Publishing online with WebConnect

Updated for BRAHMS 8.7.4, March 2026

For installation and upgrading: https://herbaria.plants.ox.ac.uk/bol/brahms/support/installv8

Training guide: https://herbaria.plants.ox.ac.uk/bol/content/software/v8/Getting_Started_BRAHMS.pdf

Demonstration database: https://herbaria.plants.ox.ac.uk/bol/brahms/support/conifers

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For licensing enquiries, contact brahms@innovation.ox.ac.uk

For technical enquiries, contact brahms@biology.ox.ac.uk

http://herbaria.plants.ox.ac.uk/bol/brahms/software/v8

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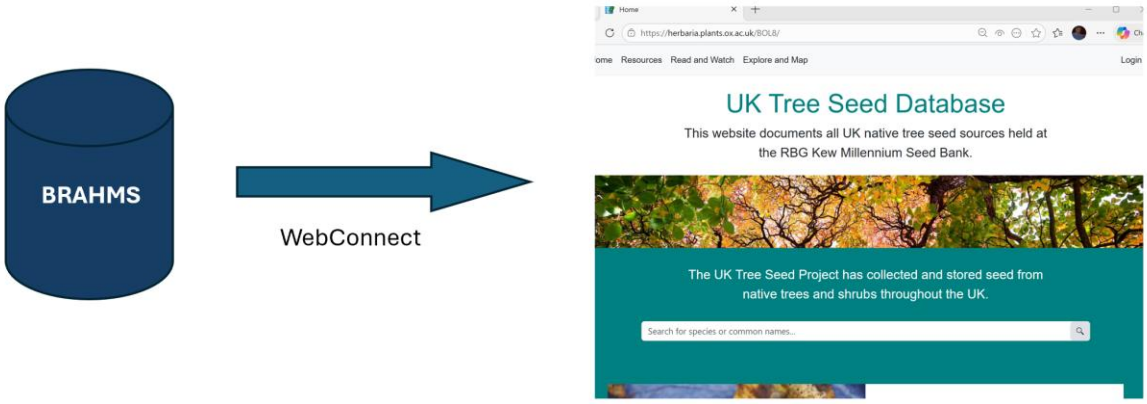
Introduction

Many projects have a requirement to publish their data online or simply want to share their data with the wider community. Some projects will upload their data to national or international data networks such as GBIF. However, these projects as well as those that do not upload to these networks, often wish to create a more personal website for their own project and data.

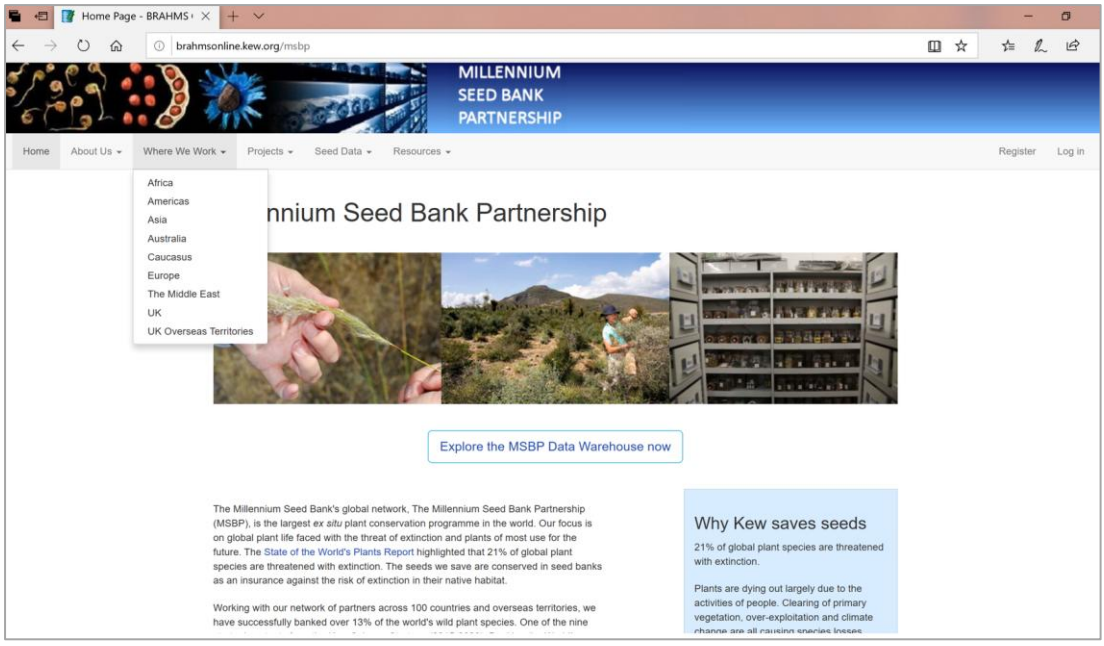
This guide explains how to create and edit your own website(s) and upload your data and images directly to BRAHMS online. The module connecting BRAHMS to BRAHMS online is known as WebConnect.

You do not have to be a website techy to develop a basic website. However, the more knowledge you have, the more you can develop. WebConnect provides a blank blackboard upon which you can use any valid HTML, CSS and jQuery constructs.

BRAHMS online (BOL), is a unique website service used to publish BRAHMS databases online and/or to describe and promote your project. BOL websites can be richly developed with text, images, hyperlinks, tables, file downloads and indeed any standard website feature. As for your data and images, you can selected which tables, data fields and images to publish.



Data are presented in virtualized data grids with a grid filter row similar to that used in BRAHMS desktop. Searching is fast and is not greatly influenced by the size of the tables. For example, a specimen table with ca. 2 million records can complete a query based on several fields in a few seconds. Visible columns can be selected by users and a default view set by Admin. Data can be sorted, summarised, mapped and exported (if permitted). Images uploaded as physical files or URL links can be viewed individually or in organised image groups. Your website 'weblinks' can be uploaded from BRAHMS. You can see example screens and websites from the previous version of BOL on:
https://herbaria.plants.ox.ac.uk/bol/brahms/publishonline/websites



An example of a content rich, BRAHMS online website: http://brahmsonline.kew.org/msbp - the website site design and data uploads were processed via WebConnect.

Changes between BOL5 and BOL8

For those interested in the technical detail, BOL was updated November 2025 from the previous .NET Framework 4.6.2 that used ASP.NET MVC 5 and Windows services for BRAHMS interactions - to the new application which is written with .NET 8 using server-side Blazor and ASP.NET Core which unifies ASP.NET, ASP.NET MVC, ASP.NET Web API, and ASP.NET Web Pages. It now uses a secured REST Web Api to replace the previous Windows service for BRAHMS communications.

Unlike before where BOL data were stored in either MSSQ Server or PostgreSQL databases, data are now stored in a simple SQLite database which is created locally populated with your uploaded data and then copied to the server.

With WebConnect, there are also many changes, notably that you can now choose to upload data from any field including custom fields and rename these fields are as appropriate; the data from each table uploaded is entirely independent of data in any other table – thus the need to upload species before collection data no longer exists. The Page Design features are updated. You can now upload selected weblinks and create and upload map styles. Image folder mapping is much simplified.

BRAHMS WebConnect

Introduction

WebConnect is the software that connects your BRAHMS system to BRAHMS online (BOL) allowing you to develop and edit websites and upload selected data and additional resource files. Using WebConnect, you can manage security settings, control access, logins and downloads. WebConnect options are accessed in BRAHMS from the **BOL** menu. In order to see the BOL menu option, you need to have a BOL licence.

Signing in to WebConnect

If you have installed BOL on your own server, for the initial sign in, refer to the sign setup as described in Annex 1. For regular sign in and/or if you are signing in on the BRAHMS server, you will need a username and password. These credentials will give you access to website(s) you own/manage.

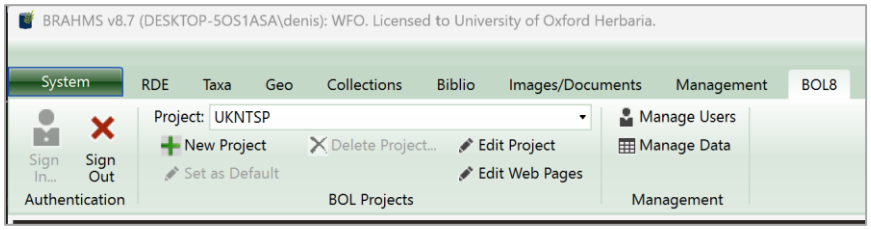
Unless you have been assigned the role of Administrator within BRAHMS online, you will need to have been given manager access to one or more websites. If using the BRAHMS server, please request by email to brahms@biology.ox.ac.uk providing details of your project and/or website requirement. Note that you need a licence from OUI to use BOL.



Signing in to BOL.

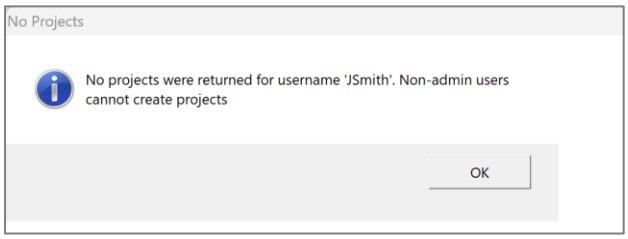


The website/server-name will depend on where your BOL system is installed.



After signing in, your available projects will be listed, and you have options to edit the site(s).

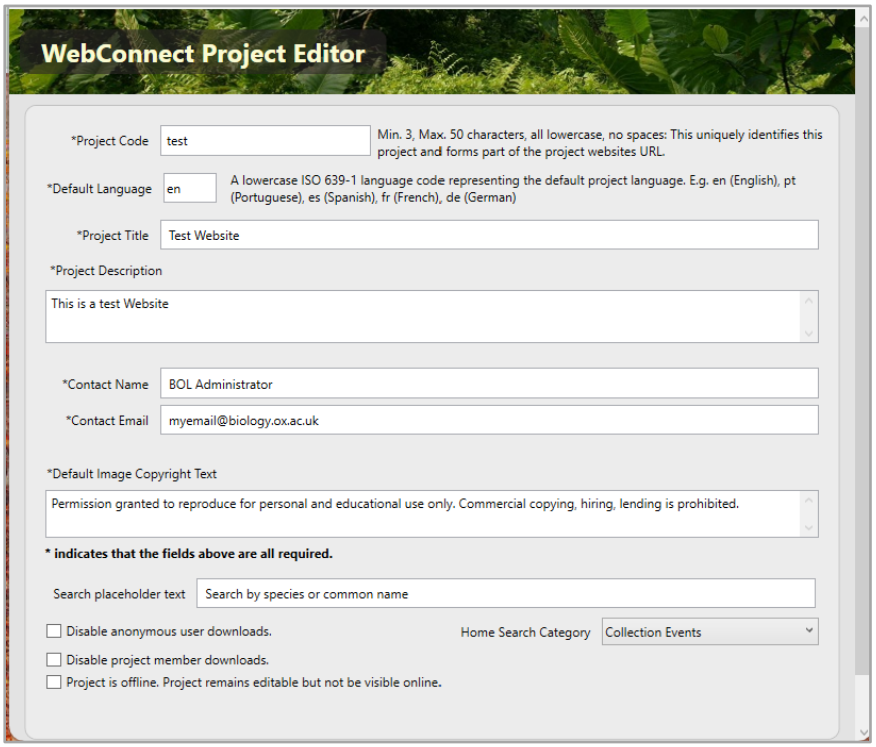
With your credentials, if you do not have access to any websites, it will not be possible to proceed. To gain access, the BOL administrator needs to link your login credentials to one or more website projects. If a non-manager user signs in, they will see a message similar to:



Create/Edit a Website Project

Creating a new project/website

For users with administrative access, select **New Project** on the Publish Online toolbar. If you do not have admin access, ask the BOL administrator to create the website for you and give you permission to access and edit the website.



Project code and details

The Project code will be used to form the final part of the website URL on the BOL server. In this case, the website URL will be https://herbaria.plants.ox.ac.uk/bol/mymuseum. If BOL is installed on your own server, the URL will reflect that. You may also define domain addresses such as http://brahmsonline.kew.org/msbp

Using the options on the project edit page, you can add a project description which may be useful for web browsers picking up your website details; the contact name and email; and a default image copyright message which is displayed under each data linked image. There are also options to:

- Restrict downloads to users who are registered and logged in.
- Restrict searching to users who are registered and logged in.
- Project is offline.

If both these checkboxes are ticked access is restricted to signed-in project members only. With only one box ticked, access will not require project membership but will require the user to be signed in. You can also disable a project. If disabled, the project is taken offline but it remains editable through web connect.

Delete a project

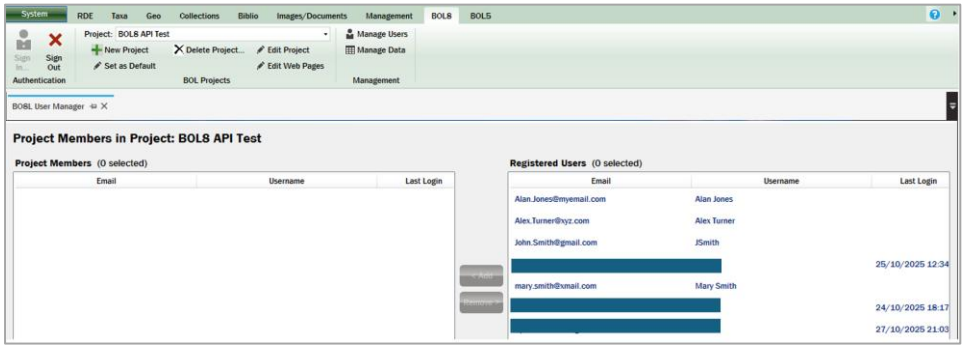
If you delete a project, this will delete the website together with all of its associated website design images and any related documents. This will NOT delete any databases or data images associated with the website.

Managing Users

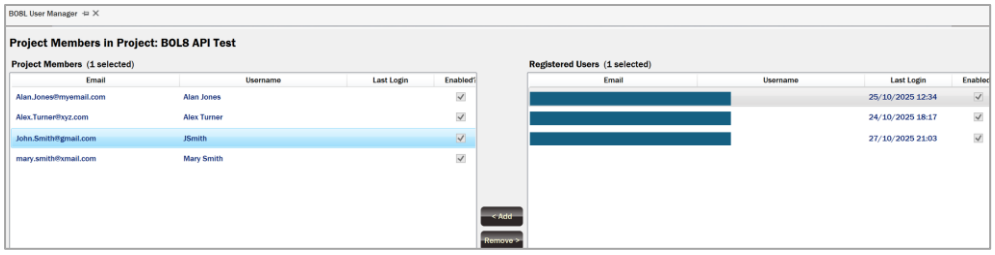
User management is only available to those with Admin or Project Manager level status. The options under **Manage Users** allow you to control who has access to a given database.



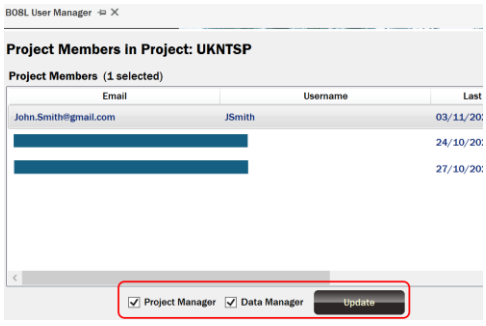
The options under Manage Users allow you to control who has access to your database. Any user registered on the BRAHMS website can potentially be added as a member or a manager.



The right-side window displays all users registered for BOL who are not already Project Members for the currently selected online project.



The left-side window displays all users who have been registered as Project Members for the currently selected online project.



A user added as a 'Manager' will have access to edit the website details and/or the data.

Website design

Introduction

Website design is based on a bootstrap/CSS framework directed at responsive, mobile-first front-end web development. You can also use jQuery.

You add webpage details in the same way as you add records to other tables in BRAHMS. Each page is added to a data grid with one record per page. Each page will be displayed on your website menu – either as a main menu item or as a child record of a main menu item.

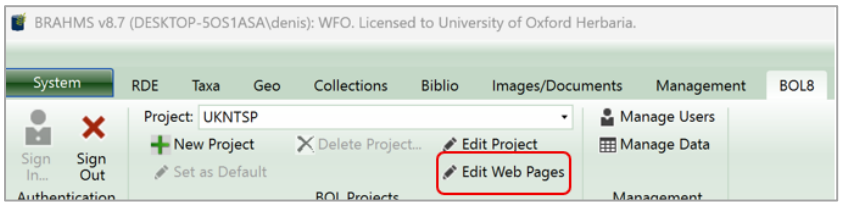
Technically, each website is divided into 4 regions:

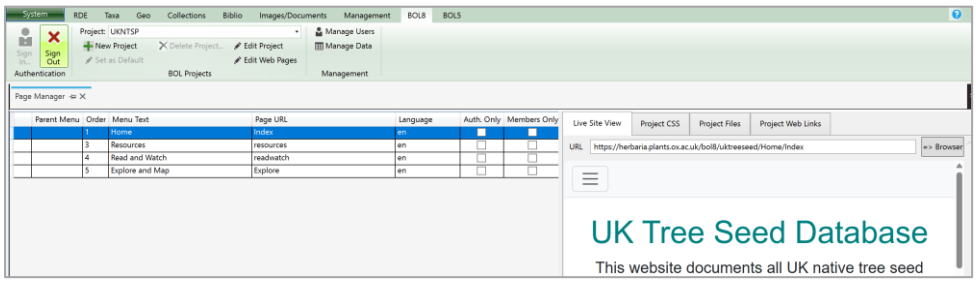
- **Title area:** by default, this is used form a website banner image as added when you create a new website. Banner images can be edited or removed.
- **Navigation area:** used for the menu system. The position of this can be moved above the title area using the appropriate CSS. The menu system itself is edited by adding pages which may be hierarchical.
- **Content area:** all user content is added here.
- **Footer area:** primarily reserved for BRAHMS website link. It can be hidden.

Creating and editing web pages

Opening the website editor

To create and edit web pages, select **Edit Web Pages**. This opens a data grid with one record per website page.



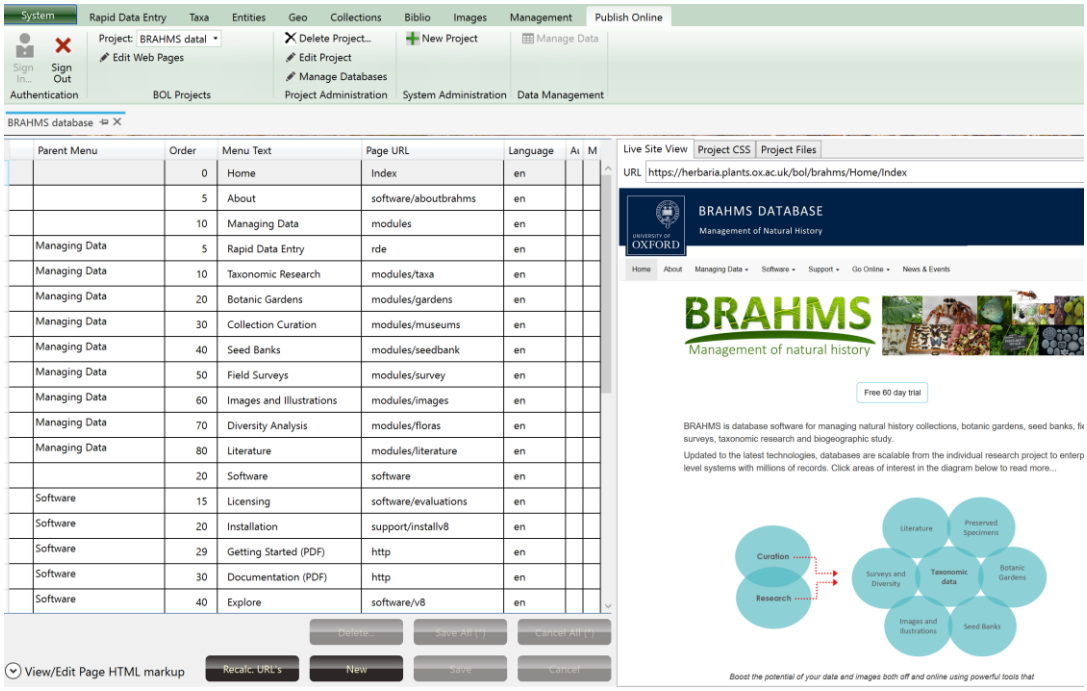


*The above screen shows a newly created website project. By default, a page is added with menu text 'Home'. The Page URL is set to 'Index' and the default language is 'En'. On the right panel, the **Live Site View** displays the page online.*

Adding new pages

To add a website page, select **New** at the bottom of the data grid. Edit the Menu text and the page URL in the data grid fields. Do not use spaces in the URL. Pages can also have a page order which will control their position in the menu. They may also have a Parent Menu value. If the Parent Menu is left blank, the page will appear as a top menu item. If you add a parent menu value using the dropdown provided, the page will appear as a sub-menu item of the parent page. Example uses of the Parent Menu option can be

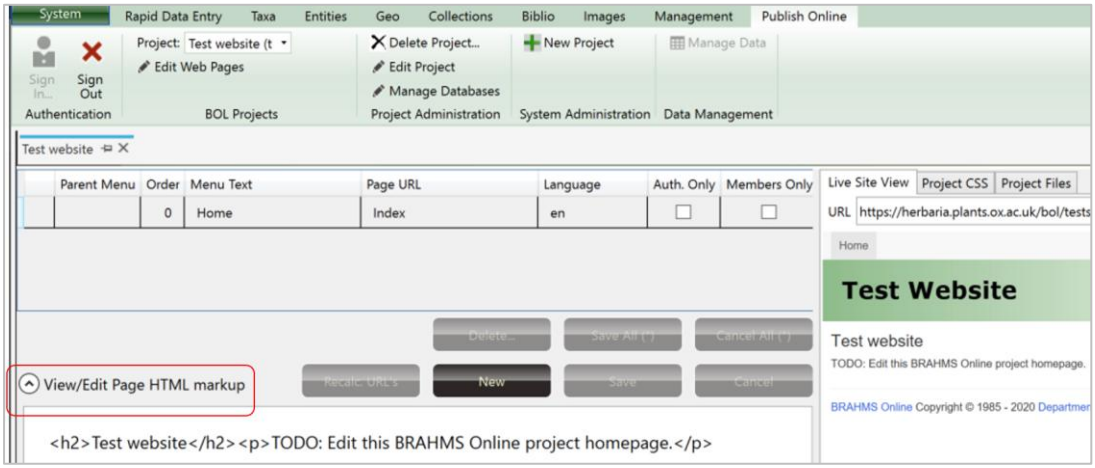
seen in the BRAHMS website example below. The Auth. Only and Members Only options are discussed below.



Web Pages *added to the main BRAHMS website showing the use of the Parent Menu field. Clicking on any record in the grid (=web page) will update the Live Site View on the right.*

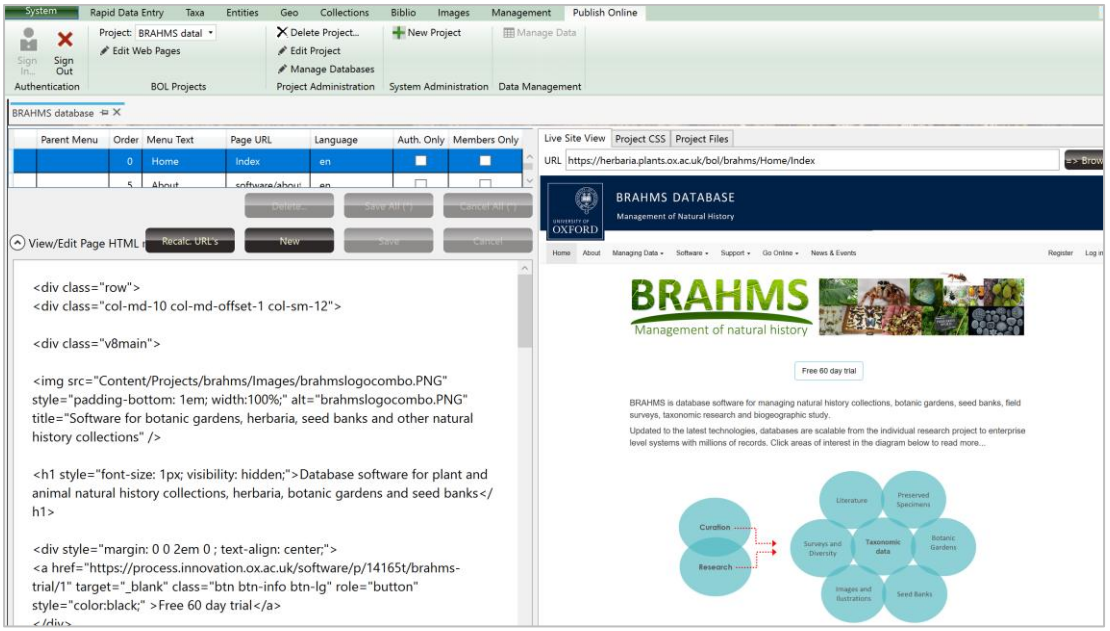
Editing the HTML

To edit the page content, select *View/Edit Page HTML mark-up* at the bottom of the screen. This action opens up the text editing area into which you can add any html mark-up you wish, optionally basing this on a bootstrap framework.





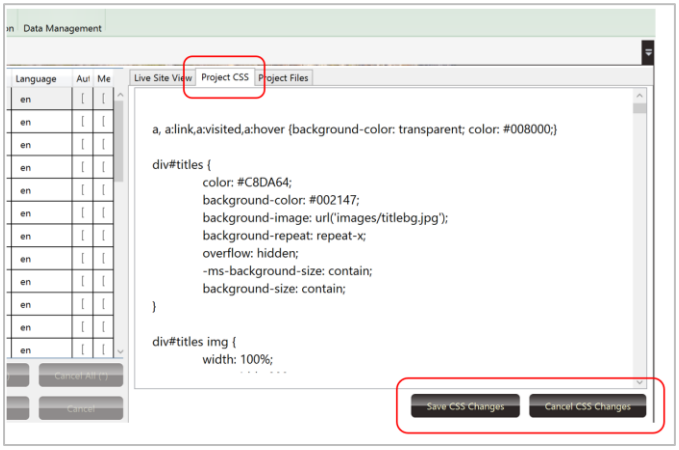
When text is edited the Save options are enabled. Once saved, the live website is updated.



An example page being edited for the BRAHMS home page.

Using CSS

Website layout and formatting can be controlled using the CSS (Cascading Style Sheets) file. CSS describes how HTML elements are to be displayed on screen, paper, or in other media and the correct use of CSS saves a lot of work. The CSS effectively provides a Stylesheet for your website. It helps to separate document content from document formatting and styling, reducing website complexity and making it far easier to edit and change all your website pages at once.



*To open and edit the CSS file for your website, select the **Project CSS** tab next to the Live Site View tab.*

When you create a new website, the following CSS is added to your default CSS file:

```
div#titles {
  color: #000000;
  background-color: #FFFFFF;
  /*background-image:url('images/titlebg.jpg');*/
  background-repeat: repeat-x;
  overflow: hidden;
  background-size: contain;
}

div#titles img {
  width: 100%;
  max-width: 960px;
  min-width: 400px;
  border: none;
}
```

Website images

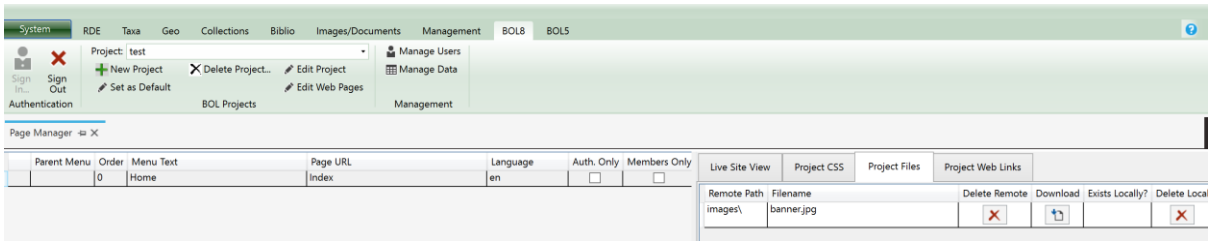
This section deals with website page content images rather than data related images. The latter are discussed in the data section.

Some general guidelines

- Image file names uploaded to websites should not include spaces or other strange characters. Underscores are OK. Thus, not 'Clusia alba.jpg' but 'Clusia_alba.jpg' is OK.
- Large sized image files (file size in bytes) take longer to load when someone views your webpage. Keep homepage images as small as possible without loss of clarity. High resolution images may be larger.
- Uploading a large sized image and then forcing a smaller dimensions using HTML image tags to reduce image height/width is bad practice – better to resize the images before uploading.
- Make sure the dimensions of your images are suitable – not just for your monitor.

Banner image

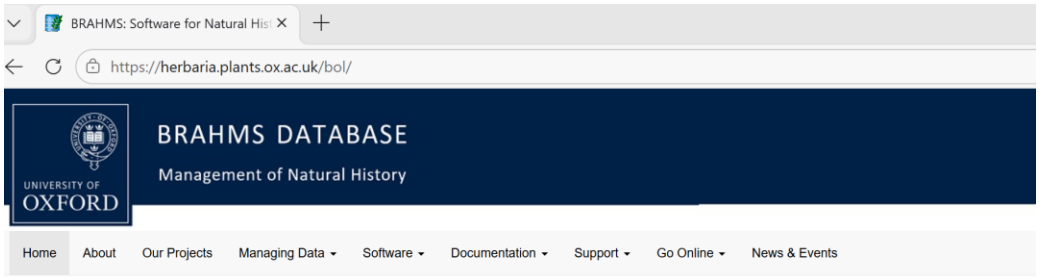
When you create a new website, a default banner image is always added to the website title area. This is simply a green fading image with your project code added. You can replace the image, remove it, or reposition it. Banner images in the title area must be named banner.jpg.



The default banner image added when you create a new website.

You can upload a new banner image by:

a) Creating a suitable image probably approx. 800-960 x 70-100 px max.
b) Make sure this image is called banner.jpg.
c) Uploading the image using the **Upload Image** option provided at the bottom of the Project Files tab.

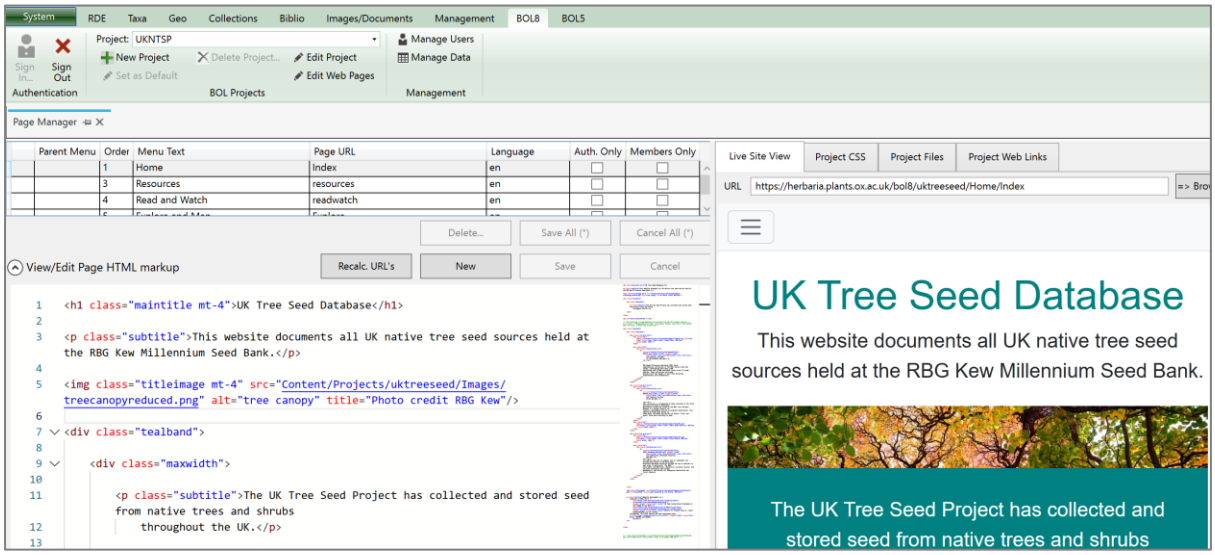


An example banner image on the main BRAHMS website.

Other website images

All other images will be added to the content area of your website using standard HTML tags with whatever style settings you may choose. You can use CSS to create image related classes. The image(s) themselves must be uploaded to your website folder using the Upload Image option provided or copied to the appropriate folder on your website server.

Note that when you use the **Upload Image...** option, you can use the function **<< Insert into page** to add default HTML to your content.



The above show an example of HTML code including the addition of an image named treecanopyreduced.png.

Image folders

The Documents\BRAHMS\Webconnect folder is used to keep track of all your website assets. This includes content images. Images uploaded to your website content and also always stored locally in your documents\brahms\webconnect\yourprojectname\images folder. You may want to copy your content images to this folder before uploading and thus avoid duplication. You can in fact create subfolders in this image folder. The subfolder structure is created and maintained on your server.

When you upload a content image, this is stored in your BOL install folder under wwwroot\Content\YourProjectName\Images. Note that cached thumbs of any data images viewed are also stored in this area of your server.

Uploading data and images to BRAHMS online

Introduction

Data and images can be selectively uploaded from your desktop BRAHMS for any of the currently available BOL data tables. While data are copied to the server, with images, only the image links are uploaded. The actual images must be copied to your server or otherwise be accessible.

When you upload data/images, these are added to a separate BOL SQLite database. This (initially empty) database is created on your server whenever you create a new BOL project. As soon as you select the WebConnect **Manage Data** option, a local copy is also created in your Documents\BRAHMS\WebConnect\project folder. The name of the SQLite database is the same as your project name.

The upload process in summary

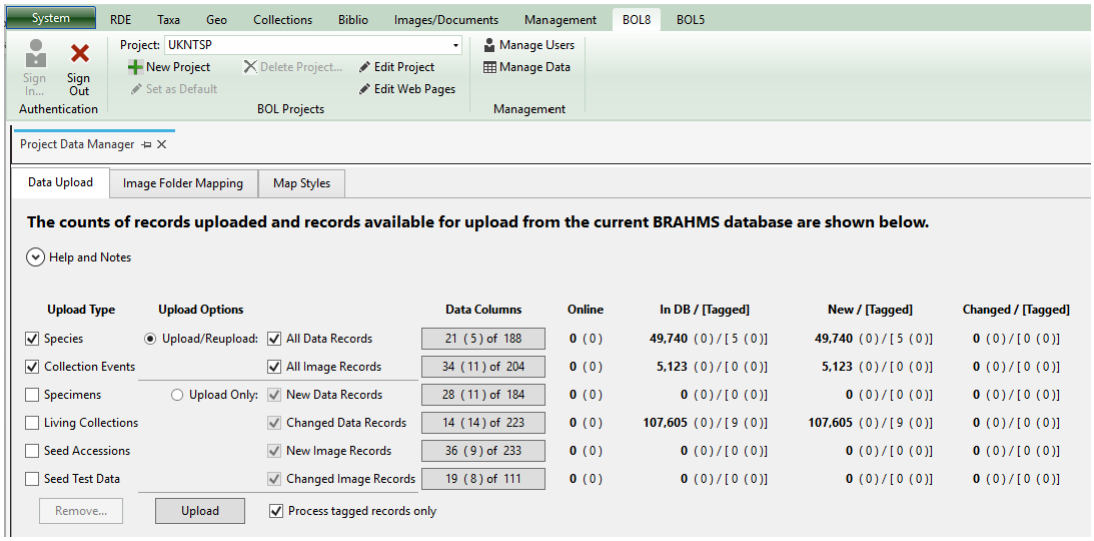
Currently data can be uploaded for the following tables: Species, Collection Events, Specimens, Living Collections, Seed Accessions and Seed Test data. You can upload multiple tables at the same time and, assuming you are wishing to do that, it is more efficient to all the tables in one go. Broadly, the upload process is as follows:

- Select which table or tables you want to upload data for.
- For each table, select which data fields are uploaded and which fields will be visible by default.
- Choose whether to upload all records, tagged records, records modified since last uploading.
- The required data are assembled into the local SQLite database.
- The SQLite database is copied up to the server.

Note that unlike as was the case in BOL5, each table with its image links is entirely independent of the other tables. In BOL5 there was a rule that you had to first had to first upload parent records before any child records, e.g. species before uploading any records referring to those species.

Uploading data

Data can be uploaded to your online database using the options on **Publish Online > Manage Data**. When you choose this option, the online database associated with your desktop BRAHMS database will be selected (assuming you have created a database as described above).

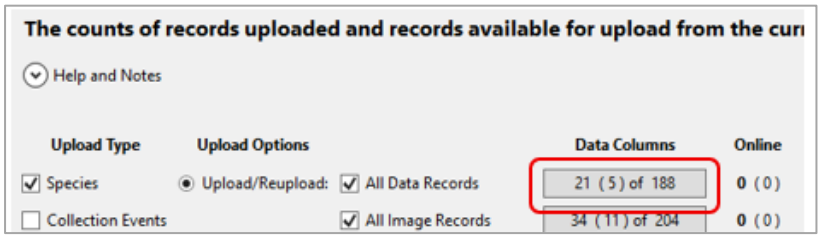


A screen showing the data upload options and statistics.

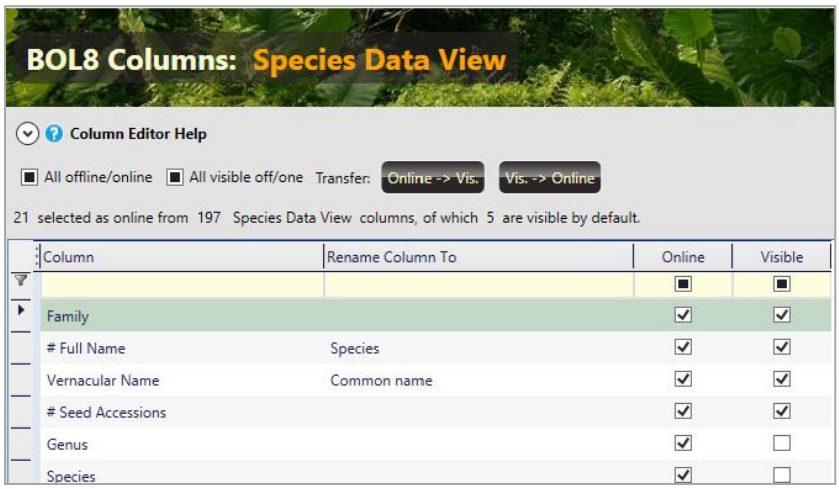
Selection of data columns

For each category of data. You can choose:

a) Which data fields to upload.
b) Which data fields to make visible by default.
c) The names of the column headers.



Choose the Cala Columns button to edit the column settings.



All fields marked Online will be available on your website. Those marked Visible will be visible by default. While you can adjust default visibility after upload (from your website), if you wish to alter the Online fields, you will need to re-upload the table. Note that with the column options, there are a number of features that enable you copy fields from Online to Visible vice versa.

Upload options

When uploading, you can choose to Upload/Reload all records and image links or selectively upload New or Changed records and image links. You can also restrict all upload operations to tagged records. BRAHMS knows which records have been upload together with the upload date. The system can thus determine if the LastModifiedDate of a record is more recent than the last upload date.

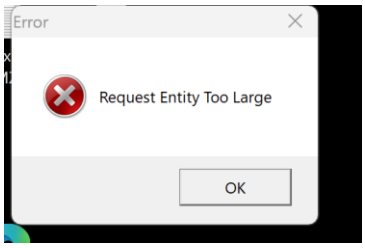
	Uploaded to BOL By	Uploaded to BOL On	Last Modified By	Last Modified On
			DESKTOP-5OS1ASA\...	15/03/2026 11:51:25
			DESKTOP-5OS1ASA\...	15/03/2026 11:51:25
			DESKTOP-5OS1ASA\...	15/03/2026 11:52:09
			DESKTOP-5OS1ASA\...	15/03/2026 11:51:25

The Uploaded to BOL By and On fields allow the system to determine which records may need to be re-uploaded.

Troubleshooting the final upload stage

When you upload data, initially, your data are uploaded to a local SQLite database file. This file is stored in Documents\BRAHMS\WebConnect\ProjectName\DatabaseName. An example database name is uktreeseed.db.

When uploading larger databases, there is a chance at the very end of the process, the .db file fails to upload to the destination server. This is due to file size restrictions. If you do get an error message, the solution is to manually copy the .db file to the BOL database folder on your server.

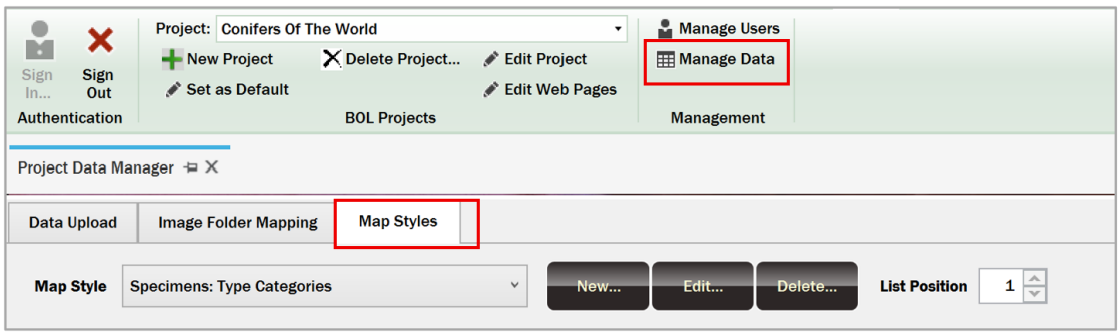


An example error message.

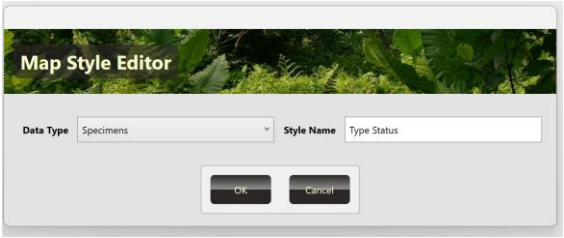
Adding map styles

You can add map styles to selectively set map point colour, symbol and size – and upload these styles to your BOL website. Map styles can be added for numeric and/or character fields. With numeric data, ranges are often used. Before adding map styles, you need first to have uploaded your data.

Having logged into BOL using BRAHMS WebConnect, select Manage Data. And then select the Map Styles tab.



Here, you can select New... to add a new entry. You must select a Data Type from the list of available data tables that you have uploaded – and provide a map style name.

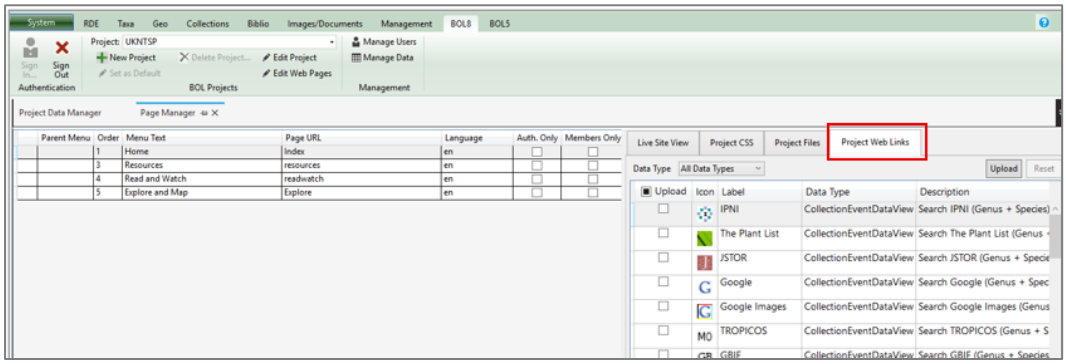


Adding a new Map Style called 'Type Status'.

Once registered, you can proceed to add the map style content. You can add as many entries per style as you wish although to make it meaningful to interpret, it's not likely to exceed 10 entries. Each entry has a legend name and an SQL clause followed by the selected colour, symbol and marker size. As soon as you select the Save Changes option, your map style is auto uploaded to your website site and will be available to use. If your website is already open, best to refresh the browser.

Adding weblinks

Any website links that you have added to BRAHMS can be uploaded to your BOL system.



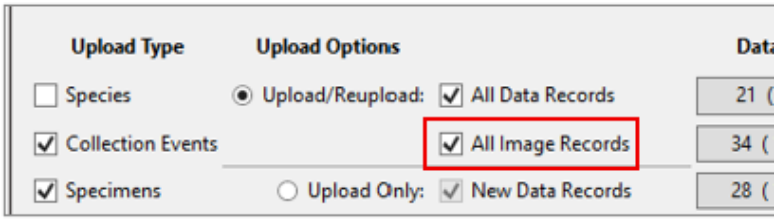
Website links can be uploaded from the WebConnect Page Manager.



Uploaded weblinks appear online to the right side of the main toolbar.

Uploading images

To upload images, all you have to do is tick the data upload option All Image Records or Changed Image Records



As the 'All Image Records' option is selected, in this example, any images associated with Collection Events and Specimens will be uploaded.

Note that the upload option only uploads details about the image links – it does not physical upload image files. These must be copied separately to your server. See notes on image folders below. Clearly, if your images are represented by URLS, there is no need to copy the image files.

Server image folders

If you are coping images to a folder setup on your server, the folder mapping is a simple process and far easier than the method used in BOL5.

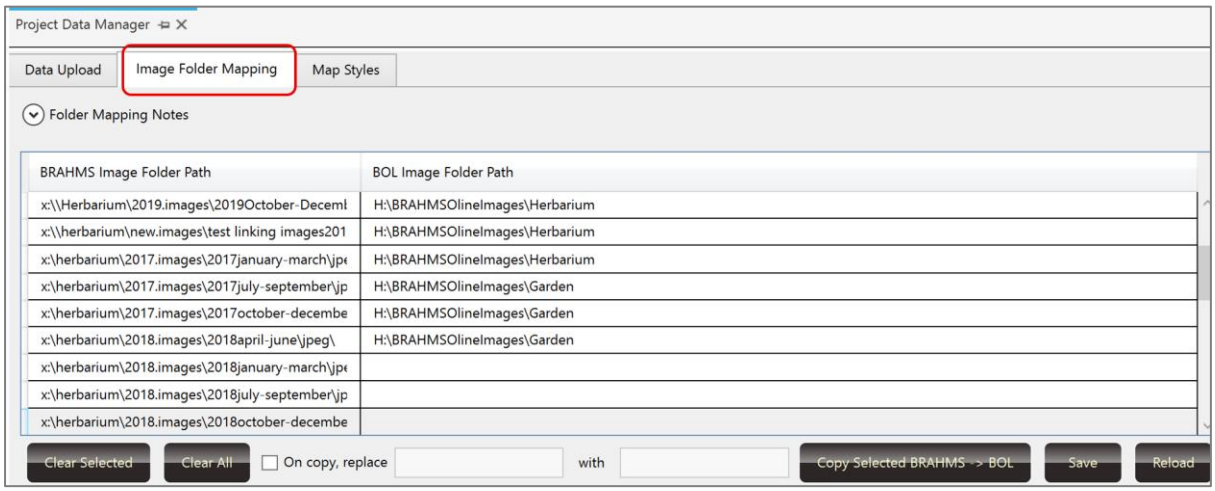
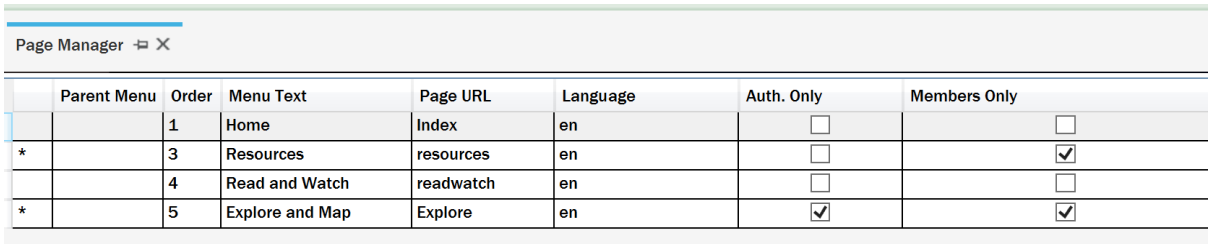


Image Folder Mapping

Each image folder registered in your BRAHMS desktop system is listed in the left pane. You can then edit the destination server folder name into the right-side pane.

Restricting access to pages and/or data

Aside from website management, some projects require that users are registered to gain online access to specific webpages (including access to data). This would apply to projects with sensitive or otherwise protected data that can only be accessed by project members rather than the general public.



	Parent Menu	Order	Menu Text	Page URL	Language	Auth. Only	Members Only
		1	Home	Index	en	☐	☐
*		3	Resources	resources	en	☐	☑
		4	Read and Watch	readwatch	en	☐	☐
*		5	Explore and Map	Explore	en	☑	☑

Annex .1 Installing BRAHMS online

BRAHMS online servers

BRAHMS online websites can be developed and published on any computer opened to the internet where the BRAHMS online system is installed. Many projects choose to install BOL on a server within their own institution, but it may also be cloud based. You may want to register a meaningful Domain Name System (DNS) for the server such as http://newworldfloras.org and thus be able to have a URL such as http://newworldfloras.org/ericaceae. Read more on e.g. http://en.wikipedia.org/wiki/Domain_Name_System .

Installation process

For licensed users, contact the BRAHMS project to receive the BOL v8 zip installation file. There are currently 2 version of this, the first is for servers capable of running .NET10 (the current .NET version) , the other is for older servers that are not capable of running .NET10.

Installing in IIS

For Windows servers, IIS is normally used. There are other web servers that you use (e.g. Apache) but these are not discussed here. For Linux servers, a different set up will be required and will be understood by the relevant IT staff.

Some familiarity with working with IIS is required.

1. Ensure the downloaded BOL8 zip is unblocked before extracting. Check the zip properties.
2. Extract the zip file to the destination folder.
3. Edit the Bol8/appsettings.json file as follows:

a) Google Maps API key. Provide a Google Maps API key in the place indicated below then save/close. BOL will not run without it. The entry in the appsettings.json file will be as follows:

"GoogleMaps": {

"ApiKey": "Place your key here in the appsettings.json file"

},

4. Decide if this is your default website or a web application. If default (as in https://www.your.website.com/) then no further change is needed, just save/close the appsettings file. Otherwise, decide what the website application URL will be, *e.g.* https://www.your.website.com/bol8/ where bol8 is the application name being used, then add the application name into the appsettings.json *e.g.* change "AppDirectory": "/", to "AppDirectory": "/BOL8/", ("/" is used as the main site, "/BOL8/" assumes a web application named BOL8).

5. Install the hosting bundle for .Net10 on your webserver (if not already installed) from https://dotnet.microsoft.com/en-us/download/dotnet/10.0 NB. make sure you choose the 'Hosting Bundle'.

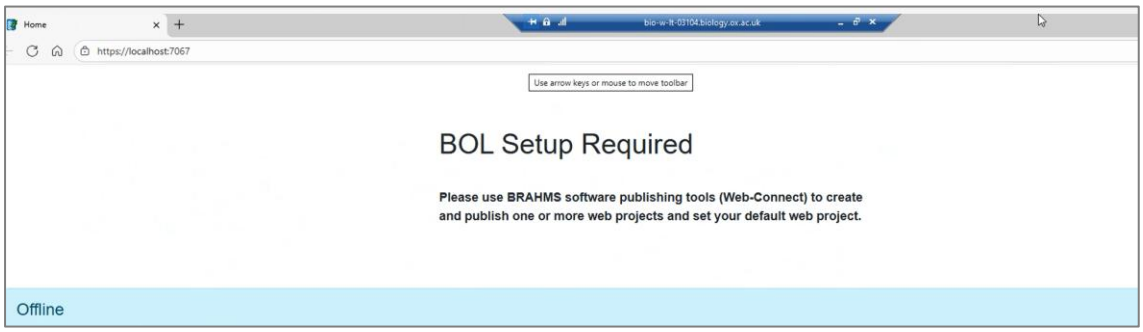
6. Run it to install this on the webserver, this shouldn't take long to complete. See https://learn.microsoft.com/en-us/aspnet/core/host-and-deploy/iis/?view=aspnetcore-10.0 for full information if needed.

7. Create an App Pool: In IIS Manager, create an application pool with a .NET CLR version of "No Managed Code" with 'Integrated' pipeline and tick Start Immediately (*e.g.* use BOL8 as the app pool name).

8. Enable the Website: Either edit the default website to point to your BOL8 folder and use the application pool created above or add a virtual application pointing to the BOL8 folder with the above application pool.

9. Set permissions: This should be the last required step and is needed to allow databases and project files to be managed: Add the "IIS Apppool/BOL8" account (or whichever named app pool account you created with your application pool above) to the security list on the BOL8 folder and give it read, write and modify permissions. Cascade these permissions throughout that folder (*i.e.* enable inheritance).

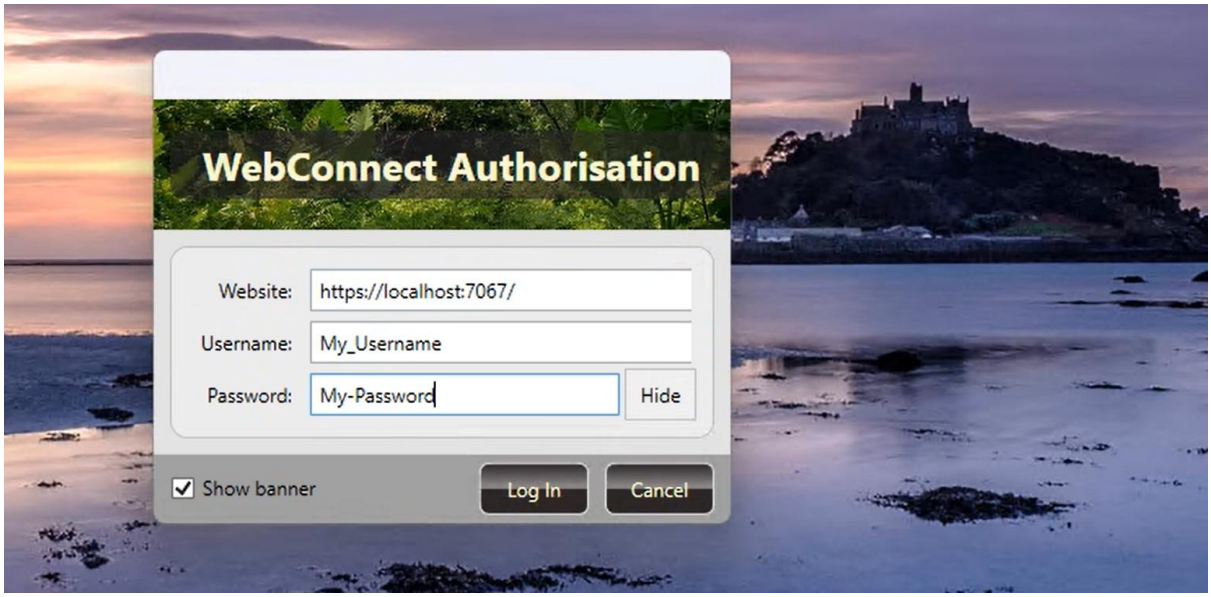
10. You will need to use BRAHMS WebConnect to create your first website (project). The installation should now be completed. You should now have a working website that can be managed from the WebConnect BOL8 (publish online) menu within BRAHMS 8.7.3 or later. If you open your website now, you should see something similar to the below:



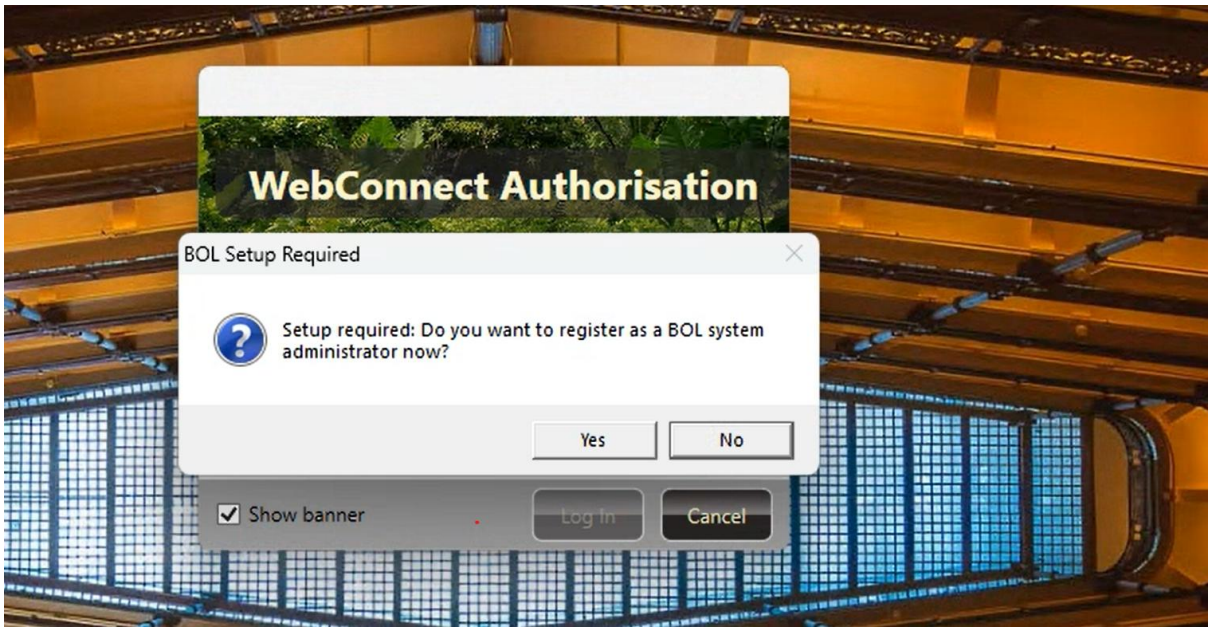
When you first open the new website, you will see something similar to the above (before you have created any website project from BRAHMS WebConnect).

Steps required within BRAHMS

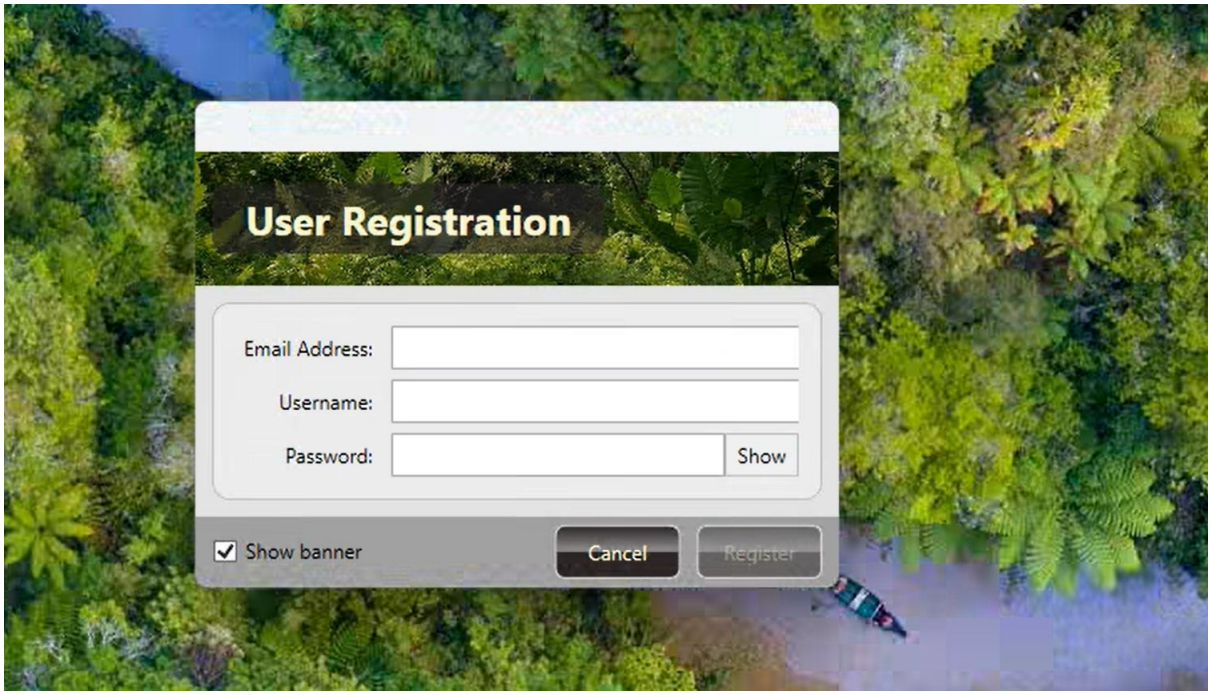
After installation when you sign in to WebConnect from BRAHMS for the first time, the system prompts you to login to the server using your website URL and then login. On the first login, there will be no user/password and you will be prompted to provide these details. **Please do not forget these credentials**.



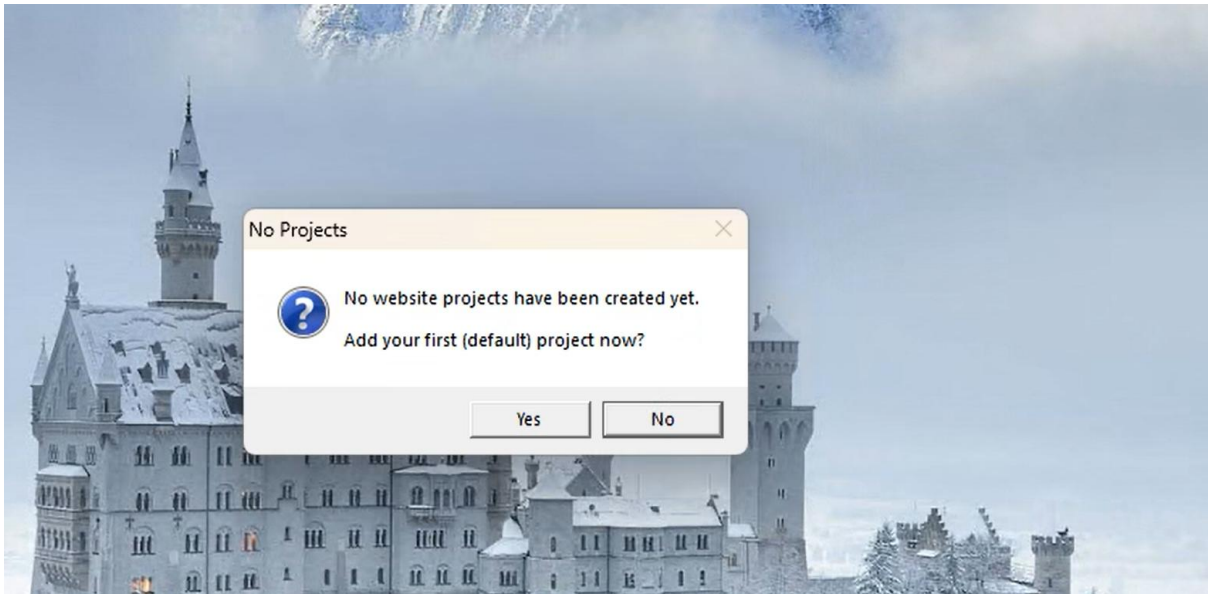
In the above example, localhost is being used. In your installation, this will be replaced by the website URL which should end in /.



Prompting you to add a username and provide a password for the System Administrator.



Adding the System Admin details.



When you first log in, you will see the above message – assuming you have not yet created a BOL website project.

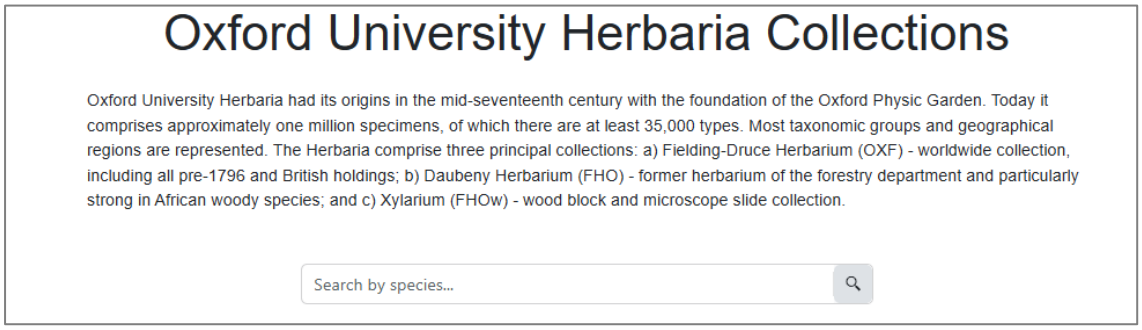
Annex 2. BOL v8 - Example Features

Introduction

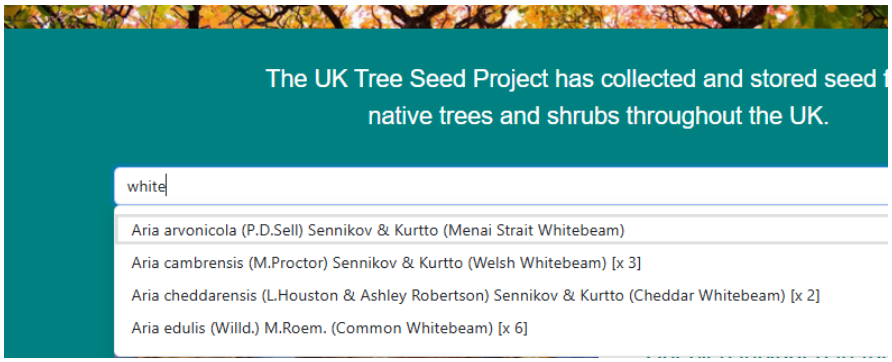
This WebConnect guide is not intended as a guide to BRAHMS online itself. However, a range of features are summarised here.

Species search widget

You can add a cool species search feature to your home page.



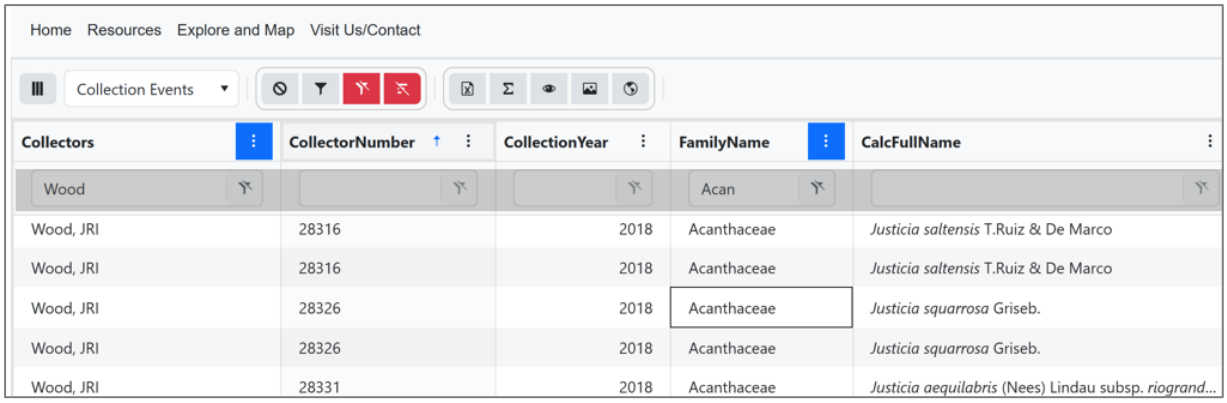
A Search by Species option added to a home page.



Searching on any component of a species name including common names.

Querying data on BOL

Once uploaded, your data are presented in virtualized data grids with a grid filter row similar to that used in BRAHMS desktop. Searching is fast and is not greatly influenced by the size of the tables. For example, a specimen table with *ca*. 2 million records can complete a query based on several fields in a few seconds. Visible columns can be selected by users and a default view set by Admin. Data can be sorted, summarised, mapped and exported (if exporting is permitted).

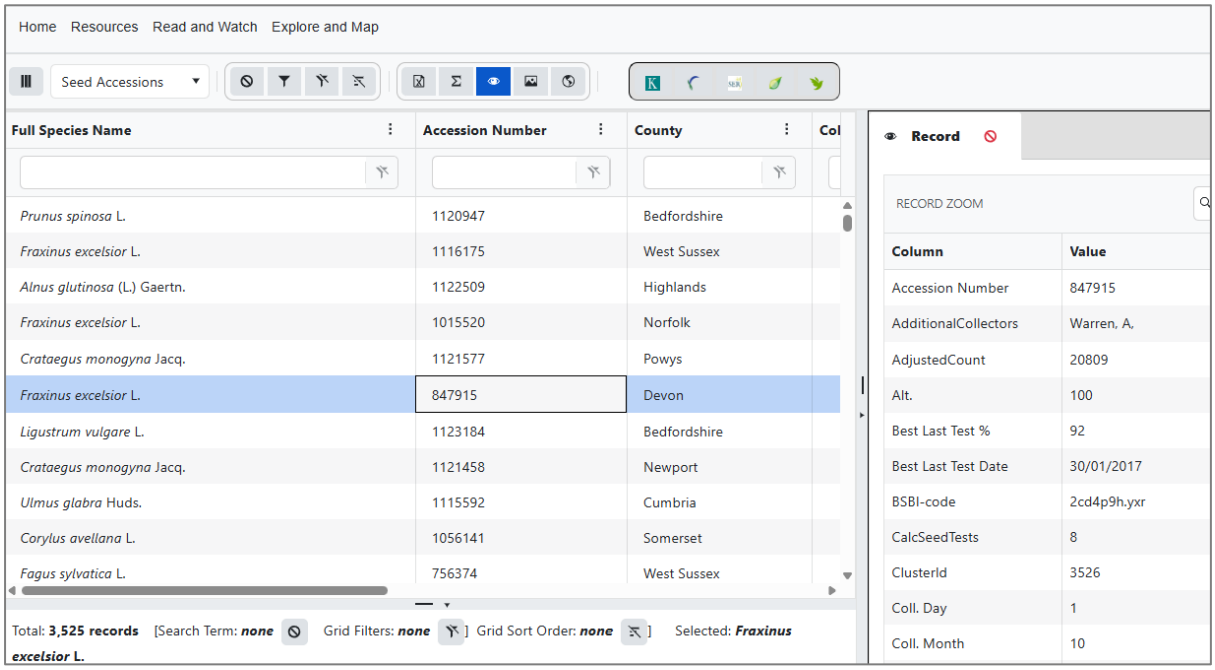


An example data grid with the query grid filter row shaded. Two filters have been applied - in the Collectors and Family Name fields.

Sorting data

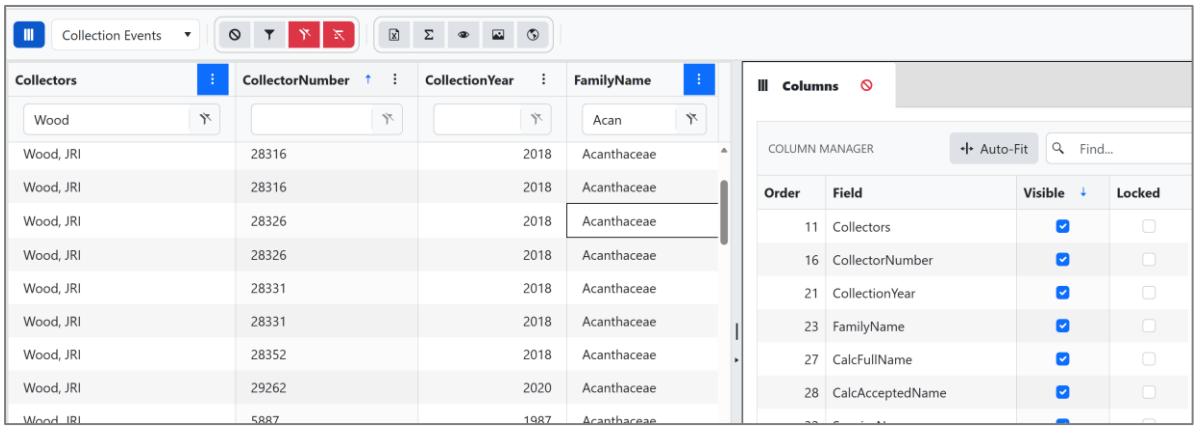
To sort records, Click on the column header. To sort on multiple records, Shift+Click on subsequent column headers.

Record Zoom



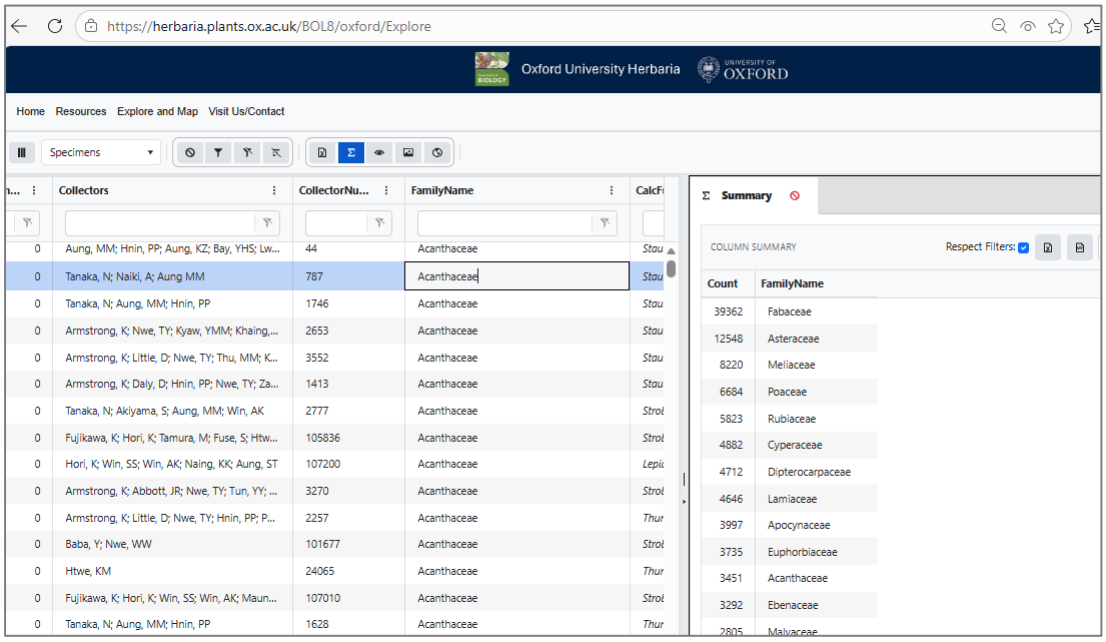
To display all non-empty fields per record, select the Zoom toolbar.

Column selection



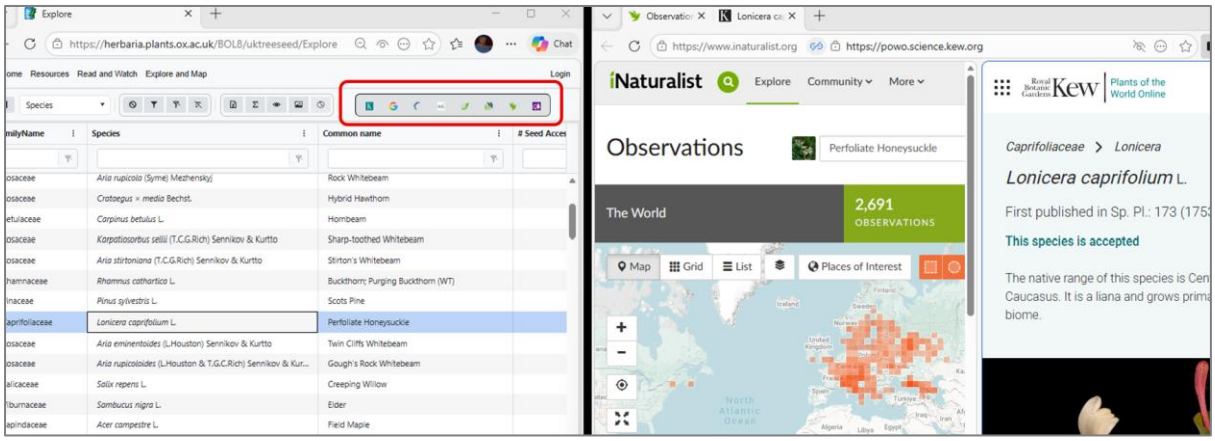
Using the top left 3-bar icon, you can open the Columns Manager. Here you can set column visibility. If you are logged in as Admin, you can save the default column settings.

Summary tool



An example showing the Summary tool in action on the Family Name column. The total number of records per family is displayed.

Accessing Web Links



An example showing two weblink options opened. The available Weblink options are entirely configurable.

Online Mapping

For examples of maps, refer to the map style examples provided in Annex 3.

Viewing images

In BRAHMS online, new features have been added to display all images (as image thumbs) associated with records in the current data grid. The images displayed respect grid filters as these are applied. Furthermore, the images are displayed in groups that correspond to any selected data grid sort. For example, if you sort the data grid by genus, the image thumbs are grouped by genus. Clicking on any image thumb will go to and highlight the relevant data grid record. And clicking on the data grid will highlight the relevant image thumb.

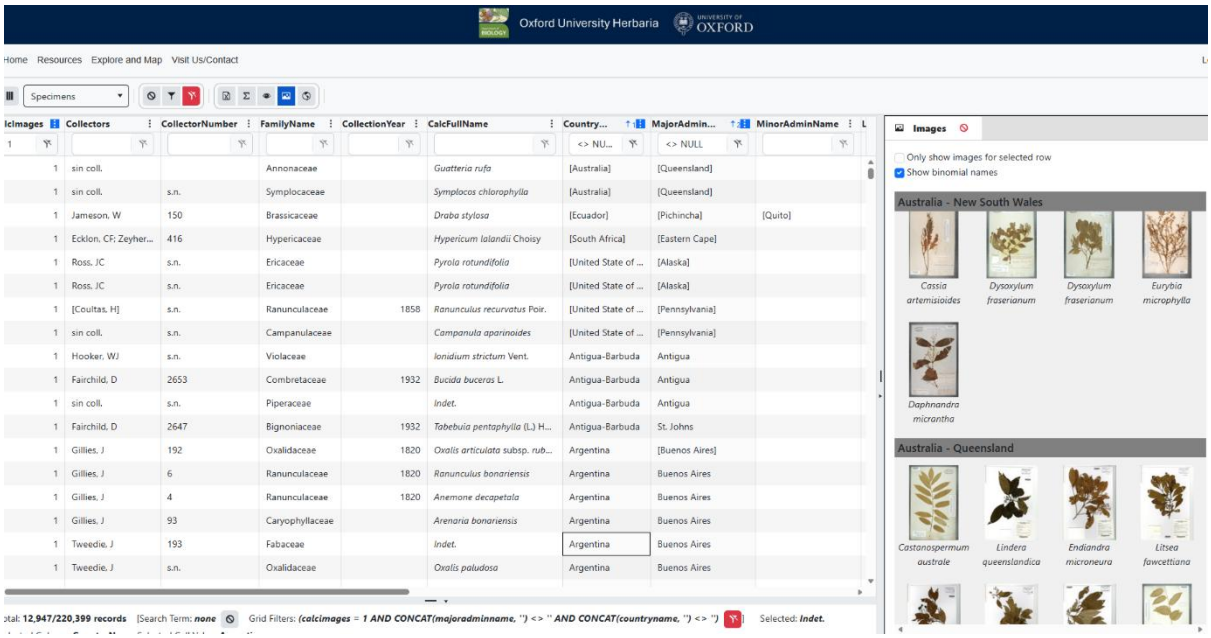
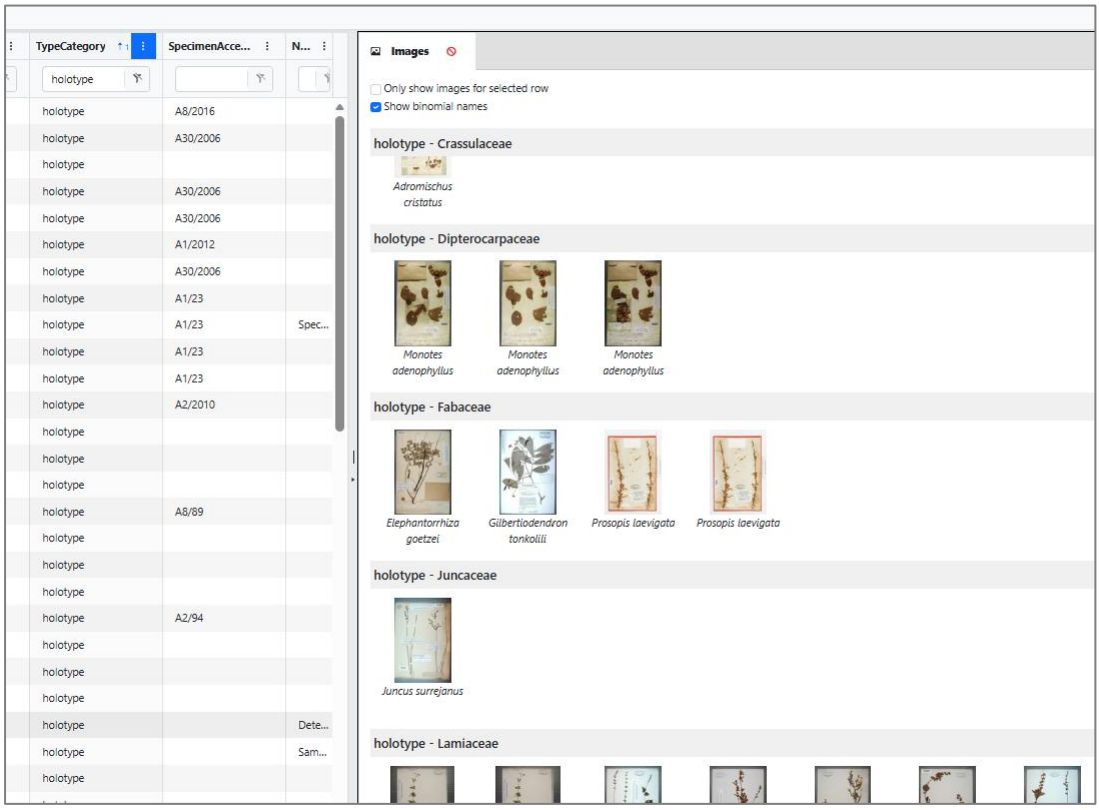


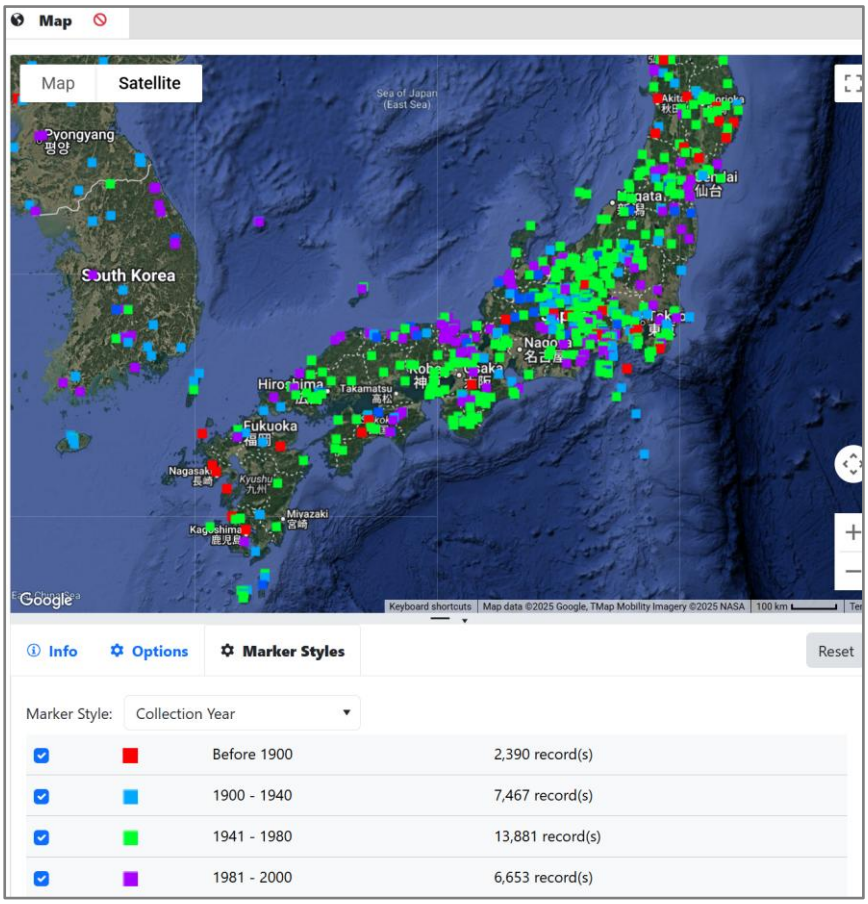
Image thumbs displayed on BRAHMS online, here sorted into geographic groups and showing binomials. Grouping is controlled by your data grid sort order.



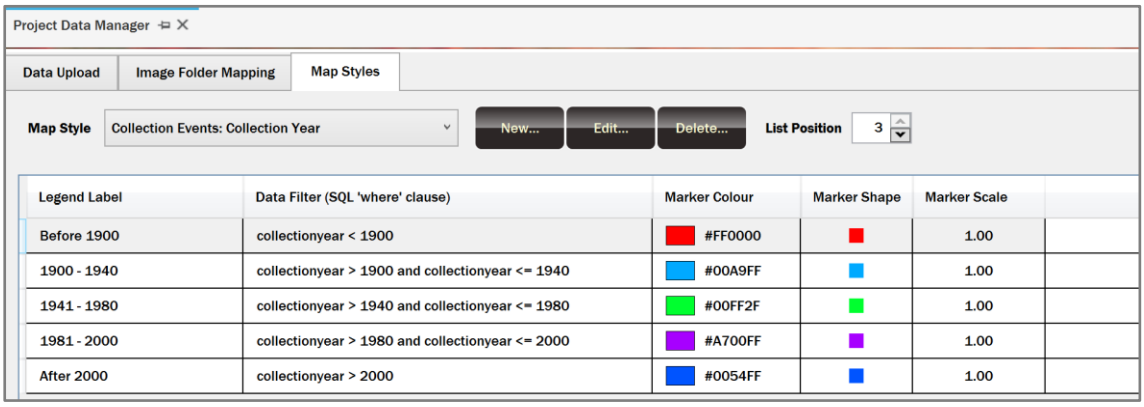
In the above example, the data grid is filtered to type category = holotype and sort by family name.

Annex 3. Map style examples

Collection Years

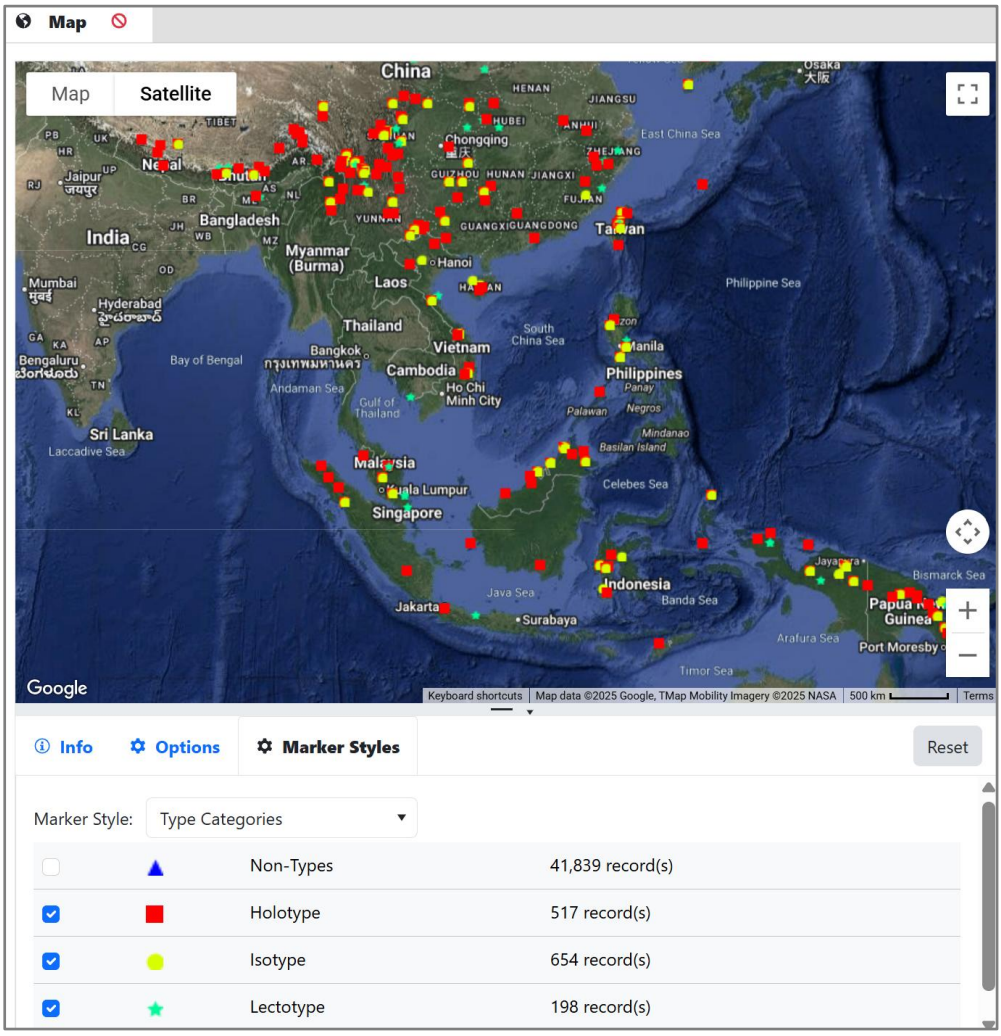


Map showing collection year ranges.

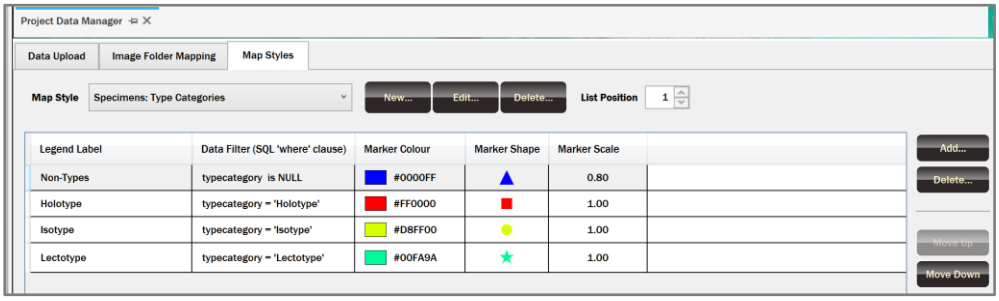


In the above example, 5 entries have been added to display collection year ranges. The colours and symbols are selected using the dropdown options provided.

Specimen Type Status

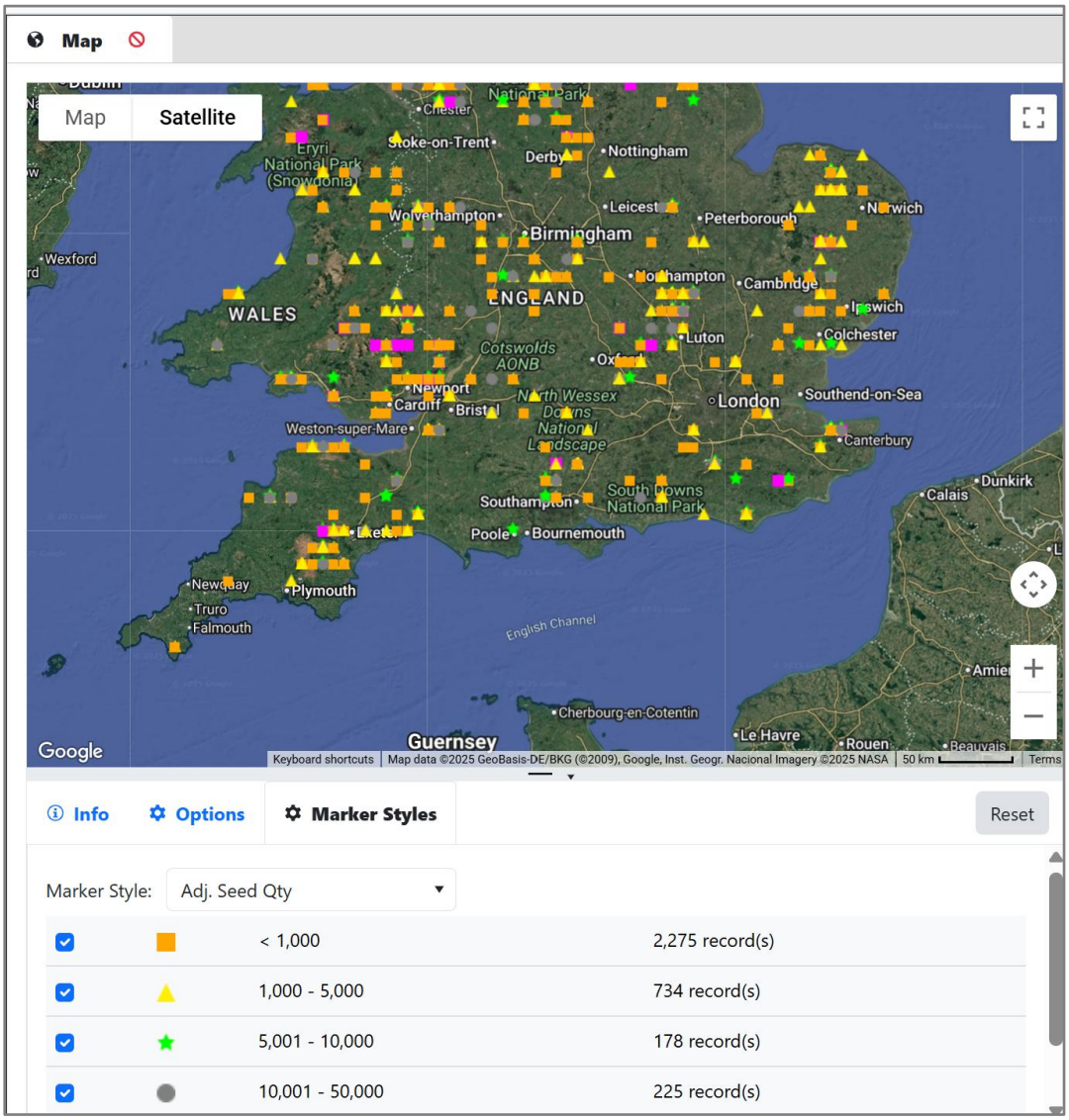


Map showing type status of specimens. Note that in this example, the non-types category has been excluded by de-selecting the legend checkbox.

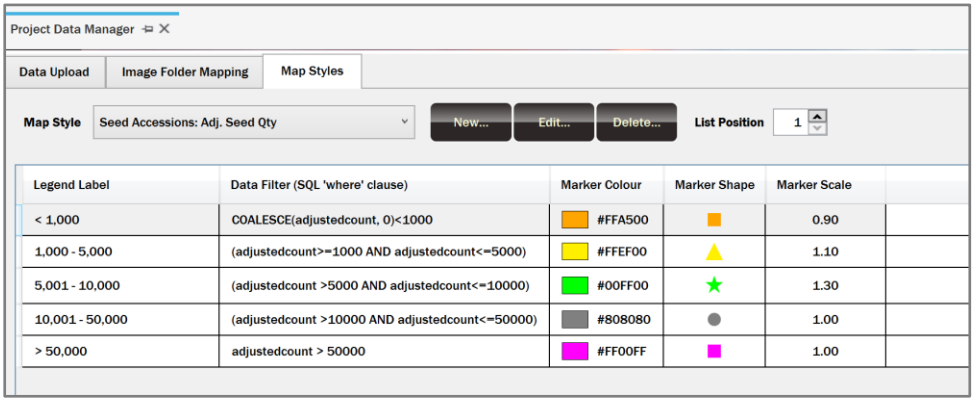


In the above example, 4 entries have been added to display specimen type categories. As text strings are being used in the SQL command, the strings are enclosed in single quotes e.g. 'Holotype'. The colours and symbols are selected using the dropdown options provided.

Seed quantity

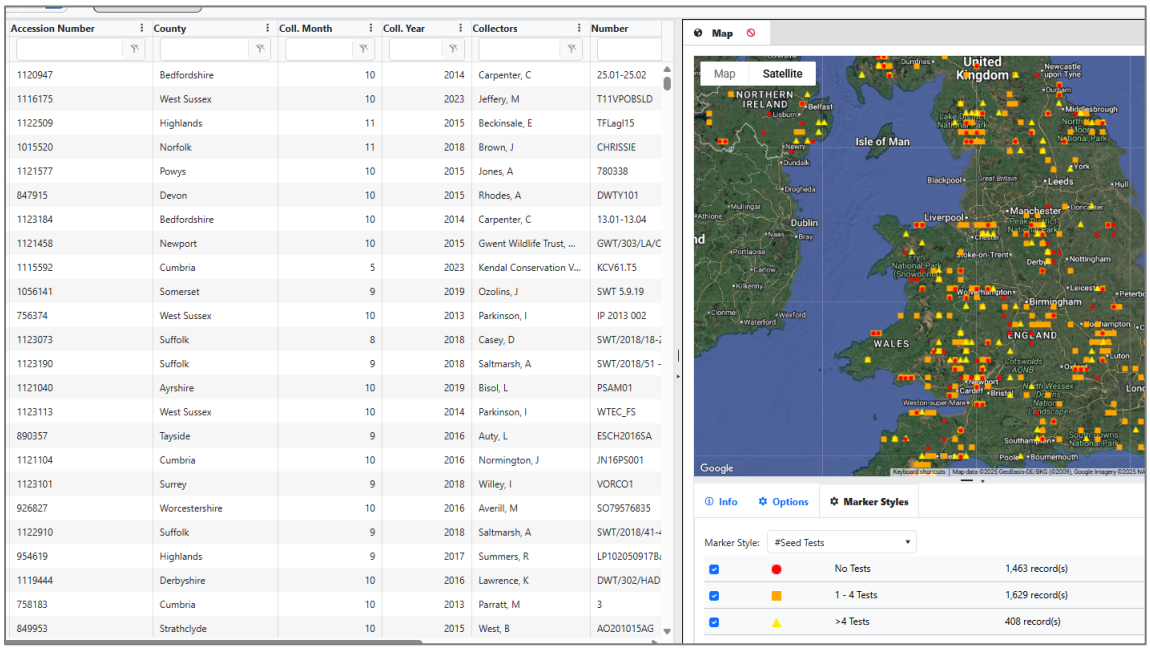


Map showing seed accessions with differing seed quantities



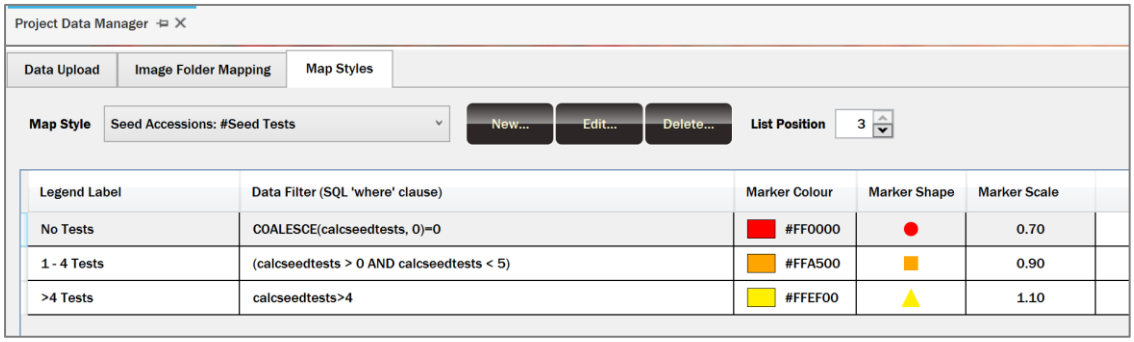
In the above example, 5 entries have been added to display adjusted seed counts. The use of COALESECE is explained below.

Seed test counts



Accession Number	County	Coll. Month	Coll. Year	Collectors	Number
1120947	Bedfordshire	10	2014	Carpenter, C	25.01-25.02
1116175	West Sussex	10	2023	Jeffery, M	T11VPOBSLD
1122509	Highlands	11	2015	Beckinsale, E	TFLagl15
1015520	Norfolk	11	2018	Brown, J	CHRISSIE
1121577	Powys	10	2015	Jones, A	780338
847915	Devon	10	2015	Rhodes, A	DWTY101
1123184	Bedfordshire	10	2014	Carpenter, C	13.01-13.04
1121458	Newport	10	2015	Gwent Wildlife Trust, ...	GWT/303/LA/C
1115592	Cumbria	5	2023	Kendal Conservation V...	KCV61.T5
1056141	Somerset	9	2019	Ozolins, J	SWT 5.9.19
756374	West Sussex	10	2013	Parkinson, I	IP 2013 002
1123073	Suffolk	8	2018	Casey, D	SWT/2018/18-2
1123190	Suffolk	9	2018	Saltmarsh, A	SWT/2018/51 -
1121040	Ayrshire	10	2019	Bisol, L	PSAM01
1123113	West Sussex	10	2014	Parkinson, I	WTEC_FS
890357	Tayside	9	2016	Auty, L	ESCH2016SA
1121104	Cumbria	10	2016	Normington, J	JN16PS001
1123101	Surrey	9	2018	Willey, I	VORCO1
926827	Worcestershire	10	2016	Averill, M	SO79576835
1122910	Suffolk	9	2018	Saltmarsh, A	SWT/2018/41-4
954619	Highlands	9	2017	Summers, R	LP102050917B
1119444	Derbyshire	10	2016	Lawrence, K	DWT/302/HAD
758183	Cumbria	10	2013	Parratt, M	3
849953	Strathclyde	10	2015	West, B	AO201015AG

An example map on BOL using a map style with 3 entries to show seed test totals. The legend is auto created, and you can use the legend tick boxes to show or hide selected entries.



Project Data Manager

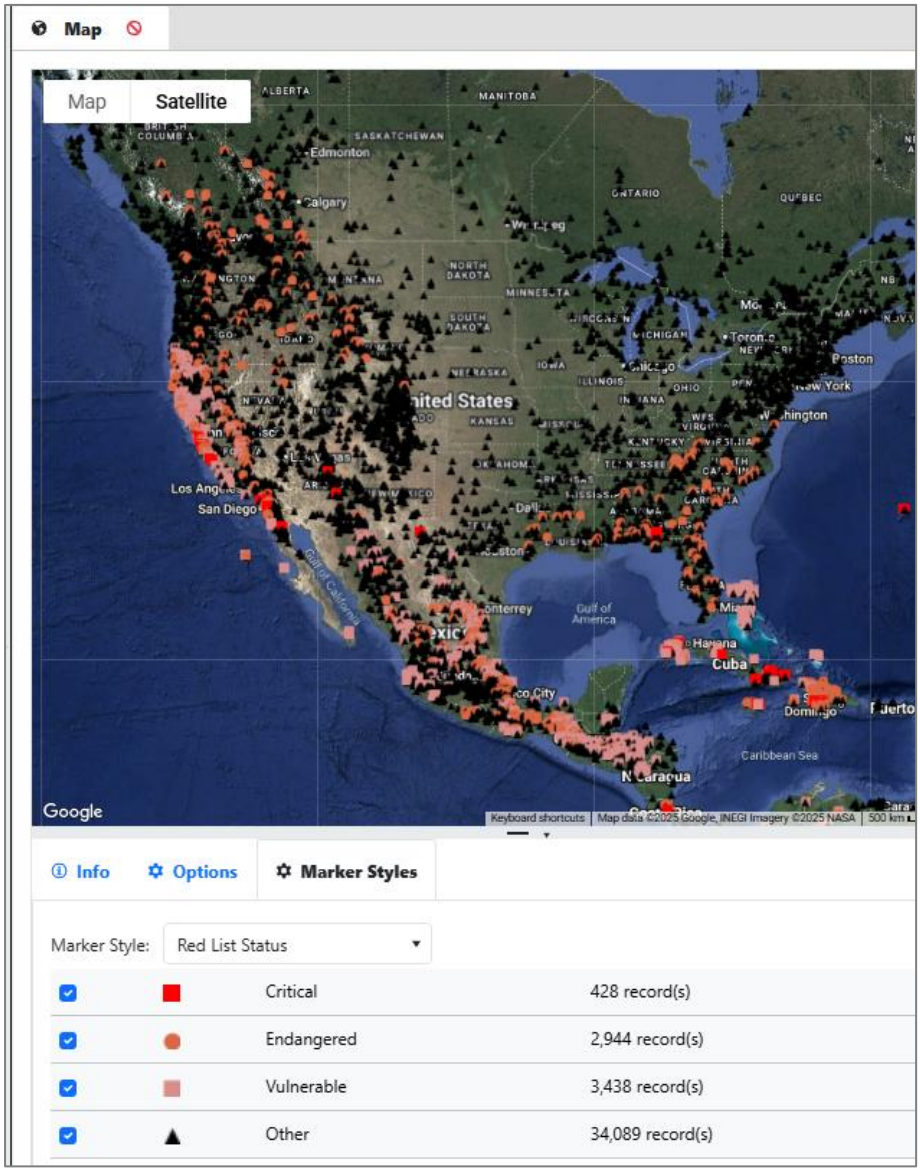
Data Upload | Image Folder Mapping | Map Styles

Map Style: Seed Accessions: #Seed Tests — New... | Edit... | Delete... | List Position: 3

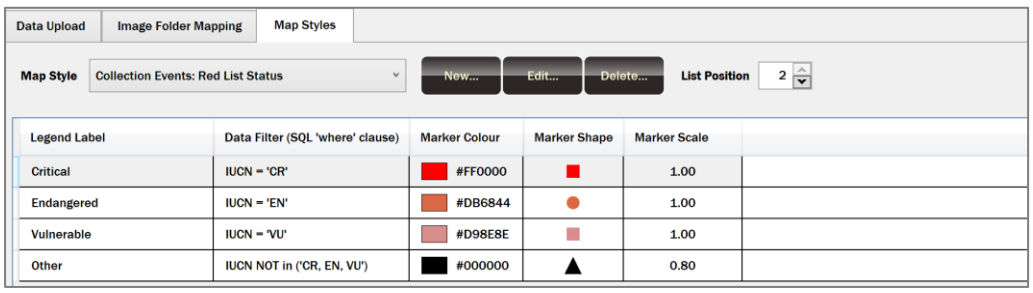
Legend Label	Data Filter (SQL 'where' clause)	Marker Colour	Marker Shape	Marker Scale
No Tests	COALESCE(calcseedtests, 0)=0	#FF0000	●	0.70
1 - 4 Tests	(calcseedtests > 0 AND calcseedtests < 5)	#FFA500	■	0.90
>4 Tests	calcseedtests>4	#FFEF00	▲	1.10

The map style settings used for the above map.

Specimen IUCN Red List categories



A partial map with legend showing collections categorised by IUCN red list status.



The map style setting used for the above IUCN categories map.

The ‘where’ clause syntax explained

The SQL syntax that you enter consist of SQL where clauses. You do not need to add ‘where’ as this is added for you. Some SQL help is provided on the bottom of the form. Typically, for numeric fields, you will want to add a range. An example entry is: collectionyear >= 2015 and collectionyear <= 2020. Note that in this command, the field name is repeated.

The same range can be achieved using the **between** command, thus: collectionyear between 2015 and 2020. The between command is inclusive on the lower and higher values. You could choose a single value as in: collectionyear = 2015.

If you wanted to display all collections with a collection year of null or 0, you could use the coalesce command. Coalesce is used so that null values appear as 0 and thus:

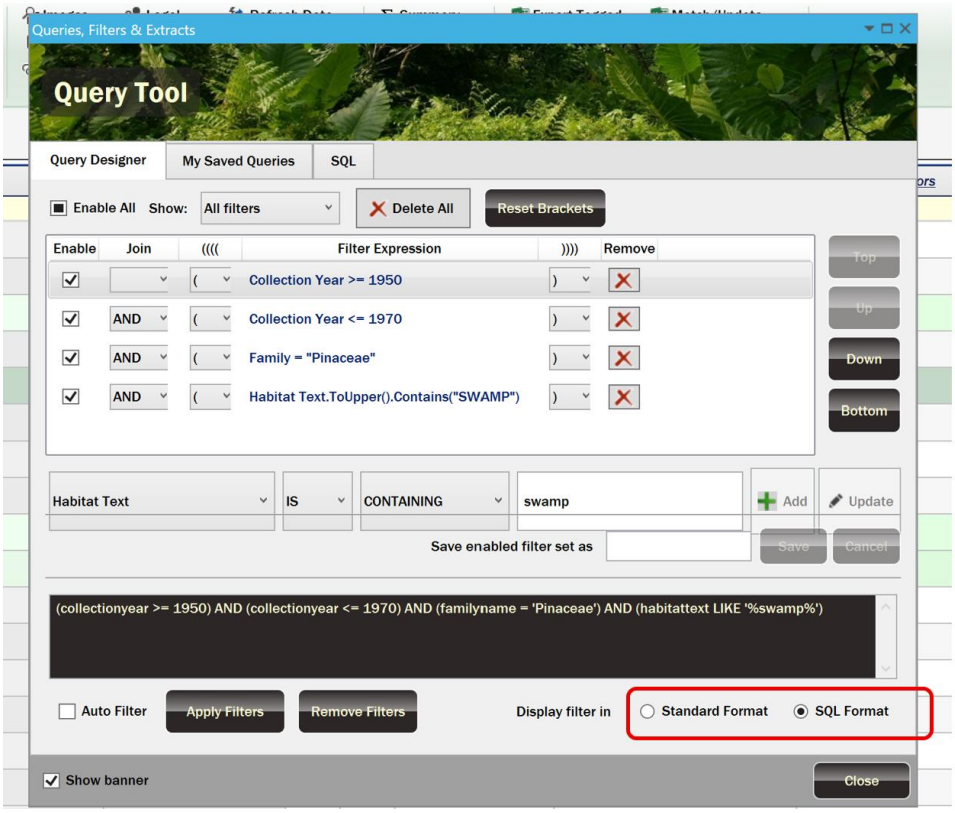
Coalesce(collectionyear,0) = 0 would select any record with a null or zero-year entry.
Coalesce(collectionyear,0) <=1900 would select any record with a null or a year value <= 1900. If you simply used collectionyear = 0, this would exclude null values.

Another useful format to use is IN or NOT IN - plus a list of values. Thus, the clause:

IUCN not in (‘VU, EN, CR’) sets a condition that include all map points that do not have an IUCN status of one of these 3 values. An example of this is shown above.

Help with more complex clauses

If useful, you can open the main Query tool to add more complex queries as shown below.



In this example, 4 entries are made using AND. If you choose the option SQL format on the lower part of the form, you can simply copy the text generated into your map style SQL clause.