


World of Crayfish

A short guide on how to complete the provided Excel template

Hello! First of all, thank you for contributing to this project!

This document will help you understand better how to complete the provided Excel template. Each column of the template is explained below.

- 1) The **first section** lets you specify what the source for the provided information is.
 - **DOI**
 - Represents the unique identifier of the source article
 - This field is **mandatory** if a DOI exists for the source article
 - If the DOI is not available, leave the field blank
 - **Caution: be careful when use to drag for auto filling the excel cells, it automatically fill successive increasing values altering the original DOI!!!!**
 - **URL**
 - Represents the URL where the article can be found
 - If the DOI is not available for the article
 - If the DOI is available, this field is **no longer required**
 - **Citation**
 - Represents the citation text for the source article APA format (search the article title in <https://scholar.google.com>, click the cite symbol () and select the APA format)
 - If the DOI is not available for the article, this field is mandatory
 - If the DOI is available, this field is **no longer required**
 - If the data are not published but they belong to you or have the permission to use, then type „**unpublished**”

- 2) The **second section** consists of
 - **Location** represented by coordinates information in the form of **Latitude** and **Longitude**. This field is **mandatory**. Each coordinate must be placed in a separate column. Please do not mix latitude and longitude. We strongly recommend using Decimal Degrees (DD), numeric values only (no symbols)

such as °, ', ", N, S, E, W). Use the minus sign (-) to indicate western hemisphere (longitude) and/or southern hemisphere (latitude):

- Decimal Degrees – DD (Lat: 24.1894 and Long: 14.3236)

Alternative formats (accepted, but will be converted internally):

- Degrees, Minutes and Seconds - DMS (Lat: 24°11'22"N and Long: 14°19'25"E)
- Degrees and Decimal Minutes – DDM (Lat: 24°11.22'N and Long: 14°19.25'E)

- **Accuracy**

- Represents a flag that specifies how accurate the provided coordinates are related to the place of field observation
- This field is mandatory
- Can have one of these values:

Value	Meaning	Precision*
high	data extracted from published maps at hydrographic level; data extracted from published toponymy with good details; or exact coordinates;	being able to pin-point the precise river/lake – useful for SDM
low	data from continental/national grid systems; data locations estimated from published maps at national level; data extracted from published toponymy with low details	not being able to pin-point the precise river/lake – useful for range estimation

Note! Do not store multiple records in the same spot for the same species and same year. Pay attention to the function to claim extinction for a previously recorded population/spot (see below). The same rationale for *A. astaci*, very important to claim extinction if an infection outbreak was certainly documented as being eradicated.

IMPORTANT: The next two sections are optional. However, completing at least one of them is mandatory. Therefore, you can complete them in the following ways:

- Only the green section, if the observation includes only a crayfish species
- The green and the red sections, if the observation includes the presence of a pathogen on a certain crayfish species
- Only the red section, if the observation includes only the presence of a pathogen, but not discovered on a certain crayfish species (i.e., eDNA)

If one of the fields in a section is completed, the validation rules below will apply.

- 3) The third section lets you specify what crayfish species observed at the specified coordinates.
 - **Crayfish scientific name**
 - Represents the scientific name of the observed crayfish species

- This field is **mandatory**
- **Population status**
 - Characterize the status of the meta-population
 - Can have one of these attributes:
 - **indigenous**
 - **non-indigenous**
 - This field is **mandatory**
- **Occurrence origin**
 - Characterize the occurrence provenance
 - Can have one of these values:
 - **native**
 - **introduced**
 - **alien**
 - **cryptogenic**
 - **Write "type locality" here if you are indexing the paper in which a species has been described. This will make it possible to display this information on the map, which will be very useful for future searches**
 - This field is **mandatory**
- **Year of record**
 - Represents the year when the observation of the crayfish species (or documented extinction) was made
 - This field is **mandatory** (if this is unknown, then use the year of paper publication)
- **NCBI accession code**
 - Represents the accession number in NCBI's GenBank for **any type** (e.g., CO1, 16S, mitogenome) of sequence (example: MK645042), no label of sequence type needed
 - This field is **optional**, multiple codes can be listed separated by comma
- **Claim extinction**
 - If there is certain information that a crayfish population has completely disappeared from a specific locality, then insert a distinct record and type "Extinct" in the Claim_extinction cell. This kind of record will flag as extirpated the localities from current distribution maps starting with the information provided by Year_of_record cell. This local extirpation is default set for 500 m radius buffer around the provided location, but users can set their own value (filling into the cell Extirpation_buffer, expressed in meters). This record must be a distinct line in the Excel file, with an appropriate reference source (including Unpublished if assumed by expert) proving the extinction. **IMPORTANT: Use the "Comments" field to briefly describe the cause of local extinction using the following categories: invasive: [species name], disease: [pathogen name, ideally, consider a separate entry in the database for the pathogen record], habitat loss: [brief description], or combined invasive + disease, or unknown.**

4) The **fourth section** lets you specify the details of the crayfish plague pathogen identified at the specified coordinates

- **Pathogen/Symbiont scientific name**

- List *Aphanomyces astaci* or *Branchiobdella spp.* (use the full name) detection.
- This field is **optional**
- The pathogen/symbiont can be either on a crayfish (species name will be listed in the crayfish specific section) or detected based on *eDNA*. For the latter instance, the crayfish species box left empty.

- **NCBI accession code**

- Represents the accession number in NCBI's GenBank sequence for the pathogen/symbiont (**not for the crayfish host**)
- This field is **optional**

- **Genotype group**

- Represents the genotype group of the identified pathogen/symbiont
- This field is **optional**
- Can have one or more of these values (values must be separated by /):
 - A
 - B
 - D
 - E
 - Up
 - Name other, if described

- **Haplotype**

- Represents the mitochondrial haplotype (rnnS + rnnL) of the identified pathogen/symbiont
- This field is **optional**
- Can have one of these values:
 - d1
 - d2
 - Name other, if described

- **Year of record**

- Represents the year when the pathogen/symbiont was sampled
- This field is **mandatory** (if this is unknown then the year of paper/publication will be registered here)

5) The **fifth section** lets you provide any additional information that might be worth mentioning

- **Comments**

- Represents any additional information that might be worth mentioning
- This field is **optional**

- **Confidentiality level**

- Referring to the degree of openness that the contributor has chosen for their data
 - Use "0" or leave the cell blank for no restrictions - data will be displayed and downloaded with the exact location
 - Use "1" for normal restrictions - non-registered users will see data displayed in a 25 km hexagonal shape and downloaded as present for the selected area but with no specific location. Registered users will see data displayed and downloaded with the exact location
 - Use "2" for high restrictions - all users will see data displayed in a 25 km hexagonal shape and downloaded as present for the selected area but with no specific location. Registered users will see data displayed and downloaded with the exact location only upon a well-reasoned request approved by the IAA
- **Contributor**
- Represents the name of the contributor to the database (not necessarily the author of the source paper)
 - This field is **mandatory**

Save the final document with the label „WoC-Country-Name“.

Important!

World of Crayfish™ can be a repository option for your datasets involving distributions. We can provide „accession codes“ for your unpublished records.