# Tutorial for the World Register of Introduced Marine Species (WRIMS)

The World Register of Introduced Marine Species (WRIMS) was officially launched in March 2015 and aims to be the most complete register for marine alien species worldwide. Given the amount of information available on alien species, the WRIMS chief-editor (Shyama Pagad) has decided to create a global network of thematic editors, who can help keep the database up-to-date.

WRIMS contributes to the Biological lot of the European Marine Observation and Data Network (EMODnet) and – as part of the World Register of Marine Species (WoRMS) – it is also a valuable contribution to the LifeWatch Taxonomic Backbone which aims at bringing together both taxonomic and species-related (ecological) trait data.

Both initiatives – EMODnet & LifeWatch - support the compilation of WRIMS. LifeWatch is a distributed virtual laboratory which will be used for different aspects of biodiversity research. The taxonomic backbone of LifeWatch aims at bringing together taxonomic and species-related data and at filling the gaps in our knowledge. EMODnet is a long term marine data initiative funded by the European Commission Directorate-General for Maritime Affairs and Fisheries (DG MARE) underpinning its Marine Knowledge 2020 strategy.

The IUCN SSC Invasive Species Specialist Group (ISSG) is the lead partner in this initiative. Links have been provided to marine invasive species profiles featured in the Global Invasive Species Database (GISD) their flagship knowledge product. ISSG is committed to developing species profiles for all known marine invasive species.

This Tutorial is specifically written for the WRIMS Thematic Editors, explaining how to add and edit information and how to make sure that all added data is a structured as possible and easily searchable and retrievable from the database. We urge all WRIMS editors to follow these instructions.

If at any time questions or issues arise, please contact the WoRMS Data Management Team at the Flanders Marine Institute (VLIZ) (info@marinespecies.org) for help.

#### Important links:

- WRIMS: <a href="http://marinespecies.org/introduced/">http://marinespecies.org/introduced/</a>
- WRIMS terminology: <a href="http://marinespecies.org/introduced/wiki/">http://marinespecies.org/introduced/wiki/</a>
- WoRMS: <a href="http://marinespecies.org/">http://marinespecies.org/</a>
- EMODnet Biology: http://www.emodnet-biology.eu/
- LifeWatch Belgium: <a href="http://www.lifewatch.be/">http://www.lifewatch.be/</a>
- LifeWatch Taxonomic Backbone: <a href="http://www.lifewatch.be/en/taxonomic backbone">http://www.lifewatch.be/en/taxonomic backbone</a>
- Marine Regions Gazetteer: <a href="http://www.marineregions.org/">http://www.marineregions.org/</a>

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Go to <a href="http://marinespecies.org/introduced/">http://marinespecies.org/introduced/</a> and log in.

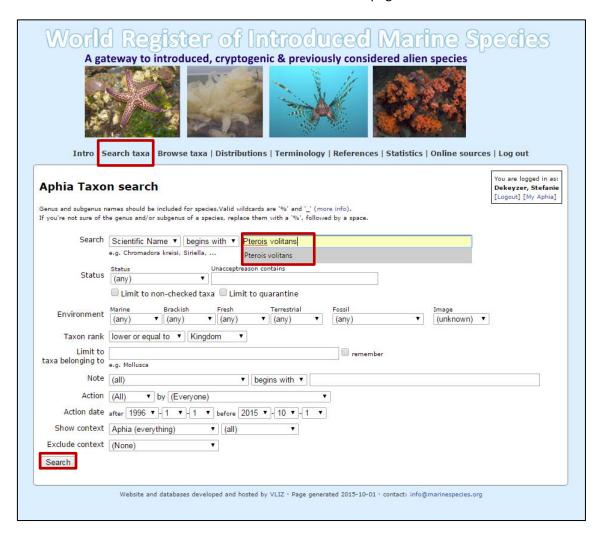
If you lost your password, go to <a href="http://marinespecies.org/introduced/aphia.php?p=lostpass">http://marinespecies.org/introduced/aphia.php?p=lostpass</a>

If you have any problems logging in, contact info@marinespecies.org



#### 1. How to search for a taxon

Go to "Search taxa" and start typing the taxon name in the search box. Select the right option from the picklist. Click on "Search". You are redirected to the taxon details page.



# 2. How to add a new species distribution to WRIMS

All information related to the introductions and invasiveness of a taxon is linked to distributions.

To add a new distribution, you have two options:

- a) Add a new distribution by selecting a place name from a pick list [add distribution]
- b) Add a new distribution by selecting an area on a map [add map distribution(s)]



# a) How to add a new distribution to WRIMS - selecting place name from picklist

Click on [add distribution] (see image above). This will open a new window "Aphia add distribution record".

Aphia add distribution record				
Geo Unit *	Belgian part of the North Sea			
des sinc	[new geounit]			
Status	valid ▼			
Source	Add existing source:			
	[Pick]			
	remember			
Unaccept				
Reason	Add existing source:			
Source	Add existing source.			
V-P-I T	[Pick]			
	Acanthogobius flavimanus (Temminck & Schlegel, 1845)			
Туре	Type locality Map Specimen Vagrant			
Introduction Origin	(select) ▼			
Introduction	(select) v			
Invasiveness	(select) ▼			
Introduction Occurrence	(select) ▼			
Note				
Latitude	° dec. deg ▼			
Longitude				
	Shallow Deep Units ® m • ftm			
Abundance	Min Max			
Begin Date	▼ ▼ (yyyy-mm-dd)			
End Date	▼ ▼ (yyyy-mm-dd)			
	Cancel			

• **Geo Unit (mandatory)**: Start typing the place name and select the correct option from the pick list.

Please note that we aim to standardize all distributions in WRIMS to:

- c) IHO Sea Areas
- d) Marine Regions (intersect between IHO Sea Areas and Exclusive Economic Zones (EEZs))
- e) Nations (we aim to avoid to use this since we are dealing with marine species)

More information about these geo units can be found on <a href="http://www.marineregions.org/sources.php">http://www.marineregions.org/sources.php</a>

- Status (highly recommended): There are 3 possibilities for the status of a distribution record:
  - Valid: the record is certainly valid
  - Doubtful: doubts on whether the species really lives there
  - Inaccurate: taxon cited for this area but it is clear that it does not live there (e.g. misidentification)

# Source (mandatory)

Here you can add the source for the taxon distribution. If the source is already available in the database, type "author"%"year" in the source box and click on 'Pick'. A picklist will appear with all combinations of the author and year you provided. Select the right one. If the source is not available yet in the database, see further below "How to add a new source to WRIMS".

#### • Unaccept Reason (highly recommended in case of misidentification)

Reason why the distribution is doubtful or inaccurate (e.g. misidentification).

#### Unaccept Source (highly recommended in case of misidentification)

Source where the doubt or inaccuracy regarding a specific distribution is explained.

#### Type (not applicable for introduced species)

For more information, see the WoRMS manual: http://www.marinespecies.org/aphia.php?p=manual

# Origin, Invasiveness, Occurrence (mandatory)

Select the correct terms (for more information: <a href="http://marinespecies.org/introduced/wiki/">http://marinespecies.org/introduced/wiki/</a>).

#### Note (recommended)

Here you can enter the detailed location information (e.g. a certain beach, caught by fishermen).

#### • Latitude and longitude (optional)

If desired and/or available, you can add the coordinates of the point location where the introduced species was recorded. You can choose between the decimal or DMS (Degrees, Minutes, Seconds) format, click on DMS to switch. For decimals, do not forget to use the minus sign for South and West. For example 40S = -40.

#### Depth (optional)

The depth at which the introduced species was recorded in that area.

#### Abundance (optional)

Any information about how many introduced species were documented for this distribution.

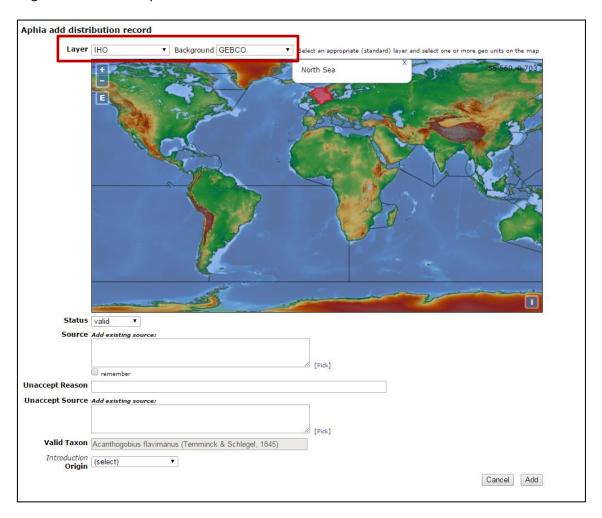
#### Begin date (recommended)

The begin date is used to document the year (and perhaps even month and day if available) of introduction or first report.

If all necessary fields are filled in, click on "Add".

# b) How to add a new distribution to WRIMS - selecting area on map

Click on [add map distributions]. This will open a new window "Aphia add distribution record". Select one or more geo units on the map.



This option is recommended when 1 source is mentioning several areas where the species is occurring. This option can be seen as a more rapid way to enter many distributions from one source. When working with this map-option, only 1 type of layer can be used, e.g. all added distributions need to be IHO's or countries.

# Layer (mandatory)

Select the appropriate (standard) layer (IHO or Marine Regions for WRIMS).

# Background

Background of the map. You can choose between World continents, World Ocean Base or GEBCO.

- Status (highly recommended): There are 3 possibilities for the status of a distribution record:
  - Valid: the record is certainly valid
  - Doubtful: doubts on whether the species really lives there
  - Inaccurate: taxon cited for this area but it is clear that it does not live there (misidentification)

#### Source (mandatory)

Here you can add the source for the taxon distribution. If the source is already available in the database, type "author"%"year" in the source box and click on 'Pick'. A picklist will appear with all combinations of the author and year you provided. Select the right one. If the source is not available yet in the database, see further below "How to add a new source to WRIMS".

#### Unaccept Reason (highly recommended in case of misidentification)

Reason why the distribution is doubtful or inaccurate (e.g. misidentification).

#### • Unaccept Source (highly recommended in case of misidentification)

Source where the doubt or inaccuracy regarding a specific distribution is explained.

#### Origin (mandatory)

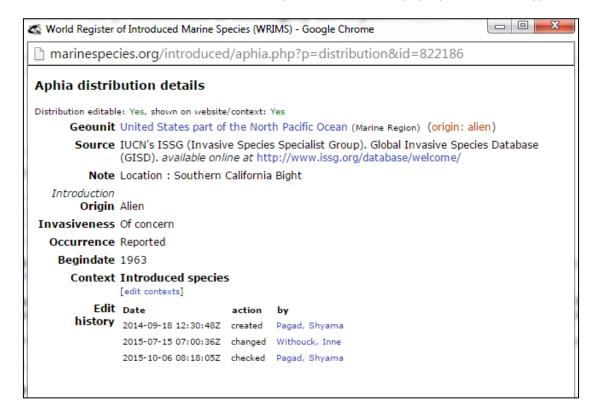
Select the correct terms (for more information: http://marinespecies.org/introduced/wiki/).

When using this map entry tool, it is not possible to add occurrence and invasiveness. For this you will need to edit the distribution once it is added to the species page (see further below).

If all the necessary geo units are selected and all information is filled in, click on "Add".

! Please note that information regarding abundance, impact, management, population trends, and vector dispersal is not entered at the distribution level, but is stored in a note at species level. See further below "How to add a note to WRIMS".

All distribution information entered can be found in the distribution details page. Go to the species details page and click on "details" next to the distribution you want to view. A pop-up window will appear.

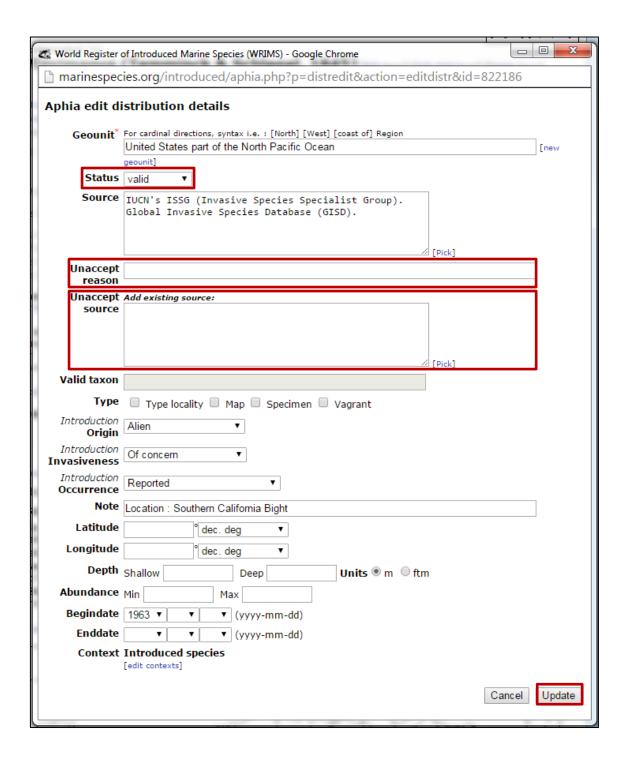


# 3. How to edit a distribution in WRIMS

Go to the taxon details page of the species, and click on "Edit" next to the distribution you want to change.



#### A pop-up window will appear:



In case of a doubtful distribution or species misidentification, you need to edit the following fields:

#### **Status:**

- Valid: the record is certainly valid
- Doubtful: doubts on whether the species really lives there
- Inaccurate: taxon cited for this area but it is clear that it does not live there (e.g. misidentification)

#### **Unaccept Reason:**

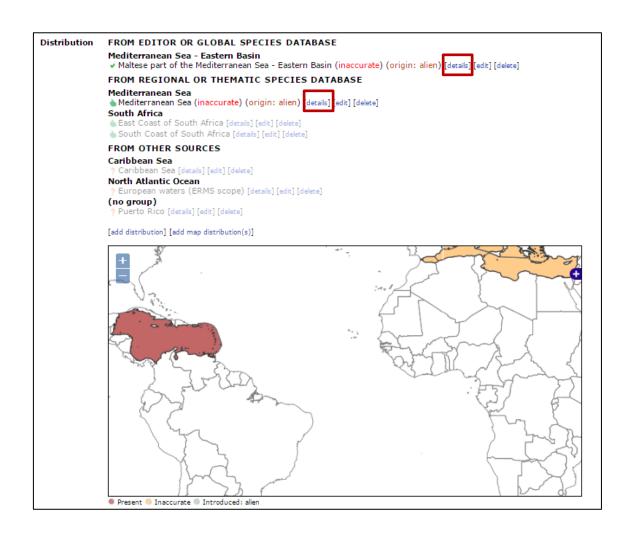
Here you can type the reason why the distribution is doubtful or inaccurate (e.g. misidentification).

# **Unaccept Source:**

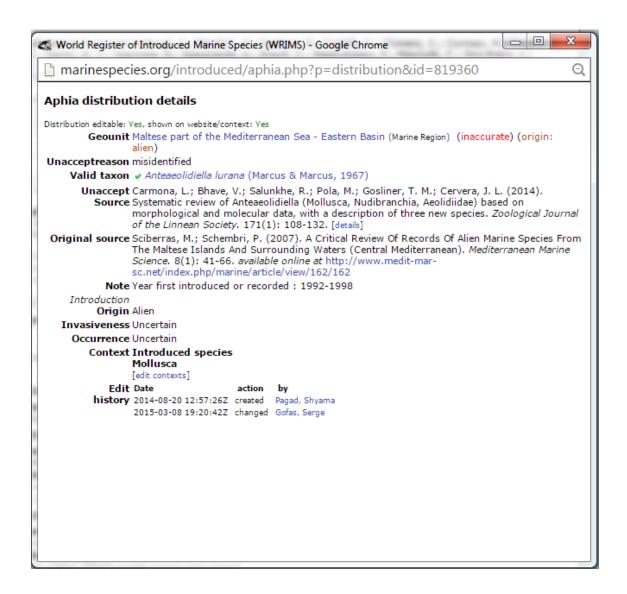
Pick the source where the doubt or inaccuracy regarding a specific distribution is explained.

When you have performed the necessary changes, click on "Update".

The doubtful or inaccurate distributions will appear as such in the distribution list on the taxon detail page. They will also appear orange on the map below the distribution list.

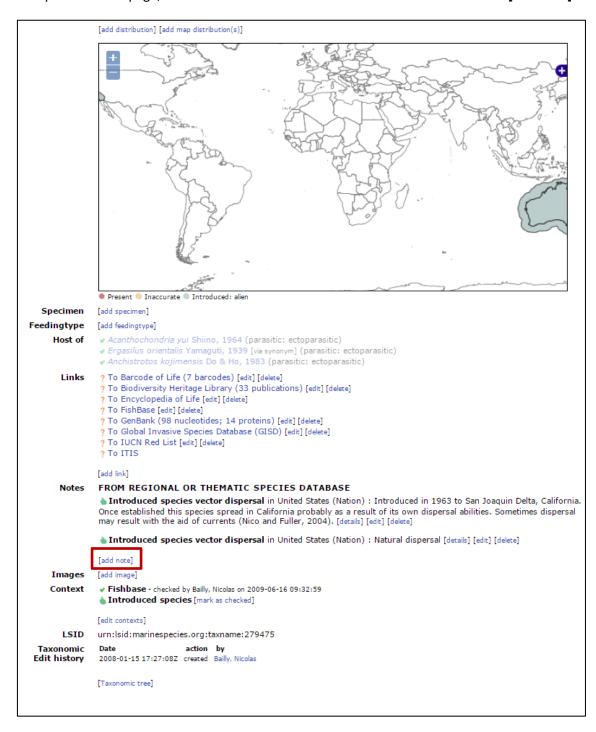


When you click on "**Details**" next to the doubtful or inaccurate distributions, a pop-up window will appear, displaying all information regarding the doubtful or inaccurate distribution (Unaccept Reason and Unaccept Source).

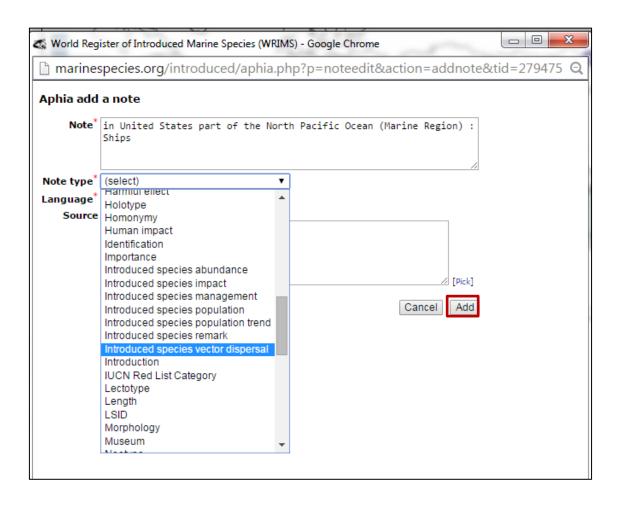


# 4. How to add a note to WRIMS

Go to the species details page, scroll down to below the distribution section and click on [add note].



A pop-up window will appear.



#### • Note (mandatory)

We strive to keep the information in the notes as structured as possible, and to keep the link with the species distribution. Therefore we recommend to use the following structure:

((a) I a so I (b) a so I (b) a so I (b) a so I (c) a so I (c

"in [area] (type): term" (e.g. in United States part of the North Pacific Ocean (Marine Region): Ships).

#### Note type (mandatory)

For WRIMS, 7 note types are relevant (see screenshot above): Introduced species abundance, Introduced species impact, Introduced species management, Introduced species population, Introduced species population trend, Introduced species remark, and Introduced species vector dispersal (for more information about the used terminology and definition, go to <a href="http://marinespecies.org/introduced/wiki/">http://marinespecies.org/introduced/wiki/</a>).

#### Language (mandatory)

**English** 

#### Source (mandatory)

Here you can add the source for the taxon distribution. If the source is already available in the database, type "author"%"year" in the source box and click on 'Pick'. A picklist will appear with all combinations of the author and year you provided. Select the right one. If the source is not available yet in the database, see further below "How to add a new source to WRIMS".

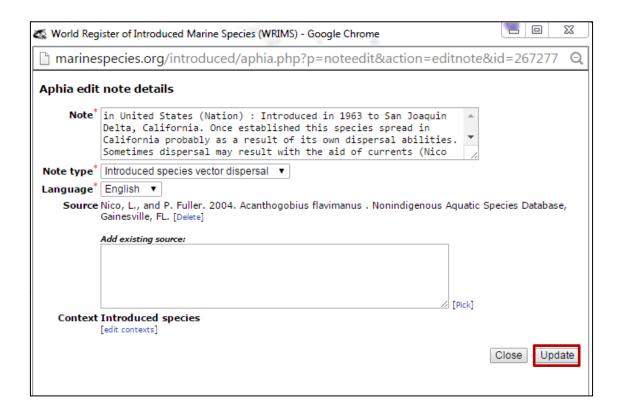
If all necessary fields are filled in, click on "Add".

#### 5. How to edit a note in WRIMS

Go to the species details page, scroll down to below the distribution section and click on **[edit]** next to the note you want to change.

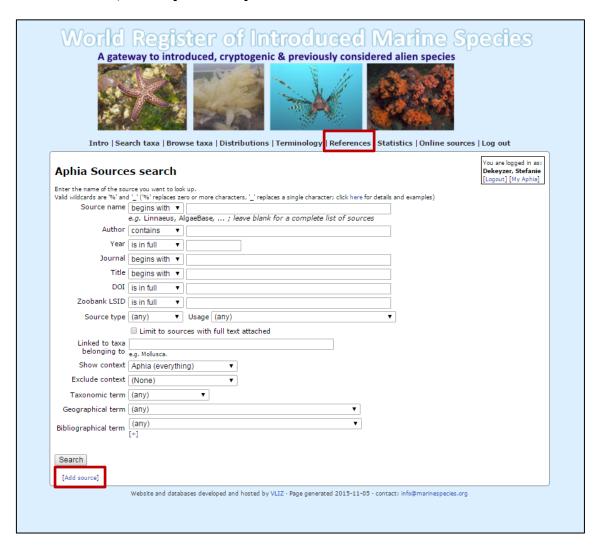


A pop-up window will appear. When you have performed the necessary changes, click on "Update".



# 6. How to add a new source to WRIMS

Go to "References". First you should check if the source is already available in the database, to avoid duplicate entries. If not, click on [add source].



Instead of storing the source in just one field, sources can now be stored more efficiently, in a so-called "atomized" way.

The "Source name" field is split up into 6 fields: Digital Object Identifier (DOI), author, year, title, journal and suffix (volume, pages, etc.). When entering new sources, these fields can be filled in manually, but sources can also be completed and/or atomized automatically when the DOI, ZooBank LSID or full citation is available.

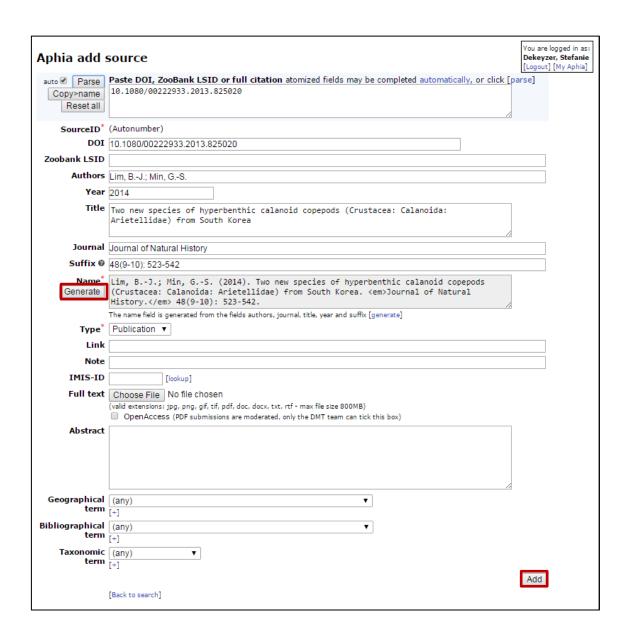
Paste the DOI, ZooBank LSID or full citation in the first field. If the "auto" box is checked, atomized fields will be completed automatically. You can also opt to uncheck the "auto" box and do the atomization manually by clicking on "Parse".

Aphia add	source	Dekeyze	ogged in as: er, Stefanie [My Aphia]
auto Parse Copy>name Reset all	Paste DOI, ZooBank LSID or full citation atomized fields may be completed automatically, or click [pa 10.1080/00222933.2013.82502	rse]	
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Full text	Choose File No file chosen (valid extensions: jpg, png, gif, tif, pdf, doc, docx, txt, rtf - max file size 800MB)  OpenAccess (PDF submissions are moderated, only the DMT team can tick this box)		
Abstract			
Geographical term	(any) ▼ [+]		
Bibliographical term	(any) ▼ [+]		
Taxonomic term	[(any) ▼ [+]		
	[Back to search]	Add	

Make sure the parsing of the fields was done correctly; a manual check is highly recommended to verify the automatically parsed data. If mistakes would have occurred, you can edit the fields manually. In case of manual changes, don't forget to click on "**Generate**", to complete the source name field.

It is also possible to add additional information (note, abstract, etc.), and to upload the full text publication. The maximum file size is set at 800MB. If you would like to add many sources (bulk upload), upload a larger file or if you would experience any problems during the uploading, please contact us.

If all fields are filled in correctly, click "Add", and the atomized source will be added to the database.



The automatic atomization of sources is based on external services: CrossRef, ReFindit and FreeCite. More information can be found <a href="here">here</a>.

We highly recommend to use the automatic parsing and atomization of sources (i.e. if the DOI or ZooBank LSID is available), since this significantly reduces the risk of having duplicate sources in the database.

# Final note:

As thematic editor, you cannot add/change taxonomic information yourself. These rights are reserved to the WoRMS taxonomic editors (list available at <a href="http://www.marinespecies.org/aphia.php?p=editors">http://www.marinespecies.org/aphia.php?p=editors</a>).

If you would come across any taxonomic issues (wrong species, missing species, etc..), please let us know at <a href="mailto:info@marinespecies.org">info@marinespecies.org</a>, with sufficient information (e.g. source) and we will cross-check with the responsible taxonomic editor(s).

The other way around, taxonomic editors may have more recent information or taxonomic insights that might be in contradiction with what some alien papers mention. In these cases, communication between the WRIMS and WoRMS editors will be set up, to make the information in WRIMS as correct and up-to-date as possible.

Taking into account the above, we recommend to not delete wrong information from WRIMS, but to flag it as being incorrect, specifically for the distribution information. This way, it can be avoided that someone else re-entered this incorrect information and that we need to go through the correction-process again.