

LifeWatch Data Grant 2014

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

Rissoinidae

Final Report

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1. Data grant background

In March 2014, following my work on Indo-Pacific Rissoinidae (Faber, 2011; 2013; based mainly on PANGLAO expedition material), and Guadeloupe, western Atlantic (Faber & Moolenbeek, 2013, based on KARUBENTHOS expedition material), Philippe Bouchet (Muséum national d'Histoire naturelle, Paris) asked me if I would be interested in editing the Rissoinidae Stimpson, 1865 (Mollusca: Gastropoda) in WoRMS. The Rissoinidae are one of the rather few larger molluscan families in WoRMS that had not yet been reviewed and brought up to date.

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

On 1 April 2014, we started with the following: "There are currently 333 valid species listed in WoRMS, and a total of 603 names at all ranks ... This is about 60% of the valid species and probably less than 40% of all names that ought to be indexed. ... The data grant project will start April 1st, 2014 and will run until August 31st, 2014. The following results are expected by the end of the contract: ... Addition of ca. 250 species to WoRMS. ... Addition of original combinations and synonyms."

3. Results of the project on 1 September 2014:

At that date there was a grand total of 1,018 names at all ranks (up from 606). In crossing the 1000 mark, the Rissoinidae can be no longer considered as a "small", or even a "medium-sized" family. The increase since last April is 415 names (+ 66.7%). This includes 615 accepted taxa listed in WoRMS, including 597 species-level taxa (+ 264, or + 79.2%); the others are mainly genus-level taxa. I have "created" 407 names; changed 136 names; and checked 8 names, for a total of 504 "actions".

I have checked (my estimate) over 98% of all described extant nominal rissoinids. So far, only one major source of new taxa (Hertlein & Strong, 1951)* has not been available to me, and perhaps another few with one or two names have escaped noticing, or have not been seen yet (e.g. Jordan, 1936).

*meanwhile these taxa have been added

For all actions I have added in the reference section the original description and nearly always, if available, the (original) published type figure(s). Not necessarily these have been recorded in WoRMS as "new edits", or new "actions". In most cases, the actions are recorded only in the "detail"-section of the references and images, respectively. A total of 269 (groups of) type figures have been added by me to WoRMS (situation 10 August; now increased to ca. 300). This is nearly 2.5% of all shelled gastropod illustrations in WoRMS. This number includes species originally described as rissoinids but no longer regarded as such, as well as species not originally but later included in the Rissoinidae.

4. (Brief) description of the work/methodology

Two major literature sources have been used. First, my own hand-library of rissoinid papers (compiled over many years) including hard copies and pdf versions, and a digitized version

of descriptions and illustrations copied from these works. My estimate is that this provided over 60% of all nominal species. Second, the online library of the Biodiversity Heritage Library (<http://www.biodiversitylibrary.org/>), good for another 30% of all basionyms. Finally, additional records were found checking the reference sections of available publications, the Zoological Records, and by browsing the internet using numerous key word combinations (e.g. *Zebina* + Florida; *Rissoina* + Jousseume; *Rissoina* + Miozän; etc., etc.).

5. Problems encountered and how it was solved (or expected solutions).

Regarding the location of basionyms, few problems were met. Some papers appeared to be quite elusive, but with the help of colleagues most gaps could be filled. Regarding an up-to-date generic representation of the Rissoinidae, this still needs a comprehensive review of the genus-level taxa. This is a work in progress.

6. Other: remarks, suggestions, other information, bibliography, ...

NEXT STEPS

1. Numerous new combinations (names that ought to be indexed) will be added after publication of a paper that re-ranks the genus-level taxa. The number of valid extant genera will be more than doubled, from 13 to ca. 28; the number of species that will shift to other genera will be about 250-350, perhaps more. Most of these will be moved away from the catch-all genus *Rissoina*.
2. A number of names introduced in WoRMS are still without original publication references (only listed from secondary sources), many are not yet figured in the WoRMS gallery.
3. A bibliography of the Rissoinidae, including all papers with basionyms is a work in progress.

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