LifeWatch Data Grant 2014

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

Digenea

Final Report

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1. Data grant background

In 2013, a grant was approved for the updating the Digenea (Trematoda, Platyhelminthes), an important subclass of worms which are parasites of all major vertebrate and invertebrate groups, for the World Register of Marines Species. Specifically, checks of the existing species and the addition of valid and synonymised digenean names were needed.

In 2014, a second project was granted to support the work originally initiated, as it had become a much greater and more complex task than anticipated and, consequently, required a greater expenditure of time than expected.

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

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During the period of the 2013 grant, about 70-80% of the digenean taxa were updated.

It was estimated that c.2,100 species would be reviewed in the current project.

Based on the groups previously completed, dealing the remaining families would involve:

- The addition of c.400-500 names to the World Register of Marine Species.
- The revision of c.400-500 names already in the World Register of Marine Species

3. Results of the project:

Work on the Digenea (since 17/05/2013) resulted in:

Taxa created : 2,474 names

Taxa updated: 2,802 names

Taxa checked: 3,388 names

The current number of available digenean species in WoRMS is 8,031.

4. (Brief) description of the work/methodology

An extract of the existing names in WoRMS was provided, family by family, in the form of Excel files. The data in these were checked, revised and additional taxa added, after consulting various Internet searches, e.g. the Zoological Record, searches of the Natural History Museum (London) Host-parasite Database and the checking of recent revisionary works in the literature. Synonymies were indicated and major synonyms added to the file. In addition, the classifications were checked and updated, Latin suffixes of specific names were checked and corrected, and locality data were checked where needed. The updated Excel file was returned to VLIZ to be added to WoRMS.

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

In the case of bird parasites, especially those of coastal birds, it was not always easy to decide whether or not the parasite was marine or freshwater in origin. Even in the original publications, it is often not clear, and is known for certain only when the life-history data for the parasite are available (which is rare). This could only be solved by checking the original publications and/or estimated using one's experience.

Many genera have been synonymised in the recent literature (especially in the 'Keys to the Trematoda' - 2002, 2005 and 2008). As the latter only dealt with taxa down to the generic level, many species need to be moved. As it seemed nonsense to attribute valid species to unaccepted genera, as with other on-line databases, combinations, which have not been made in print, have been used in WoRMS.

Many modern taxonomists lack any knowledge of Latin (or the ICZN), so a surprisingly large proportion of recent species names encountered were malformed. Those in Latin did not pose too much of a problem, but those with a Greek basis consumed an inordinate amount of time to correct. It is also worth noting that some names, which had already been corrected in the literature, were often not used – a change perhaps assumed to be a *lapsus calami* or that the original must be correct.