

## **LifeWatch Data Grant 2015**

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

*Tardigrada*

## **Final Report**

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## 1. Data grant background

This data grant is issued in the framework of the LifeWatch project, to make the content of the Marine Tardigrada within the World Register of Marine Species (WoRMS) more complete.

Before this project, marine tardigrades in WoRMS lacked most of the data (e.g. references, type localities, distribution, type material repository, etc.), and most of the taxa were not validated.

The aim of the project was to complete the list of tardigrade marine species and to add all the information related to their systematics and distributions.

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

PDFs of the original descriptions of the species will be uploaded to WoRMS, for all 200 marine tardigrade species.

The original species name, type locality, environment and true authorship will be documented in WoRMS, based on the original descriptions, for all 200 marine tardigrade species.

Data about the original type material will be uploaded to WoRMS, for all 200 marine tardigrade species.

When available, pictures of the type material will be uploaded to WoRMS.

## 3. Results of the project:

271 taxa, comprising (204 species), were checked and revised according to their taxonomic status and their authorship, and synonymization reported. After this operation, the taxa have been validated.

348 references with the original descriptions, type localities and distributions of taxa were added. Now the references of the taxa are complete.

345 PDF files of the references with the original descriptions, type localities and distributions of taxa were collected (eventually scanned) and added to the database. Now the original references in PDF files are complete for all species description, also the references in PDF files reporting the distribution (geographic data) of the species are complete (only 3 are lacking).

For each species, it was reported and updated the original reference (and the PDF file uploaded) and the geographic information (the geographic coordinates and depth of the type locality and of all findings; the marine region according to [www.marineregions.org](http://www.marineregions.org); the kind of sediment in which the specie was found), when needed distribution notes were reported.

2032 geographic information related to species distribution have been added to the database.

The presence of type material (holotype, paratypes, allotypes), and the site in which it was conserved have been reported for all species for which the data were available.

Pictures and drawings of the type material of the species were uploaded by means of the original references in PDF files, therefore they were not uploaded separately.

The presentation/introduction webpage for the new "World Tardigrade Database" within Global Species Databases (GSD) of WoRMS has been prepared and the associated pictures collected.

#### 4. (Brief) description of the work/methodology

To check the taxonomic status and authorities of the marine taxa, the checklist of tardigrade species by Degma et al. 2015 (<http://www.tardigrada.modena.unimo.it>) and the paper by Kaczmarek et al. (2015) have been compared to look for discrepancies and used to fill the database.

The original PDF files of the species descriptions and species geographic information were collected from our bibliography, or asking to our local library to find the papers, or asking the collaboration of other colleagues. When the original papers were available, if not in PDF format the papers were scanned, and if not in Italian or English were translated, when possible, to extract the information required.

The WoRMS editors were contacted when some unclear situations were present.

5. Problems encountered and how it was solved (or expected solutions).
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An issue encountered was the extreme difficulty to obtain much of the literature cited in older 18th and 19th century publications.

Other problems were related to the fact that many references were cited in WoRMS several times with different format, leading to time consuming to find the right reference.

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