

# Generating XML for API and LAPI

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Document applies to BRAHMS 7.1 or later

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## Introduction

This document describes the procedures within BRAHMS to generate the required XML transfer file required by the African Plants Initiative (API) and Latin American Plants Initiative (LAPI) projects.

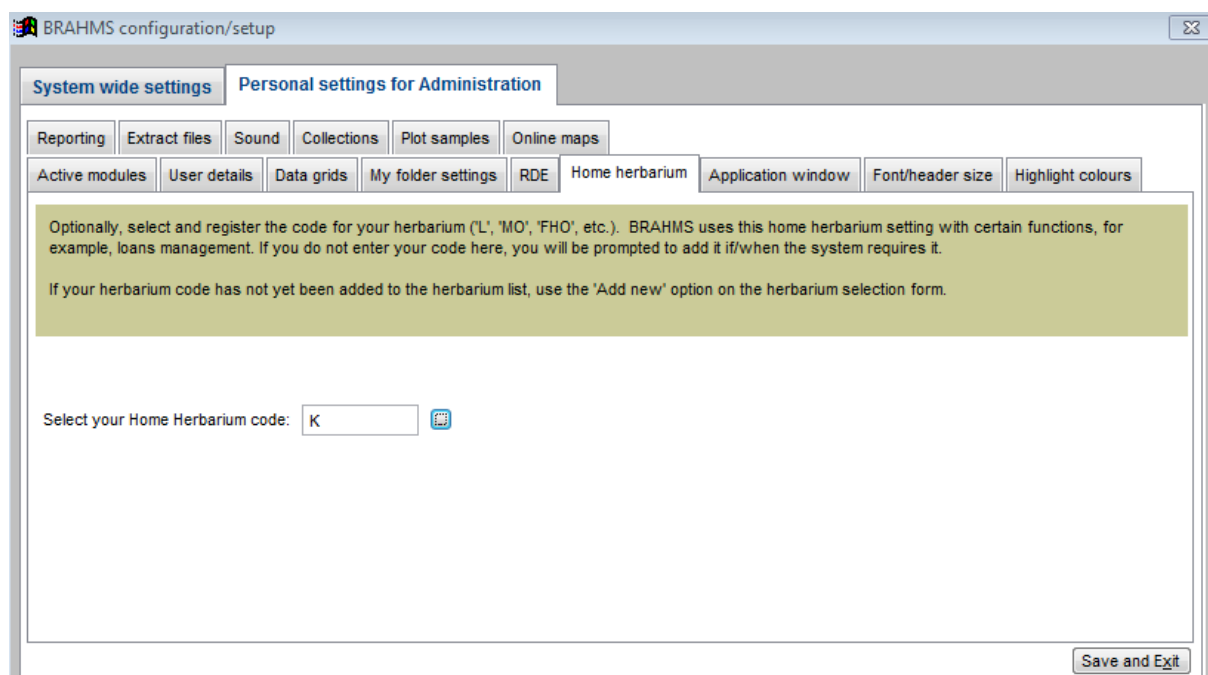
The procedure creates an XML file following XML Schema Version 2 as accepted by the API Technical Advisory Group May 11, 2005. Technical information about the Schema and further notes on digitization and data quality control can be found online by searching for JSTOR Plant Science Handbook: Appendix D or Appendix D: Understanding XML & the GPI Schema.

Note that API/LAPI XML files cannot be created from RDE. They are created from specimen extract files. As explained below, you will find the API/LAPI export option on the BRAHMS data export form opened using the  toolbar option (or **File > Copy/Save as**) when you are in a specimen extract file.

## Setup for API / LAPI transfer

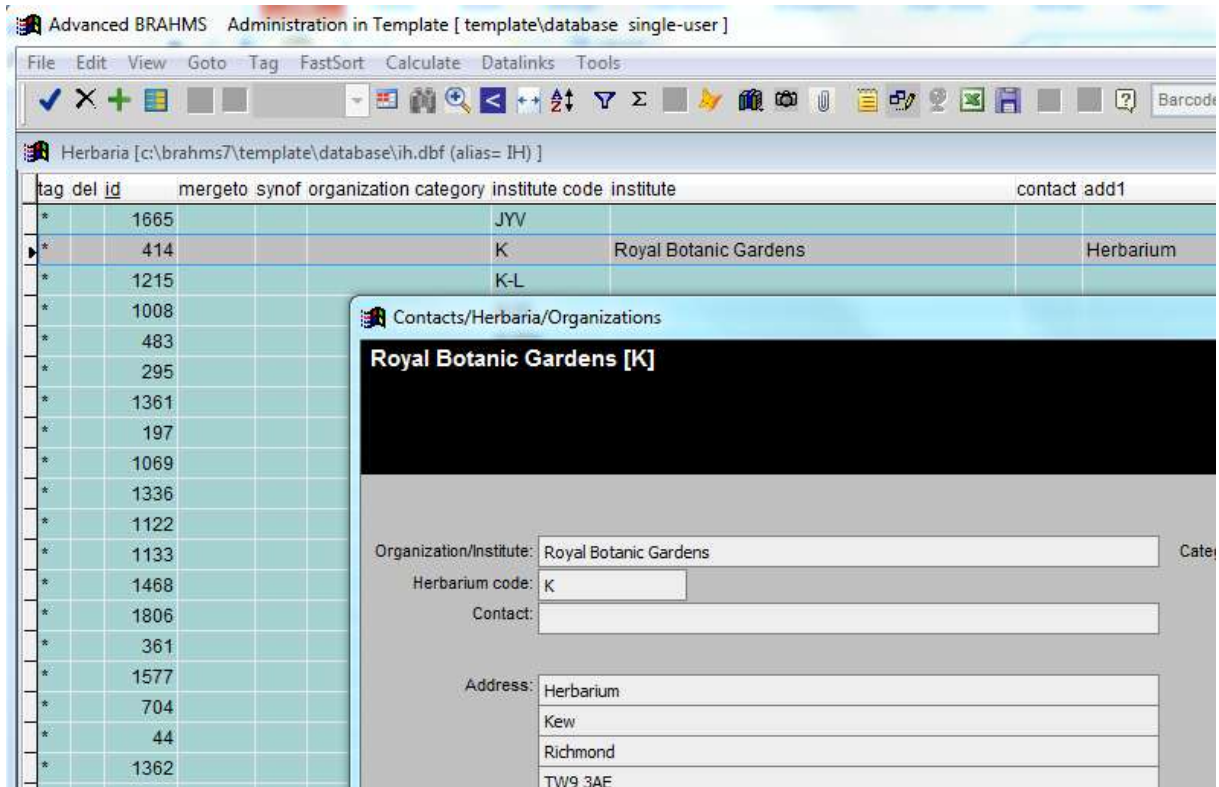
### Home herbarium

Before using this export function, ensure that your home herbarium code and institution name are correctly registered in your database. This information is stamped into your XML transfer file. To check these settings, first select **Utilities > My setup/profile** and ensure that the Home herbarium entry is correctly set to your herbarium code. If it is not, click on the button provided to choose the herbarium.



The screenshot shows the BRAHMS configuration/setup window. The title bar reads "BRAHMS configuration/setup". The window has two tabs: "System wide settings" and "Personal settings for Administration". Under "Personal settings for Administration", there are several sub-tabs: "Reporting", "Extract files", "Sound", "Collections", "Plot samples", "Online maps", "Active modules", "User details", "Data grids", "My folder settings", "RDE", "Home herbarium", "Application window", "Font/header size", and "Highlight colours". The "Home herbarium" tab is selected. A green box contains the following text: "Optionally, select and register the code for your herbarium ('L', 'MO', 'FHO', etc.). BRAHMS uses this home herbarium setting with certain functions, for example, loans management. If you do not enter your code here, you will be prompted to add it if/when the system requires it. If your herbarium code has not yet been added to the herbarium list, use the 'Add new' option on the herbarium selection form." Below this text, there is a label "Select your Home Herbarium code:" followed by a text input field containing the letter "K" and a small icon button. At the bottom right of the window, there is a "Save and Exit" button.

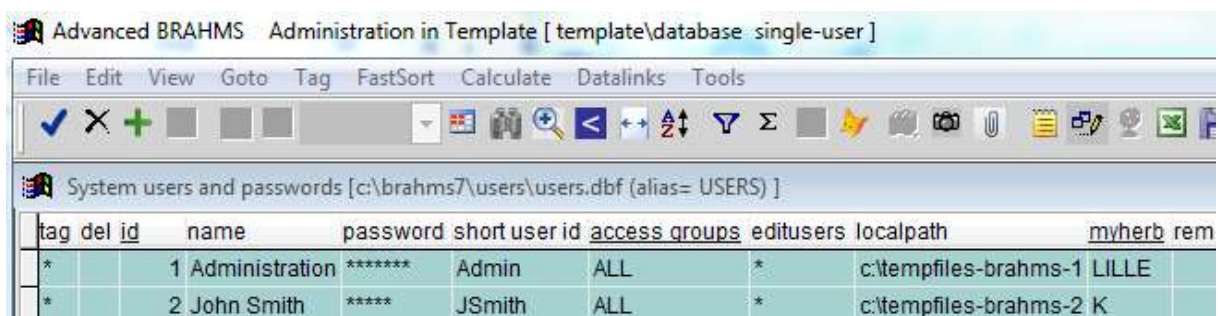
If your herbarium is not in the list or if you want to edit your herbarium/institutional name, select **Herbaria > Herbarium list** and add or edit your entry. Return to the setup form and then link this code as your home herbarium. If the Herbaria menu is not visible, select **Utilities > My setup/profile > Active modules** and ensure “Herbaria” is selected.



Editing your herbarium entry using the form option. The Institute name must be added for your herbarium as this is included in the API/LAPI XML file.

## Username

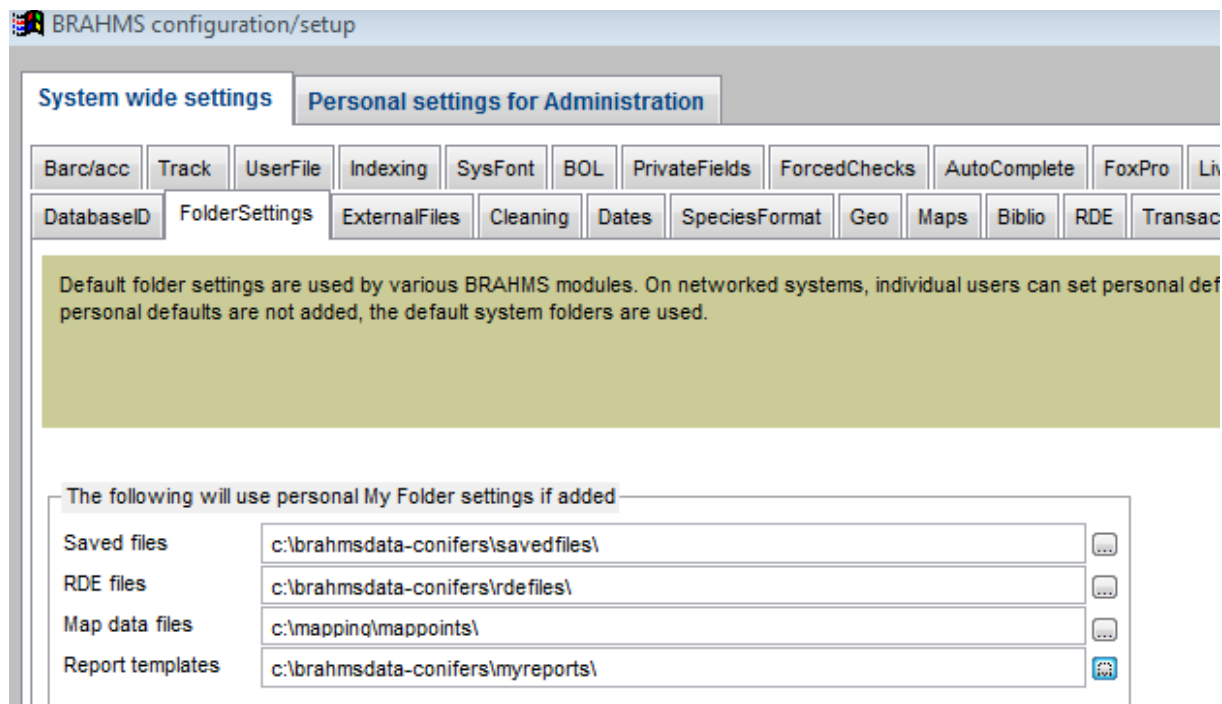
When you log into BRAHMS, the system keeps a track of your username. This user name is also stamped into the XML transfer file as the ‘PersonName’ providing the data. You can edit your username by selecting **Admin > Users and Access permission**.



## Saved files location

Check that you have selected a “Saved files” folder. This folder is used to store exported files including the API/LAPI XML file.

The Saved files folder is set using **Admin > Project configuration > System wide settings > Folder settings**. Any valid folder can be selected on either a local or a shared drive.



## Country ISO codes

Check that your country dictionary includes 2-letter ISO codes in the ISO2 field in your country file, at least for the countries you work with. If these codes are missing, the country code will be represented by 'ZZ'.

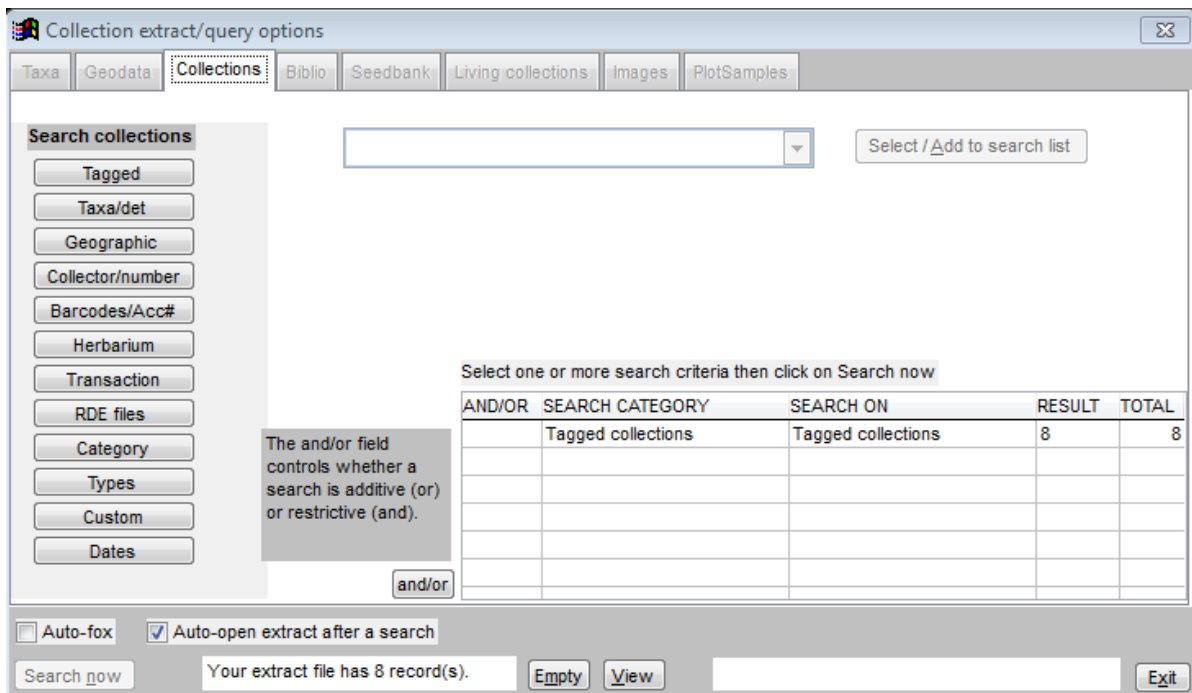
To check your country list, select **Geo > View/edit countries in database**. You can edit ISO2 codes manually or use **Tools > Import/Update country list from external file** option. This will auto update your country names with useful information including the required ISO codes.

## List of valid type categories

The file \Brahms7\template\API\apitypes.dbf includes a list of type categories listed in the API LAPI Schema document. It should not be necessary to edit this list but if it is, the file can be opened and editing using **File > Get external data > Open/browse an external DBF file**. If any of your type categories are different to those in this list, they will not be processed by the API-XML transfer procedure.

## Extracting botanical records and their specimens

A first step to generating the XML file is to extract the botanical records you wish to process from your database. This is done by selecting **BotanicalRecords > Extract/query data**.

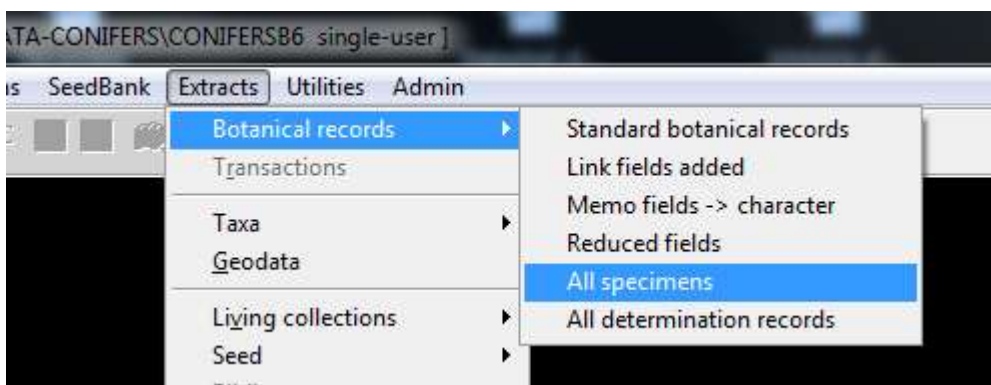


Extracting botanical records, in this example, using tagged records

## Generating the XML file

As this export function uses specimens rather than botanical records, you need to open the specimen extract file.

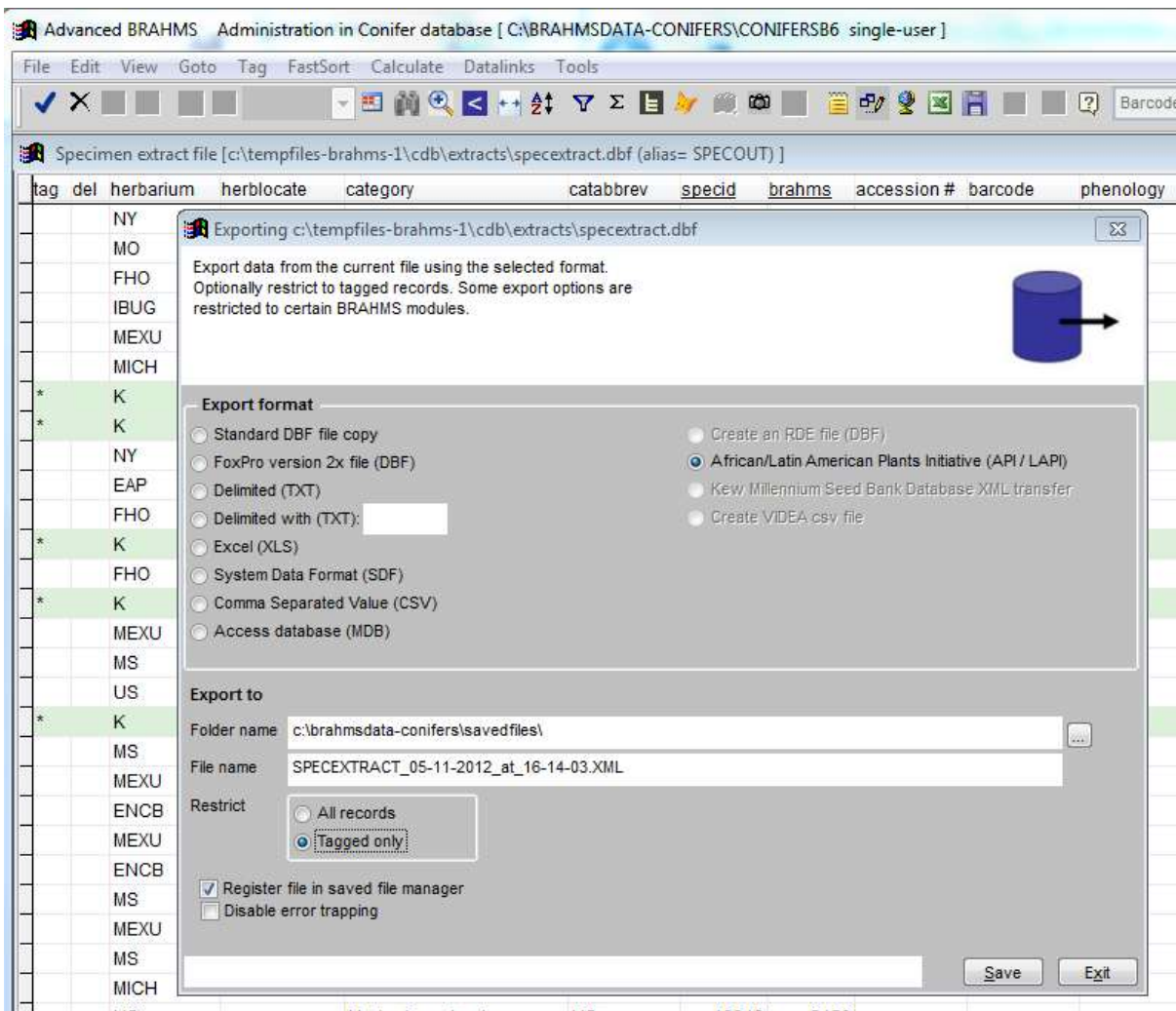
After extracting your botanical records, close the default botanical record extract file and then select **Extracts > Botanical Records > All specimens**. This file has one record per specimen.



You may wish to select records by tagging them. One reason for this is that your specimen extract may include duplicates from other herbaria and you would want to exclude these.

After opening the specimen extract, select the  toolbar option and select then the 'African/Latin American Plants Initiative (API/LAPI)' option from the list of options provided.

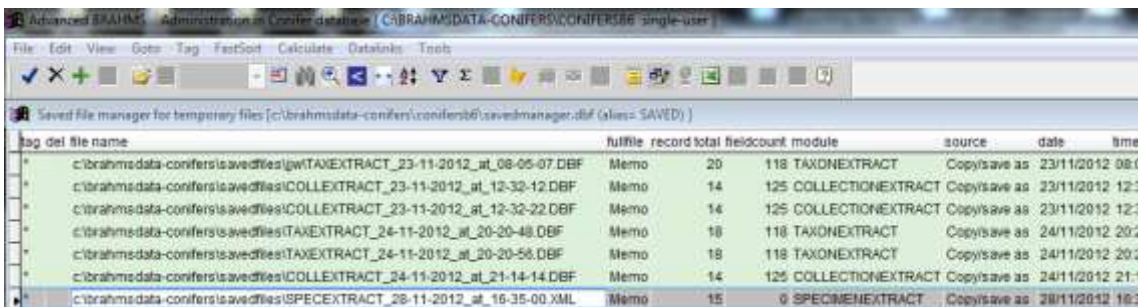
If you want to restrict to tagged records, select the '**Tagged only**' option on the form.



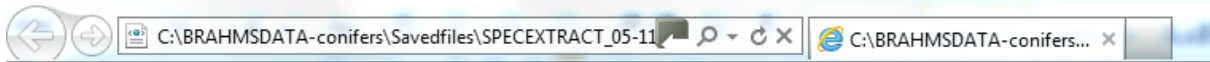
The XML file will be generated in the specified folder. The date and time are included in the exported XML file name. Note in the above example, the export is restricted to tagged records.

## Sample XML output

You can view your XML output by selecting **Extracts > Saved file manager** and dbl-clicking on the last entry.



Saved file manager opened using **Extracts > Saved file manager**. The last entry is the XML file created for LAPI/API. Dbl-click the file name to open.



```
<?xml version="1.0" encoding="UTF-8"?>
- <DataSet xsi:noNamespaceSchemaLocation="http://plants.jstor.org/XSD/AfricanTypesv2.xsd"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <InstitutionCode>K </InstitutionCode>
  <InstitutionName>Royal Botanic Gardens</InstitutionName>
  <DateSupplied>2012-11-05</DateSupplied>
  <PersonName>Administration</PersonName>
+ <Unit>
+ <Unit>
+ <Unit>
- <Unit>
  <UnitID>BRAHMSnumber31802</UnitID>
  <DateLastModified>2011-01-13</DateLastModified>
  - <Identification StoredUnderName="true">
    <Family>PODOCARPACEAE</Family>
    <Genus>Halocarpus</Genus>
    <Species>bidwillii</Species>
    <Author>(Hook. f. ex Kirk) Quinn</Author>
    <PlantNameCode>4146</PlantNameCode>
    <Identifier>Molloy, B.P.J.</Identifier>
    - <IdentificationDate>
      <OtherText>Not on sheet</OtherText>
    </IdentificationDate>
    <TypeStatus>-</TypeStatus>
  </Identification>
  - <Identification StoredUnderName="false">
    <Family>PODOCARPACEAE</Family>
    <Genus>Dacrydium</Genus>
    <Species>bidwillii</Species>
    <Author>Hook. f. ex Kirk</Author>
    <Infra-specificRank>var.</Infra-specificRank>
    <Infra-specificEpithet>reclinata</Infra-specificEpithet>
    <Infra-specificAuthor>Hook. f. ex Kirk</Infra-specificAuthor>
    <PlantNameCode>5971</PlantNameCode>
    <Identifier>Molloy, B.P.J.</Identifier>
    <IdentificationDate> </IdentificationDate>
    <TypeStatus>Syntype</TypeStatus>
  </Identification>
  <Collectors>Kirk, T.</Collectors>
  <CollectorNumber>s.n.</CollectorNumber>
  - <CollectionDate>
    <StartMonth>01</StartMonth>
    <StartYear>1876</StartYear>
  </CollectionDate>
  <CountryName>New Zealand</CountryName>
  <ISO2Letter>NZ</ISO2Letter>
  <Locality>South Island, Canterbury, Trelissick</Locality>
  <Altitude>249 meters</Altitude>
  </Unit>
+ <Unit>
+ <Unit>
+ <Unit>
```

An example XML file. Each record is represented as a 'Unit'.