertinent taxonomical literature, the checklist work was now considerably easier than in the previous effort a decade ago, but the amount of work was still larger than was expected. Instead of trying to re-upload the pdfs to Aphia individually in the course of data checking, we anticipate this could be done as a mass operation between archives by the DMT.