

# Report AquaRES workshop 28–30 September 2015, Brussels

*Report:* Aaike De Wever, Leen Vandepitte, Quentin Jossart

*Participants:* See below

## Summary

From the 28th to the 30th of September, taxonomic experts and data managers working on freshwater, marine and Antarctic species checklist gathered in Brussels to discuss the construction of such checklists and their exchange between the existing species registers [WoRMS](#), [RAMS](#) and [FADA](#). This meeting with 29 participants presented an opportunity to demonstrate tools for data entry & checklist quality control developed in the framework of [AquaRES](#), initiated a roadmap for the construction of an Antarctic species register and ideas for a series of joint papers involving both marine and freshwater experts.

Below, we aim to give a brief overview of the presentations and discussion topics covered and the plans for further data management and exchange. Where available, links to presentations in pdf format are provided.



## Introductory presentations

- AquaRES: Introduction to this collaborative project on aquatic species registers and to the goal of the meeting. [Presentation pdf](#)

## Brief introduction of the participating species registers

- Freshwater Animal Diversity Assessment (FADA) [Presentation pdf](#)
- World Register of Marine Species (WoRMS) [Presentation pdf](#)
- Register of Antarctic Marine Species (RAMS) [Presentation pdf](#)

## Taxonomic group presentations

- [Annelida-Hirudinea \(WoRMS\)](#), Jürgen Kolb
- [Annelida-Hirudinea \(FADA\)](#), Boris Sket
- [Annelida-Oligochaeta \(FADA & RAMS\)](#), Patrick Martin
- [Annelida-Polychaeta \(FADA\)](#), Christopher Glasby
- [Annelida-Polychaeta \(WoRMS\)](#), Geoff Read
- [Crustacea-Amphipoda \(WoRMS & FADA\)](#), Risto Vainola
- [Crustacea-Cladocera \(FADA\)](#), Alexey Kotov
- [Crustacea-Copepoda \(WoRMS & FADA\)](#), Geoff Boxshall
- [Crustacea-Decapoda \(WoRMS & FADA\)](#), Keith Crandall
- [Crustacea-Mysida \(WoRMS\)](#), Leen Vandepitte (for Jan Mees)
- [Nematoda \(FADA\)](#), Ursula Eisendle
- [Platyhelminthes \(WoRMS, RAMS & FADA\)](#), Tom Artois
- [Rotifera \(FADA\)](#), Christian Jersabek
- [Gastrotricha \(FADA\)](#), Maria Balsamo
- [Tardigrada \(WoRMS\)](#), Roberto Guidetti
- [Ostracoda \(FADA\)](#), Koen Martens
- [Ostracoda \(WoRMS, RAMS\)](#), Simone Brandão

## Workshop expectations

For the taxonomic group presentations, we asked to include expectations for the workshop. These were summarised by Quentin Jossart in [this presentation](#).

Main topics for discussion included:

- Solutions for improving data entry and checklist updating, introduction to the FADA and WoRMS/Aphia interface, use of same definitions, need for finer habitat categories
- Demonstration of new tools, easier handling of geographic data
- Checklist publication and joint paper

## In depth presentations of FADA and WoRMS

- The FADA database, survey results, website, integration in the freshwater data portal and data entry are discussed in [this presentation](#).
- The WoRMS website, tools and data entry and the Aphia database system [this presentation](#)
- The ideas for the AquaRES data exchange using of master databases is discussed [here](#), and the reflection by Geoff Boxshall [here](#).

## Presentation of tools

- The demonstrated tool include AquaCache - [aquacache.lifewatch.be](http://aquacache.lifewatch.be), which is also covered in [this presentation](#), and acts as a tool for checklist comparison. Other tools shown are the WoRMS checklist publication tool and distribution entry tool which can be accessed after logging in at [marinespecies.org](http://marinespecies.org). The FADA data import tool and checklist generation are covered in the [presentation mentioned earlier](#).

## Presentation of the European Journal of Taxonomy

Koen Martens presented the [European Journal of Taxonomy](#), an e-journal for descriptive taxonomy as a possible outlet for checklist papers. See [presentation pdf](#).

## WoRMS break-out session

This session was dedicated to give a hands-on demonstration of the WoRMS/Aphia system and discuss its advanced features. Please consult the [manual](#) for help with the system or get in touch with the [WoRMS team at VLIZ](#) if you are interested in such a demo/training.

## FADA break-out session

During this session, we looked into a few examples of how to correctly fill out the FADA-template and highlighted a number of frequent errors. This presented also an opportunity to discuss how the template could be improved. As summarised in [this presentation](#), suggestions included improving the instructions for using “reference keys” (RefKeys) and how to populate the “parasitic” field, and to explore the option to join or the taxon and faunistic sheet.

An important topic that was brought up during the debriefing to all participants on Wednesday, is the fact that we need a clear definition on when to use the “isFreshwater” flag for indicating the species to be exchanged from WoRMS to FADA. Although the option to work with a two term system (marine/continental + salinity class) was brought up, we agreed that the best working solution (which does not require database modifications) it to define Freshwater as “Freshwater (including anthallasic saline)”.

## Antarctic species register discussion

The discussion on the construction of a register of Antarctic terrestrial species (RATS) and on a Antarctic species register (including RAMS & RATS), focussed on a timeline and the people to be contacted for the steering committee.

During the breakout session it was concluded not to create a new specific RATS but rather an overarching RAS (Register of Antarctic Species) that includes RAMS. This would only necessitate having 2 Scientific steering committees.

The proposed timeline is to invite people to the new RAS by the end of October and to start contacting experts after that. Invited taxonomic experts would start contributing to RAS at their earliest convenience, with the aim to present this initiative at the next [SCAR Open Science conference](#), 20–30 August 2016 in Kuala Lumpur, Malaysia.

The baseline for the taxonomic data would be the Antarctic Plant database and the Antarctic biodiversity database hosted by British Antarctic Survey and the Australian Antarctic Division.

## Break-out sessions by organism group and perspectives on checklist generation and management

Following the break-out session by organism group on Tuesday, we tried to get an overview of the status of the different checklists, how editors see the way forward and how we can assist. This also included the question who is planning to integrate data in Aphia/WoRMS and further edit it there (on either short or long-term). Below is a brief overview of the feedback we received:

- *Annelida-Hirudinea (WoRMS)*, Jürgen Kolb: Already managed in Aphia.
- *Annelida-Hirudinea (FADA)*, Boris Sket: Draft freshwater list under construction in FADA-template, plans to include data in Aphia.
- *Annelida-Oligochaeta (FADA & RAMS)*, Patrick Martin: Freshwater checklist in FADA-templates nearing completion, further management in FADA for time being, might be involved in (marine) Oligochaeta database work in Aphia in the future.
- *Annelida-Polychaeta (FADA)*, Christopher Glasby: Freshwater checklist data in FADA template, to be exchanged/imported in Aphia, esp. with view to start Annelidabase.
- *Annelida-Polychaeta (WoRMS)*, Geoff Read: Plans for Annelidabase (cfr. Molluscabase)
- *Crustacea-Amphipoda (WoRMS & FADA)*, Risto Vainola: Need to get in touch with big (30) editor group to get agreement on importing the data from former FADA efforts (which needs to be updated) in WoRMS
- *Crustacea-Cladocera (FADA)*, Alexey Kotov: The FADA checklist is a “single editor effort”, the interest of the Aphia system is the possibility to attach additional info (e.g. pictures) to the checklist data.
- *Crustacea-Copepoda (WoRMS & FADA)*, Geoff Boxshall: Already managed in Aphia.
- *Crustacea-Decapoda (WoRMS & FADA)*, Keith Crandall: Data requires updating in WoRMS. Data in FADA template will be provided to both FADA and WoRMS for processing

- *Nematoda (FADA)*, Ursula Eisendle: Start in FADA Excel template, would be interested in using Aphia for adding geographic information.
- *Platyhelminthes (WoRMS, RAMS & FADA)*, Tom Artois: FADA data recently transferred to Aphia, citation to be followed-up. Integration of/with Turbellarian Taxonomic Database of Seth Tyler (incl. large reference collection) would be ideal.
- *Rotifera (FADA)*, Christian Jersabek: Manages Rotifera database, would require an export query to exchange with FADA/WoRMS. Is interested to explore possibility to use Aphia as a “safe haven” for his “single editor effort”, this would require importing pictures and references. As a first step, the export would focus on the checklist data with a link to the Rotifera database website. This list could act as a central taxonomic backbone for Rotifera.
- *Gastrotricha (FADA)*, Maria Balsamo: Will consult co-editors, interested in using Aphia.
- *Tardigrada (WoRMS)*, Roberto Guidetti: Recent editor, interested to start World Tardigrade database in Aphia, collaboration with Sandra McInnes.
- *Tardigrada (FADA, RAMS)*, Sandra McInnes: First export to FADA, future integration in Aphia.
- *Ostracoda (WoRMS, RAMS)*, Simone Brandão: Further checking overlap freshwater-marine, FADA data to be exchanged/imported into Aphia.

## Open Tree of Life

Keith Crandall introduced us to the Open Tree of Life project, which is based on tree synthesis and maps phylogenies on a taxonomic backbone (based on NCBI and GBIF taxonomy). See [here for the Presentation pdf](#) and [opentreeoflife.org](http://opentreeoflife.org).

## Plans for joint publication

Geoff Boxshall suggested to analyse the number of independent colonisations of freshwater from marine environments (or the other way around) for different organism groups, and also compare the number of parasites between marine and freshwater representatives. This could lead to a series of papers for selected organism groups for which there are a fair number of representatives in both environments.

Geoff offered to initiate this effort. Meanwhile Aaike discussed this idea with Koen and we agreed that we should be able to offer editorial support.

## Participants

**Full meeting (28–29–30 September):** Artois, Tom; Balsamo, Maria ; Boxshall, Geoff; Brandão, Simone; Convey, Peter; Crandall, Keith; Eisendle, Ursula; Glasby, Christopher; Guidetti, Roberto; Jersabek, Christian; Kolb, Jürgen; Kotov, Alexey; Martin, Patrick; McInnes, Sandra; Read, Geoff; Sket, Boris; Vainola, Risto

**Partial:** d’Udekem, Cédric (29th); Martens, Koen (29th); Mees, Jan (Excused); Segers, Hendrik (29th); Van de Putte, Anton (28–29th); Verleyen, Elie (29th)

**Organisers:** Bovit, Lorenzo ; Danis, Bruno ; De Wever, Aaike; Jossart, Quentin; Kapel, Michel; Vandepitte, Leen ; Vanhoorne, Bart