USER MANUAL

TEMPLATE ABCDIMPORT2DARWIN: ENCODING DATA IN XML-FILE (ABCD SCHEMA STRUCTURE)

Version		Author(s)	Date	Description
1.0	a) ABCDImport2DaRWIN _Mineral_v1.0.xlsm b) ABCDImport2DaRWIN _Litho_v1.0.xlsm + Template_Litho_localities.xlsx	MAdam	February 2014	Testing version of the template for import
1.1	a) ABCDImport2DaRWIN _Mineral.xlsm b) ABCDImport2DaRWIN _Litho.xlsm + Template_Litho_localities.xlsx	Madam	September 2014	Production version Adaptations and improvements based on remarks from other templates

For information about ABCD - Access to Biological Collection Data: http://wiki.tdwg.org/ABCD
For information about EFG extension - Extension for Geosciences: http://www.geocase.eu/efg

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UPDATES

- New fields for specimen storage corresponding to the “Container” Widget in DaRWIN:
    - Container
    - Container Type
    - Container Storage
    - Sub Container
    - Sub Container Type
    - Sub Container Storage

  The boxStorage field is not available anymore since there was a conflict with the new fields.
- New fields for sampling location, for extended possibilities
- Add possibility to reference more than one external link or more than one picture/related file (have to be separated by “;”)

  Note: For RBINS users, if your pictures/related files are stored in datastore, be careful to reference url as “smb://datastore/darwintmp/…”
- Since the use of a dot (“.”) in specimen ID is frequent, several tests were made to see if an error could occur. It appears that the use of a dot surrounded by letters is not a problem. Example: INV.2367. Remember that it will be stored in the “code” field of the “Codes” widget and not split into a prefix and a code in the code widget. If you wish to add a prefix for one collection, the curator of the collection should edit the collection to explicitly give a default prefix to the code. A function was also added to the macro, so that some special characters are corrected. Nevertheless, it is still important to avoid special characters in Excel cells.
- Improvement of the export function in the macro.

USER INFORMATION

Template tested with Excel 2007.

1. Open the template document and save it with a custom name “[CUSTOMNAME].xlsm“.

If a Security Warning appears, then Enable macros (click options… and select “Enable this content”).

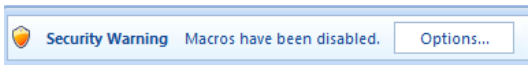

Figure 1 - Security Warning for macros

You can also access these options through the Excel Options > Trust Center ❶. Then, click on “Trust Center Settings” ❷. In the new window, in “Macro Settings” ❸, check “Enable all macros” ❹.

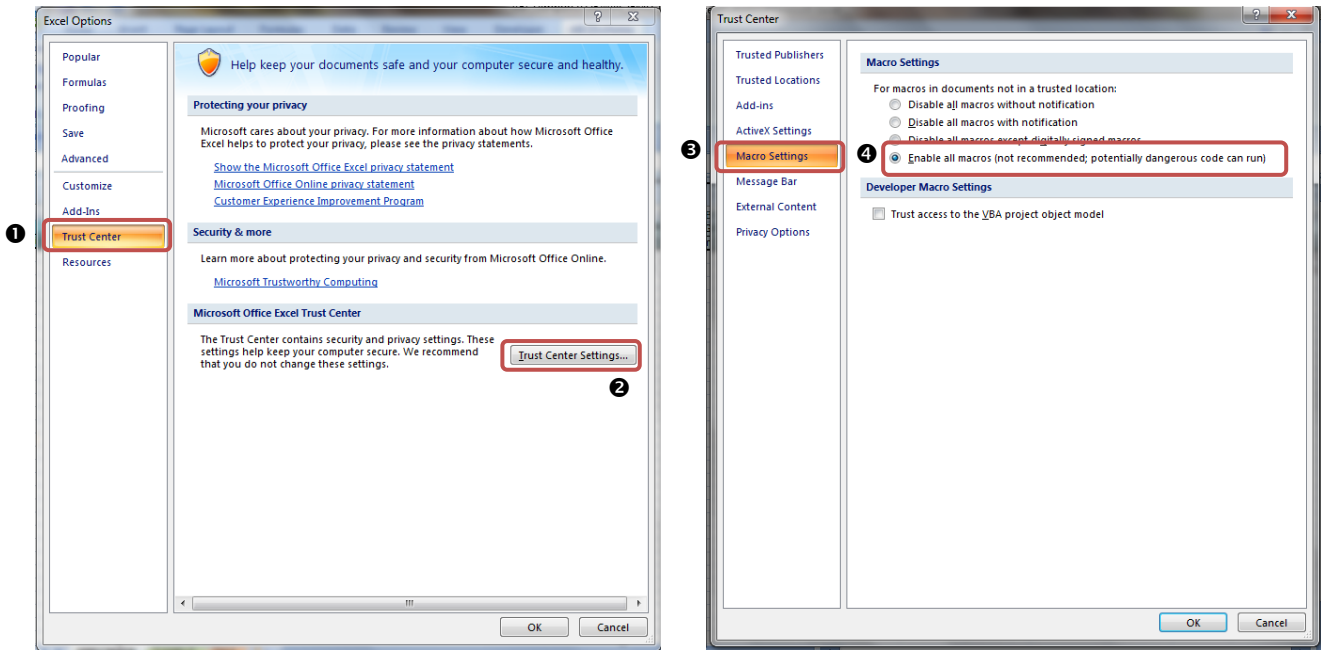

Figure 2 - Excel options: enable macros

2. Fill in the worksheet RECORDS

Information about the specimen is stored in a worksheet named RECORDS.

3. Before export, some checks can be made

For more details about the tools available for checking before export, see Technical Information. The *Quick Practical Guide* below gives you some practical information on how to use of the template. It gives you some minimal advices to complete the template properly. Nevertheless, we strongly advise you to read this user manual completely.

4. Click on "Export2ABCD" to export the data

When running the Export2ABCD code, an XML-file following the ABCD schema structure is produced and this XML-file can be saved in a folder defined by the user. During the export, Excel is unavailable (the worksheet could disappear or turn into blue during the process). This may take several minutes, depending on the number of lines and the quantity of information.

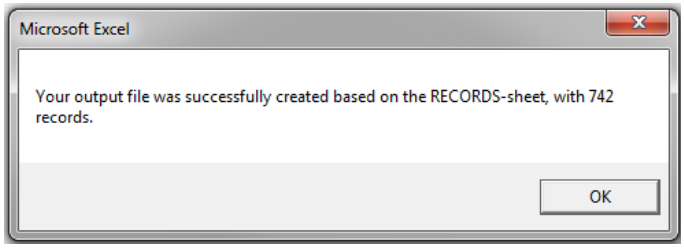

Figure 3 - Summary of your export

QUICK PRATICAL GUIDE

Template structure

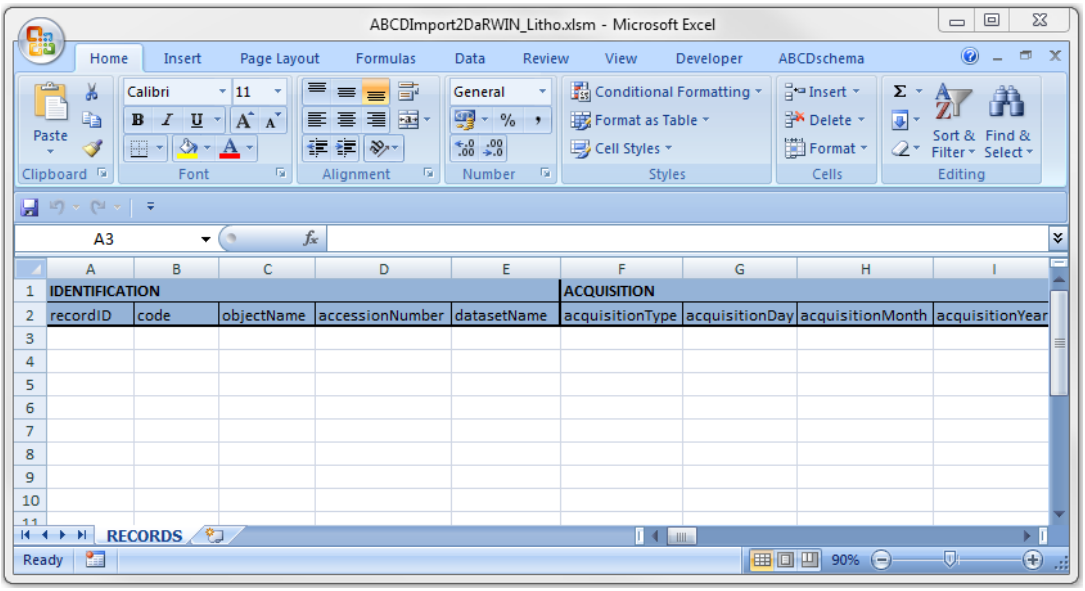

Figure 4 - Template structure

Verify the presence of:

- **The worksheet named 'RECORDS', containing information about your records**
- **A title for each column**, written **in the second row** and using the exact same name and spelling as in the pre-established list of supported fields available in the appendix of this document. If this condition is not fulfilled, the information will not be exported to the XML ABCD formatted file. You can add as many columns as you wish, for internal purpose but the information they contain will not be exported to the XML ABCD formatted file.
- **A column for IDs**, named 'recordID'
  An ID is not required, but remember that links between specimens and hosts or other kind of units (e.g., part of object) are established thanks to it. Using the voucher/accession number attributed in the museum collections as the ID will allow to retrieve information of each linked object within DaRWIN. If you use your own IDs, this link will not be possible…

Values

No values are required. Nevertheless, remember that this tool helps you to import data into DaRWIN, as collection management system. Incomplete information is therefore of limited interest and relevance.

Do not use special characters (=, +, /, *, &, #, $, etc.) in Excel cells, neither as first character nor in subsequent characters. Excel is a data analysis software, therefore it will try to interpret these characters and this may raise errors during export to the XML ABCD formatted file.

If you don't have information for a cell, leave it blank. This should limit the presence of uninformative values in your exported XML ABCD formatted file or possibly the number of errors to correct during the import into DaRWIN.

For some columns, the program expects **specific formats or predefined values** given in the list of supported fields available in the appendix of this document. If this format is not respected, the value cannot be taken into account or replaced by default values and you could end up with errors or unexpected values in your exported XML ABCD

formatted file.

Some good practices when you fill in the template:

- ***People name***
  - **The more complete the name is, the better**. You should give the first name, the last name and the title.
  - For the same person, **always use the same spelling**.
  - **Avoid irrelevant values** as "anonym." or "NA".
  - **You can reference more than one person**: their names should be separated by a semicolon.
- ***Sampling code***: **One code is used for one collecting event**. A collecting event is defined by all the fields included in the "Collecting event" in the list of supported fields available in the appendix of this document. If the value in one of these fields is different, another sampling code should be defined as well.
- ***Dates* should always be complete**. Supported formats are: YYYY, YYYY-MM and YYYY-MM-DD. If you only have incomplete information or if you want to add textual part in your date, use the fields dedicated to comments.

Checks

You can check if your latitudes/longitudes are well-formatted, the presence of duplicated IDs and the correct structure of the template (name for RECORDS-sheet and column titles), by using the **buttons in the groups "Tools" and "Checks" in the custom "ABCDschema" menu**.

Use filter (select the heading row, click on "Filter" in the "Data" menu) to check your values. You can **see whether the expected values or formats were used**.

One template = one xml file = import in one collection in DaRWIN

It is not possible to import only a part of records from one xml ABCD formatted file in one collection and the remaining records from the same file in another collection. Once the xml file is created, each record it contains can be imported in one unique collection.
If some specimen are not yet published or should not be visible for everybody, they should be stored in another template and imported in a private collection. You can always transfer these specimens to another collection once they are published. You can for example create a collection and add a public sub collection and a private one, that can be grouped later.

Number of "exportable" rows

The template should not contain more than 3000 rows. If you wish to import more records than 3000 in one collection DaRWIN, you should split this dataset into different templates of 3000 rows.

TEMPLATE STRUCTURE

Two templates are available, one for minerals specifically and one for other sort of objects. The basic structure is very similar, the template for minerals consisting however of a smaller amount of columns.

The template for encoding consists of the worksheet RECORDS, containing data with regard to the specimen (collecting, identification, etc.) where the “recordID” column is required (even if the cells are left blank).

This template was designed to minimize the requirements when encoding, which supposes that your data is clean. This allows for a large range of data that can be encoded, but also implies that the values encoded in the Excel cells will be exported as such. In some cases, for example in fields containing date, character strings or alphanumerical data could raise errors during the import.

During the export, the macro will look for which information is stored in the template thanks to the title row (located in the second row of the worksheet). Only data stored in columns where the title was recognized will be exported to the XML ABCD formatted file. Errors will occur if the titles are not well spelled and/or not in the second row of the worksheets. The order of columns doesn’t matter. You can add as many columns as you wish, keeping in mind that they will not be recognized and thus the information they contain will not be exported to the XML ABCD formatted file.

For more information about the format restrictions and correct title spelling for each field, see the list of supported fields available in the appendix of this document.

A tool was added to verify the correct mapping of columns in the template before export. It will tell you which columns are not recognized and if the RECORDS-sheet is well found. If the required IDs column (‘recordID’) is missing the export will be stopped and an error will be raised.

A warning message will also pop up if a column is not recognized, telling you which headers are concerned. You can decide to go on with the export, by clicking “Yes”: the program export your data without taking unrecognized columns into account. You can abort the export, by clicking on “Cancel” in case of misspelling…

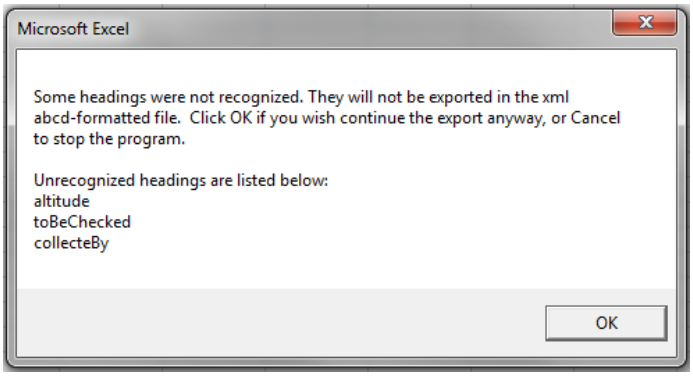

Figure 5 - Result of columns mapping

In this example (Figure 5):

- toBeChecked could be additional information, for internal purpose
- collecteBy is obviously misspelled and should be corrected to collectedBy
- altitude is available for the export, but the correct name for this field is elevationInMeters

Except columns for IDs, you can decide to keep only the relevant columns for the data you want to store in the template. The presence or absence of columns is completely customizable. For example, if you never mention the ocean or the sea where you collected your specimens, these columns do not have to be present in your template.

ADDITIONAL INFORMATION TO FILL THE TEMPLATE

Some requirements or limitations for filling the template are necessary in order to concur with the ABCD schema or with the DaRWIN structure. They are listed in the following paragraphs.

1. Introduction

You don't have to complete each cell. No values are required. Nevertheless, remember that you use this template to import your data into DaRWIN, as collection management system. Incomplete information is therefore of limited interest and relevance, for you and for any other scientist.

If you don't have any information for a cell, leave it blank. For example, when you don't know each level for classification, do not add a dash or a question mark, leave the cell empty. The macro doesn't make the difference between real values and a dash, a question mark, "NA", etc. Consequently, it will export the exact character string that it reads in the cells and you will end up with this uninformative values in your exported XML ABCD formatted or possibly with more errors to correct during the import into DaRWIN.

Do not use special characters (=, +, /, *, &, #, $, etc.) in Excel cells, neither as first character nor in subsequent characters. Indeed, Excel is a data analysis software. It will therefore try to interpret these characters and this may raise errors during export to the XML ABCD formatted file.

Nevertheless, as the use of a dot (".") in specimen ID is frequent, several tests were made to see if an error could occur. It appears from these tests that the use of a dot surrounded by letters is not a problem. Example: INV.2367. Remember that it will be stored as such in the "code" field of the Codes Widget, and not split into a prefix and a code. If you wish to add a prefix for one collection, the curator of the collection should edit the collection to explicitly give a default prefix to the code.

For some columns, the program expects specific formats or predefined values given in the list of supported fields available in the appendix of this document. If this format is not respected, the value cannot be taken into account or can be replaced by default values and you could end up with errors or unexpected values in your exported XML ABCD formatted file.

Using the fields for other kinds of information than what is expected will result in errors being raised or may lead to irrelevant information in the database.

2. ID number

a. Column names for IDs

For each row, an ID should be present. This ID should be unique and correspond to the voucher ID/accession ID attributed to the object in the museum collections. Nevertheless, for specimen that you don't own, you could possibly not know the ID. You can therefore use a custom ID, to allow cross-referencing between the information about the specimen and the samples.

Following the definition of the ABCD concept "UnitID", *"The unit ID should provide the key by which a specimen or specimen component can be identified. Preferrably, the unit ID should be stable in the database, so that it also can be used to find the same record again (e.g. for data exchange purposes)."* [1]

The identification number of an object is consequently used to distinguish the object from other objects in the collection or department. It should be unique within the collection. This uniqueness also allows to build relationships between objects.

Within an institution, these unique identification numbers can be completed by an additional identifier, as the acronym of the institution and the collection or department to which it belongs. In this way, uniqueness is extended within the institution and even beyond the institution.

One ***suggested*** format to construct your identification numbers is the following, ***but you can use the format that suits you the best***: [YYYY]_[CollectionOrDatasetCode]_[SubGroup]_[Iterative_nb]. The year should consist of 4 digits. The collection or dataset

[1] http://wiki.tdwg.org/twiki/bin/view/ABCD/AbcdConcept0140

code may include an acronym representing the expedition and/or the institutional registration number. The subgroup may be the name or an acronym of the order/family concerned. The iterative number is a unique number in the collection/the department or the subgroup. Example: 2013_RBINS23134_AVES_01034.

Remember that an unique identifier (ID) will be attributed to each encoded specimen in the DaRWIN database at the moment the specimen is created. This ID is guaranteed to be unique and stable among the whole DaRWIN database. This database ID is not to be confused with the specimen ID that is used within departments and that is not guaranteed to be unique, even if more convenient to use for scientists and curators. The specimen ID is imported as a code, with the category "main", in the DaRWIN database. If the collection curator defined a default prefix and/or suffix for the collection, you just need to write the numeric part of the code in the template, and the prefix and/or suffix will be automatically added during import. Remember that the whole content of the specimen ID will be present in the field "Code" of the "Codes" widget in DaRWIN. Example: INV.2367 in the specimenID field will be stored in the "code" field in the "Codes" widget and not split into a prefix and a code. To have such a subdivision, the prefix "INV" has to be defined as default for the collection by the curator, and sole 2367 should be present in the specimenID field.

b. Duplicated IDs

Duplicates IDs are not allowed in the "recordID" column. You can check the presence of duplicates for these by using the corresponding tool available in the ABCDschema menu. The reason behind that is that the association is not guaranteed if duplicates exist in IDs since the program will scan the values and stop at the first match. Duplicated IDs could also lead to irrelevant associations in DaRWIN if several records have the same ID.

3. Dates

For technical reasons, each date in the template is divided into 3 columns: one for the year, one for the month and one for the day.

In the ABCD schema, dates follow the ISO/ANSI 8601 standard structured format. The following formats are available and recognized in the template:

- YYYY: when only the year is known
- YYYY-MM: when only the month and the year are known
- YYYY-MM-DD: when the exact date is known

For the collecting event, the format YYYY-MM-DD HH:MM is also available, if you know the exact date and time.

If this format is not valid (i.e., you did not enter a correct numeric value in the date fields), the macro will try to structure the information and store it as a comment, without any warranty of success. If you only have imprecise information (e.g., "before 2012"), use preferably the columns dedicated to comments.

4. People name

The name should be as complete as possible. You should mention the first name, the last name and the title. Indeed, during the import into DaRWIN, you could be asked to create a new entry for this person in the People Catalogue. You need full information to create a complete entry in this catalogue.

For the same person always use the same spelling. For example, "C. Darwin" or "Darwin, C." is not considered as the same values by the import tool in DaRWIN. If you don't know the collector name, the identifier name, etc., leave the cell empty and avoid irrelevant values as "anonym." or "NA". The name of the mission/expedition should not be referenced in the columns dedicated to people.

You can reference more than one person in cells designated for such purpose. Their names should be separated by a semicolon. Otherwise, the import tool in DaRWIN will not recognize the presence of more than one name.

5. Sampling location

a. Sampling code

The field “samplingCode” is used as identifier for the sampling location, similarly to the identifier of a specimen. One code is used for one collecting event. A collecting event is defined by all the fields dedicated to it in the list of supported fields available in the appendix of this document. If the value in one of these fields is different, another sampling code should be defined as well. For example, two collecting events taking place at the exact same place with the same environmental conditions but on a different date should have two different codes.

b. Complete localities from another file

A tool is available in the template to copy information about sampling localities in the RECORDS-sheet from another file, thanks to the “samplingCode” column.

To use this tool, information about localities should be stored in an Excel file containing a worksheet named ‘LOCALITIES’ and containing the following columns: samplingCode, Longitude, Latitude, elevationInMeters, depthInMeters,collectionDay, collectionMonth, collectionYear, collectedBy, samplingMethod, localityNotes, externalLink, urlRelatedFile, with the exact same spelling than what is present in the list of supported fields available in the appendix of this document. If one of these columns is not present (or not recognized due to misspelling) in the RECORDS-sheet, its information will not be taken into account since the program doesn’t know where to store it in the template. It is therefore important to check that you have the same columns in both the template and the file with localities.

Practically, the “samplingCode” column is completed in the template and you click on the “Complete localities” button in the Tools menu, the program will look for matching between the sampling code in the template and in the file with localities. When a match is made, the information from the file with localities are copied into the RECORDS worksheet. Warning! The information from the file with localities will override what is already referenced in the template for the columns listed above.

When you click on the “Complete localities” button, a window opens to locate the location of your information on file locations. Once the correct file is selected, the missing information is copied into the RECORDS-sheet.

Be careful not to have duplicated sampling codes in your file with localities. The reason behind that is that the association is not guaranteed if duplicates exist since the program will scan the values and stop at the first match. Duplicated codes could also lead to irrelevant associations between objects and sampling locations in DaRWIN.

6. Custom record properties

You can encode custom mineral/record properties. In other words, in the “mineralProperty_[nb]” or “recordProperty_[nb]” column, you can specify which is the measured or described parameter the mineral/record (e.g., weight) and precise its value (e.g., 230 g) in the corresponding “mineralPropertyValue_[nb]” or “recordPropertyValue_[nb]” column. There are three custom properties for each mineral/object.

7. Container storage

The fields (sub)container, (sub)containerType and (sub)containerStorage correspond to the so-named fields in the Container widget in DaRWIN. While (sub)container is a text field where you can give the name and/or number of the (sub)container, containerType and containerStorage are user-defined lists. Be careful to use same expressions in the template than what is already present in DaRWIN in order to prevent the creation of duplicated type or medium of storage in the drop-down list in the widget.

8. Pre-export checks

You can check the latitude/longitude values and see if they are correctly encoded. They are automatically converted into a decimal format (if not encoded as such) for the ABCD export. If this conversion failed, you will receive a message telling you which values are erroneous. If errors are found, they will be listed in the “CheckLatLong” sheet. You can access this tool “Check Latitude/Longitude” in the group “Tools” of the “ABCDschema” menu.

You can also check the presence of correctly named worksheets, the mapping of column names and the presence of duplicated IDs before exporting the data, to allow a correction. These checks are available by clicking the buttons “1. Columns mapping” and “2. Duplicated IDs” in the group “Checks” of the custom ribbon “ABCDschema”. A window will appear, listing the potential problems. It is highly recommended to run these checks before trying the export.

Finally, you can use the filter (select the heading row, click on “Filter” in the “Data” menu) to check your values. This way, you can see if you use only the expected values or formats in the different columns. For example, you can check if there are only numerical values in other columns for dates, if the same names have the same spelling or if fields where only specific values are supported do not contain erroneous values, etc.

In the example below (Figure 6), instead of a numeric value for the year of identification event, the values “before 1950” and “<1939” were written. Such values could not be present in the exported XML ABCD formatted file, or they could raise errors. Thanks to the filter, you can display only rows with these values, and correct them. In this case, this information could be stored in a comment for example.

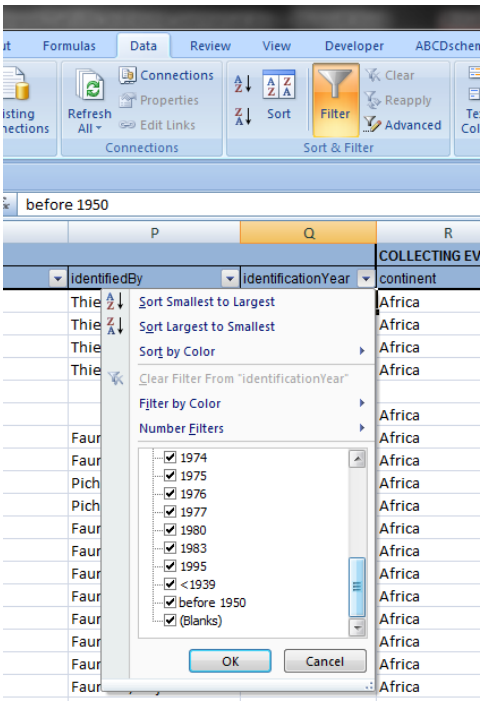

Figure 6 - Filter data in Excel

TECHNICAL INFORMATION – ABCDSCHEMA TAB

1. Commands

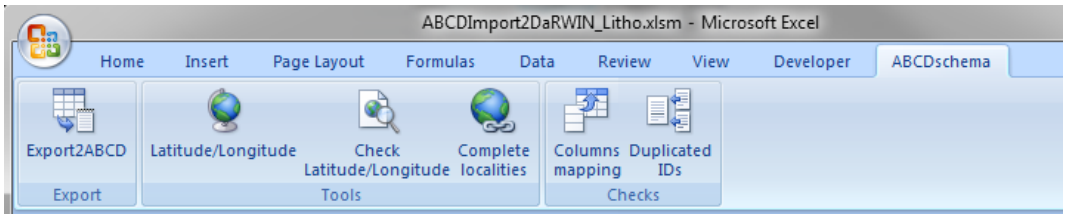

Figure 7 - ABCDschema Menu, template Litho

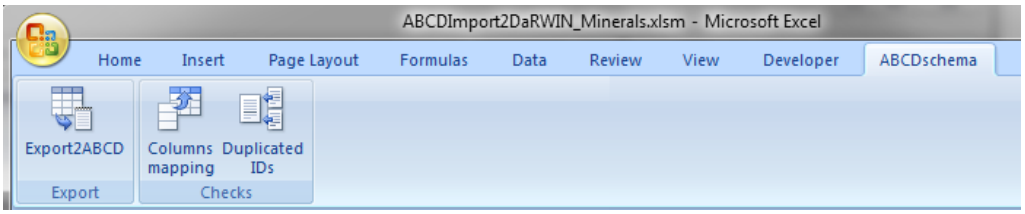

Figure 8 - ABCDschema Menu, template Minerals

a. Export group

- *Export2ABCD* : creates XML file that matches the ABCD schema with the data contained in the Excel file.

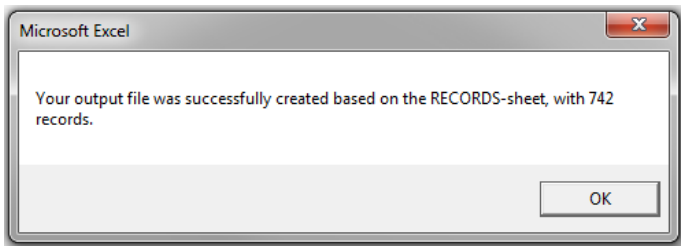

Figure 9 - Result of the export to XML ABCD formatted file

b. Tools group

Only for template Litho

- *Latitude/Longitude* : helps to insert latitude/longitude with a correct format.

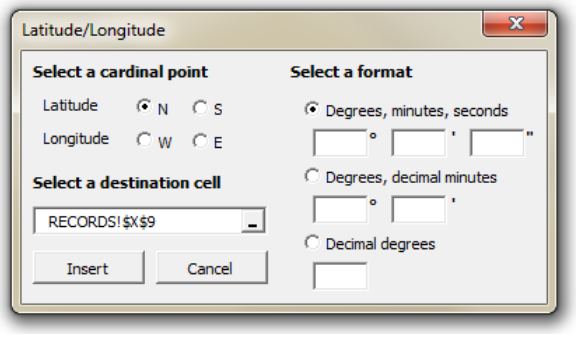

Figure 10 - Latitude/Longitude Tool

- *Check Latitude/Longitude*: helps to check if your latitude/longitude were correctly encoded. It creates a worksheet named “CheckLatLong” with a listing of erroneous values (and their mapping in the worksheet “RECORDS”). If no errors are found, a message tells you that everything looks OK.

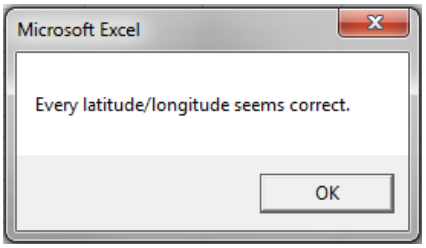

Figure 11 - No errors detected in Latitude/Longitude.

- *Complete localities*: allows you to copy localities information from a sheet named 'LOCALITIES' in another workbook (see Template_Litho_localities.xlsx for structure)

c. Checks group

- *1. Columns mapping* : checks if each column title is recognized and if the RECORDS-sheet and the 'recordID' column are found.
- *2. Duplicated IDs* : checks if no duplicated IDs are present.

2. Output

a. Name and extension

[USERDEFINED_NAME].XML

The export will create a file with extension .xml. You can choose the name and the folder where you wish to store this XML ABCD formatted file.

b. Structure

Globally, units are encoded step by step, looping within the RECORDS-sheet. One unit is created for each row.

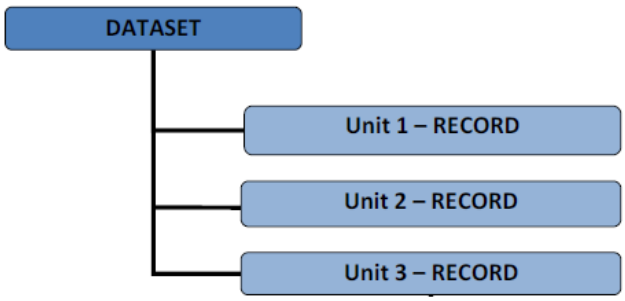

Figure 12 - Export XML file structure

GLOSSARY

XML and ABCD XSD schema

XML stands for eXtensible Markup Language and is a markup language much like HTML.

XML was created to structure, store, and transport information. Documents are therefore encoded in a format that is both human-readable and machine-readable. It is mainly used as intermediate format between two computers or softwares.

Information is structured through tags. These tags surround information by creating one element. Different elements can be fitted together, to create a hierarchical structure. A tag begins with "<" and ends with ">". Each element has a start-tag *<tag>* and end-tag *</tag>*. Empty tags takes the form *<tag />*.

XML Schema can be used as template for structuring information in your XML file. It rigorously defines the structure of your document. ABCD (Access to Biological Collection Data) is a predefined format to store biodiversity collections, developed by TDWG (Taxonomic Database Working Group). Several extension were developed:

- Extension for Geosciences (EFG)
- Extension for DNA data (ABCDDNA)
- Extension for herbarium collections (HISPID)

Visual Basic For Applications and macros

Excel has a language called VBA (Visual Basic for Applications). This language enables to program excel to automate several tasks. A macro is nothing but a set of instructions you give Excel in the VBA language.

The code for exporting your data filled in the template into an XML ABCD formatted file was prepared in a macro using VBA.

APPENDIX

1. General list of supported fields with expected format, description and example(s)

In the RECORDS-sheet, the following fields are supported corresponding to the information that can be retrieved in DaRWIN after import.

a. Template Lithology

Field name	Format	Description	Example
recordID		Unique identifier of the record if exists. Proposed format: [YYYY]_[CollectionOrDatasetCode]_[SubGroup]_[Iterative_nb]. The year should consist of 4 digits. The collection or dataset code may include an acronym representing the expedition and/or the institutional registration number. The subgroup may be the name or an acronym of the subcollection or the group concerned. The iterative number is a unique number in the collection or the subgroup.	1950_Min_Drugman_00001
code		Additional identifier, for internal purpose only	A09323
objectName		Commercial or official object name	NWA 1465 (Official)
accessionNumber		Institutional number given to each new group of items acquired by the institution and recorded in the collection registers	31669
datasetName		Name or code for the project, expedition, etc. for as complementary information for the collection name, choosen in DaRWIN at the moment of the import	Drugman
acquisitionType		Donation, purchase, etc.	Purchase
acquisitionDay	Numeric, 2 digits	Former ownership (may be a person or an institution)	Lucas Alain (Mr.)
acquisitionMonth	Numeric, 2 digits	Day of the acquisition date	4
acquisitionYear	Numeric, 4 digits	Month of the acquisition date	10
acquiredFrom		Year of the acquisition date	2009
samplingCode		Can be the code for a sampling location or the link to a database with information about the sampling location	049WO265
continent		Continent (administrative name)	Asia
country		Country (administrative name)	United States Of America
state_territory		State or territory, as a subdivision of a country (administrative name)	Florida
province		Province (administrative name)	Bali
region		Region (administrative name)	Example 1: Upper Katanga; Example 2: Flemish Region
district		District (administrative name)	Example 1: Zululand District; Example 2: North Somerset
department		Department (administrative name)	Loire-et-Cher
city		Town, city, capital (administrative name)	Example 1: Cairns; Example 2: Kinshasa
municipality		Locality (administrative name) or urban administrative division	Eagle Harbor
populatedPlace		Populated place, village	Example 1: Tayabas; Example 2: Fortaleza
naturalSite		Natural site	Example 1: Parc National de la Salonga; Example 2: Great Coral Reef
exactSite		Site name, alternative name, lieu-dit, how many kilometers and compass direction from the nearest major specific map location (e.g. town, mountain peak, lake, specific park or refuge , etc.), road network. All distances should be presented in metric units.	Copper Falls Mine
latitude	Decimal degrees prefered (DD°MM'SS" or DD°MM.MM' also accepted)	Latitude	10°58'53"S or 10°58.88'S or -10.981333
longitude	Decimal degrees prefered (DD°MM'SS" or DD°MM.MM' also accepted)	Longitude	26°44'12"E or 26°44.20'E or 22.736666
elevationInMeters	Numeric	Altitude in meters	1020
depthInMeters	Numeric	Depth in meters	20
samplingMethod		Purpose and/or method used for the sampling event	Forage
collectionDay	Numeric, 2 digits	Day of the unique date or starting date of collecting event	11
collectionMonth	Numeric, 2 digits	Month of the unique date or starting date of collecting event	2
collectionYear	Numeric, 4 digits	Year of the unique date or starting date of collecting event	2013
collectedBy		Collector name (title)	Murray
expedition_project		Expedition or project name linked to the collecting event.	Belgian Japanese Antarctic Expedition 2009-2010
localityNotes		Additional information/remark about the collecting event	Example 1 : municipality not confirmed; Example 2 : more than 50 pieces in same area, shower assumed
kindOfUnit		Part or kind of materials represented	meteorite, PTS (polish thin section), piece of core basement, etc.
lithologyMainGroup	Only: Igneous rocks, Sedimentary rocks, Meteoric rocks or Metamorphic rocks	Main group; 4 allowed values: Igneous rocks, Sedimentary rocks, Meteoric rocks, Metamorphic rocks	Sedimentary rocks
lithologyGroup		Group	Siliciclastic rocks
lithologySubgroup		Subgroup	Lutites
lithologyRockName		Rock name	Shale
lithologyInformalName		Rock informal name	marbre noir d'Ashford
meteoriteFallOrFind		Is (are) the meteorite(s) fallen or found?	Fall
meteoriteTotalWeight		Meteorite total weight	260.08 g
meteoriteCompositionType		Meteorite composition type	iron octahedrite IIIa
meteoriteNi_pct		Ni percentage	7.7%
meteoriteGe_ppm		Ge (ppm)	34 ppm

startSample		Starting depth for sampling	1272
endSample		Ending depth for sampling	1297
unitSample		Unit of measurement for sampling depth	m
petrography		Petrographic remark or description	roodbruine matig-grove zandsteen met talrijke ronde glauconietkorrels, hard gecementeerd, met nesten van pulverige oranje limoniet en slierten van zeergrove kwartskorrels
recordLength	Numeric	Length of the object	5
recordWidth	Numeric	Width of the object	3
recordHeight	Numeric	Height of the object	1
unitDimension		Dimension unit	cm
recordWeight	Numeric	Weight of the object	25.9
unitWeight		Weight unit	g
quality		Quality of the mineral	beau
analyse		Was an chemical/physical analysis performed? Is there a document related to the results?	analyseRX.txt, thin section, etc.
insuredValue		Insured value	105 euros
purchasingPrice		Purchasing price	85 $
recordProperty_1		Observation or property of the item (current, official or orginal weight, number of pieces, etc.)	original weight
recordPropertyValue_1		Observation or property value (unit if applicable)	208.09 g
recordProperty_2		Observation or property of the item (current, official or orginal weight, number of pieces, etc.)	number of pieces
recordPropertyValue_2		Observation or property value (unit if applicable)	2
recordProperty_3		Observation or property of the item (current, official or orginal weight, number of pieces, etc.)	age
recordPropertyValue_3		Observation or property value (unit if applicable)	7 ka
accompanyingMineral_1		Accompanying mineral 1	magnesite
accompanyingMineral_2		Accompanying mineral 2	dolomite
accompanyingMineral_3		Accompanying mineral 3	quartz
lithostratigraphyGroup		Llithostratigraphic group - two or more formations	Zenne Group
lithostratigraphyFormation		Llithostratigraphic formation - primary unit of lithostratigraphy	Aalter Formation
lithostratigraphyMember		Lithostratigraphic member - named lithologic subdivision of a formation	Beernem Member
lithostratigraphyBed		Lithostratigraphic bed - named distinctive layer in a member or formation	
lithostratigraphyInformalName		Lithostratigraphic informal name	Example 1 : Aa ; Example 2 : St Niklaas - Boom
externalLink		External link where more information on this object can be found (example: Databank Ondergrond Vlaanderen)	https://www.dov.vlaanderen.be/geoserver/g3dv2/wfs?
urlRelatedFile		Can be any type of file (image, pdf, txt, etc) - ex RBINS: smb://datastore/darwintmp/ YOURFOLDER/yourimage.jpg; ask the IT team for a shared folder in your institution	Example RBINS: smb://datastore/darwintmp/meteorites/00001.jpg
publicationString		Published reference citing the unit. Note that it is stored as a comment and will NOT be searchable in DaRWIN Bibliography catalogue.	Van den Borre N. (2007) Mont Dieu meteoriet. Master thesis, Univ Gent. Van Roosbroek Nadia (2012) Mont Dieu II: a IIE non-magmatic iron meteorite with chondrules. Master thesis, KULeuven.
institutionStorage		Institution storage (acronym or full name)	RBINS
buildingStorage		Building storage	Geology
floorStorage		Floor storage	-4
roomStorage		Room storage	25 meteorite lab
laneStorage		Lane storage in the room	2
columnStorage		Column or cupboard storage in the lane	7
shelfStorage		Shelf storage	P.7
container		Container name and/or number	126
containerType		Type of container	Example 1: plateau-caisse; Example 2: box
containerStorage		Conservation mean	Example 1: dry; Example 2: alcohol
subcontainer		Subcontainer name and/or number	A1
subcontainerType		Type of subcontainer	Example 1: slide; Example 2: box
subcontainerStorage		Subcontainer mean	Example 1: dry; Example 2: alcohol
notes		Additional information/remark about the specimen that doesn't fit elsewhere	Examples : Meteor Crater (Barringer), caused by 100 000 ton meteorite; KBIN miner verzam Krinovite

b. Template Mineralogy

recordID		Unique identifier of the record if exists. Proposed format: [YYYY]_[CollectionOrDatasetCode]_[SubGroup]_[Iterative_nb]. The year should consist of 4 digits. The collection or dataset code may include an acronym representing the expedition and/or the institutional registration number. The subgroup may be the name or an acronym of the subcollection or the group concerned. The iterative number is a unique number in the collection or the subgroup.	1950_Min_Drugman_00001
code		Additional identifier, for internal purpose only	2715
objectName		Commercial or official object name	Example (meteorites) : A09431
accessionNumber		Institutional number given to each new group of items acquired by the institution and recorded in the collection registers	17578

datasetName		Name or code for the project, expedition, etc. or as complementary information for the collection name, choosen in DaRWIN at the moment of the import	Drugman
acquisitionType		Donation, purchase, etc.	Gift
acquisitionDay	Numeric, 2 digits	Former ownership (may be a person or an institution)	Drugman Julien
acquisitionMonth	Numeric, 2 digits	Day of the acquisition date	4
acquisitionYear	Numeric, 4 digits	Month of the acquisition date	10
acquiredFrom		Year of the acquisition date	1950
samplingCode		Can be the code for a sampling location or the link to a database with information about the sampling location	CopperFalls2003_01
continent		Continent (administrative name)	Asia
country		Country (administrative name)	United States Of America
state_territory		State or territory, as a subdivision of a country (administrative name)	Florida
province		Province (administrative name)	Bali
region		Region (administrative name)	Example 1: Upper Katanga; Example 2: Flemish Region
district		District (administrative name)	Example 1: Zululand District; Example 2: North Somerset
department		Department (administrative name)	Loire-et-Cher
city		Town, city, capital (administrative name)	Example 1: Cairns; Example 2: Kinshasa
municipality		Locality (administrative name) or urban administrative division	Eagle Harbor
populatedPlace		Populated place, village	Example 1: Tayabas; Example 2: Fortaleza
naturalSite		Natural site	Example 1: Parc National de la Salonga; Example 2: Great Coral Reef
exactSite		Site name, alternative name, lieu-dit, how many kilometers and compass direction from the nearest major specific map location (e.g. town, mountain peak, lake, specific park or refuge , etc.), road network. All distances should be presented in metric units.	Copper Falls Mine
localityNotes		Additional information/remark about the collecting event	municipality not confirmed
mineralClassification	Strunz or Dana	Classification: is it Strunz or Dana? The value by default is Strunz.	Dana
mineralClass		Mineralogical classification by level. Use the same name as in the catalogue Mineralogy in DaRWIN (see catalogue_mineralogy.ods).	Silicates
mineralSubclass			Cyclosilicates: Tourmaline group
mineralSerie			Tourmaline group
mineralName			Elbaite
mineralDescription		Mineral description	prismes roses clivés parallèles 3 cm sur bloc pegmatite
mineralLength	Numeric	Length of the mineral	5
mineralWidth	Numeric	Width of the mineral	3
mineralHeight	Numeric	Height of the mineral	1
unitDimension		Dimension unit	cm
mineralWeight	Numeric	Weight of the mineral	25.9
unitWeight		Weight unit	g
quality		Quality of the mineral	beau
analyse		Was an chemical/physical analysis performed? Is there a document related to the results?	analyseRX.txt
insuredValue		Insured value	105 euros
purchasingPrice		Purchasing price	85 $
accompanyingMineral_1		Accompanying mineral 1	magnesite
accompanyingMineral_2		Accompanying mineral 2	dolomite
accompanyingMineral_3		Accompanying mineral 3	quartz
mineralProperty_1		Observation or property of the item (current, official or orginal weight, number of pieces, etc.)	original weight
mineralPropertyValue_1		Observation or property value (unit if applicable)	208.09 g
mineralProperty_2		Observation or property of the item (current, official or orginal weight, number of pieces, etc.)	number of pieces
mineralPropertyValue_2		Observation or property value (unit if applicable)	2
mineralProperty_3		Observation or property of the item (current, official or orginal weight, number of pieces, etc.)	age
mineralPropertyValue_3		Observation or property value (unit if applicable)	7 ka
externalLink		External link where more information on this object can be found (example: Databank Ondergrond Vlaanderen)	https://www.dov.vlaanderen.be/geoserver/g3dv2/wfs?
institutionStorage		Institution storage (acronym or full name)	RBINS
buildingStorage		Building storage	De Vestel
floorStorage		Floor storage	6B
roomStorage		Room storage	10B
laneStorage		Lane storage in the room	2
columnStorage		Column or cupboard storage in the lane	7
shelfStorage		Shelf storage	01
container		Container name and/or number	126
containerType		Type of container	Example 1: plateau-caisse; Example 2: box
containerStorage		Conservation mean	Example 1: dry; Example 2: alcohol
subcontainer		Subcontainer name and/or number	A1
subcontainerType		Type of subcontainer	Example 1: slide; Example 2: box
subcontainerStorage		Subcontainer mean	Example 1: dry; Example 2: alcohol
notes		Additional information/remark about the specimen that doesn't fit elsewhere	Not for exhibitions