

## Talking to the WoRMS: what can VLIZ web services do for you?

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Generally we would open our browser (Internet Explorer, Firefox, Chrome,...) if we would want to access information that is somewhere on the internet. However, things are rapidly evolving. Weather forecasts, real-time stock trading rates and news items appear on our mobile devices without any human interference. There are systems that allow the user to access information directly from within other applications. These systems are called web services.

Web services are systems that allow communication between two computers over the web. This communication is based on universally accepted standard protocols like HTTP (Hyper Text Transfer Protocol) , XML (Extensible Markup Language), SOAP (Simple Object Access Protocol),... Given the potential of these web services for providing support to its scientist costumers, VLIZ has set up a number of web services for accessing the available data and information resources.

A good example of these web services are the SOAP (Simple Object Access Protocol ) WoRMS web services (<http://www.marinespecies.org/aphia.php?p=web-service>). The WoRMS web services allow users to consult the World Register of Marine Species (WoRMS) and perform taxonomic data quality control by matching their own species lists with a standard register of taxonomic names. This standard register is continuously being checked and updated by taxonomic experts from all over the world. Using the web service makes it possible for the user to access the most recent and up-to-date information.

Different web services have been defined for each of the operations that were considered useful:

- get the AphiaID for your taxon
- check the spelling of your taxa
- get the authority for your taxa
- get the full classification for your taxa
- resolve your unaccepted names to accepted ones
- get all synonyms for a taxon
- match your species list
- resolve a common name/vernacular to a scientific name
- get the common name(s)/vernacular(s) for a taxon
- get the sources/references for a taxon
- get the WoRMS citation for a taxon
- get the direct children for a taxon

The demo session demonstrates the applicability and added value of the WoRMS web services in Excel and R software.