

BRAHMS WebConnect

Website development and publishing online from BRAHMS

Document updated June 2012 for BRAHMS v.7

This documentation has been prepared with support from
FAPESP - Fundação de Amparo à Pesquisa do Estado de São Paulo



CONTENTS

INTRODUCTION	5
WHY CREATE A WEBSITE?	5
WEBSITE DEVELOPMENT.....	5
BRAHMS ONLINE	5
BRAHMS WEBCONNECT	6
BOL SERVERS.....	6
EDITING PERMISSIONS.....	6
BOL AND GLOBAL NETWORKS.....	7
CHECKING YOUR CONNECTION TO BOL	8
CHECKING COMMUNICATION PORT 11301	8
FAILURE TO LOG IN	9
CREATING A NEW WEBSITE.....	10
THE BASICS	10
ARE YOU REGISTERED ON THE SELECTED SERVER?	10
HOW TO REGISTER?.....	10
CREATE/REGISTER A WEBSITE	10
THE CREATE SITE FUNCTION	11
GETTING STARTED WITH WEBSITE DESIGN	12
INTRODUCTION.....	12
CREATE A LOCAL FOLDER FOR YOUR WEBSITE RESOURCES	12
COMPONENTS OF A BRAHMS ONLINE WEBSITE	12
LOG IN USING YOUR CREDENTIALS.....	13
PROBLEMS CONNECTING	14
YOUR WEBSITE LIST.....	14
OPEN YOUR WEBSITE AND USE REFRESH	15
A START WITH EDITING THE TEXT AREAS	15
HTML MARK-UP LANGUAGE	16
THE HTML TOOLBAR.....	16
DEVELOPING WEBSITE TEXT.....	16
INTERNET BROWSERS	18
A NOTE ABOUT 'WHITE SPACE'	18
BANNER AND MARGIN IMAGES.....	19
INTRODUCTION.....	19
SOFTWARE FOR PROCESSING AND RESIZING IMAGES	19
DESIGNING A WEBSITE BANNER IMAGE	19
THE BANNER BACKGROUND.....	20
UPLOADING YOUR BANNER IMAGE.....	21
RIGHT MARGIN IMAGES – LOW AND HIGH RESOLUTION.....	22
UPLOADING RIGHT MARGIN IMAGES	22
FURTHER DEVELOPING WEBSITE TEXT AND STYLE	24
ADDING MORE TEXT AND USING THE HEADER TAGS	24
WEBSITE STYLE	24
ADDING HYPERLINKS.....	25

ADDING LINES	25
SOME EXAMPLE TEXT: ADDING AN ADDRESS.....	25
UPLOADING A FILE SUCH AS A PDF, A VIDEO OR INTERACTIVE KEY	26
EMBEDDING IMAGES IN YOUR HOME PAGE TEXT	27
IMAGE MAPS.....	29
ADDING SLIDE A SHOW.....	30
STEP 1: PREPARE IMAGES	30
STEP 2: ADD IMAGES TO IMAGE LIST	30
STEP 3: ADD THE NOVO SLIDER SETTINGS.....	31
FURTHER COMMENTS	31
WEBSITE VISIBILITY	33
HIDING YOUR WEBSITE	33
THE 'PUBLISHED SITES' LIST.....	33
PUBLISHING DATA ONLINE	34
INTRODUCTION.....	34
UPLOADING DATA AS XML	34
UPLOAD RESTRICTIONS.....	35
UPLOADING DATA IN BATCHES – ESSENTIAL FOR LARGER DATABASES.	35
UPLOADING BOTANICAL RECORDS.....	36
UPLOADING TAXA.....	36
UPLOADING IMAGES	37
PROBLEMS WHEN UPLOADING DATA	37
DELETING DATA AND DATABASES.....	37
LINKING AND UNLINKING A DATABASE TO A WEBSITE	38
LINKING MULTIPLE DATABASES TO A WEBSITE.....	39
IMAGE FOLDERS ON YOUR SERVER.....	40
INTRODUCTION.....	40
SPECIFYING NETWORK LOCATIONS (UNC PATHS)	41
CREATING THE IMAGES LOCATION XML.....	43
HOW THE IMAGES ARE LOCATED.....	44
USING ZOOMIFY	46
INTRODUCTION.....	46
LICENCING ZOOMIFY.....	46
GETTING ZOOMIFY IN ON THE ACT:	47
CREATING PFF'S WITH ZOOMIFY ENTERPRISE	47
GAINING DIRECT ACCESS TO IMAGES – SOME TESTS	48
BRAHMS ONLINE IN USE	50
HOME PAGE SAMPLES	50
DATA GRIDS	51
REPORTS	53
IMAGES.....	55
MAPPING.....	56

Introduction

Why create a website?

- Research projects and herbaria are under increasing pressure to publish their specimen data and images online. Some funding agencies supporting digitization projects require this.
- Benefits to herbaria that publishing online include feedback on determinations and potential to streamline loans management. Herbaria that put their data online become better known than those that do not.
- For researchers, a website provides a mechanism to distribute relevant data in an effective way, adding to traditional flora and monograph series. Much important taxonomic work ends up in the grey literature or in unpublished theses.
- For all, a website is a mechanism to present data to the widest possible scientific community and to benefit research.
- A well-designed website with good quality information and data is excellent publicity for your institute or project.
- A website can be cited as a publication by your institute, for your CV and elsewhere.

Website development

These days, you can, without difficulty, create your own website using one of the many available web-authoring packages. But if you want to create a website that connects to your data and provides special tools for searching, processing, analysis, mapping and image display, you need technical expertise. BRAHMS **WebConnect** enables you to develop websites that connect to your data with minimal technical knowledge.

BRAHMS online

BRAHMS online (BOL) is a unique website service created for the BRAHMS project. It is used to publish BRAHMS databases online and/or to describe and promote your project. BOL is developed at Plant Sciences, University of Oxford.

BOL websites can be richly developed with text, images, hyperlinks, tables, file downloads and indeed any standard website feature. Websites can be linked to one or more BRAHMS databases and the online data query tools search these data and present the results in flexible text pages and data grids.

Summary Family Genus Species Bot. Recs Specimens Map Images Grid View Reports

Botanical Records

Tagging | [Icons] | -- External Search Links --

Page 1 of 2 | Display 20 records per page

Tag	Type	Collector	Number	Family	Species	Country	Major	Minor	Locality	Locnotes	Habitat	Plant Des.	DD	MM	YYYY	Alt	Image
<input checked="" type="checkbox"/>		Elman, E.; H...	II562	Acanthaceae	Acanthus mollis	Gibraltar			Europ...	south end...			15	5	1924	0	0
<input type="checkbox"/>		Elman, E.; H...	1562	Acanthaceae	Acanthus mollis	Gibraltar			Europ...	south end...	White.		15	5	1924	0	0
<input checked="" type="checkbox"/>		Gamble, J.S.	28203	Acanthaceae	Acanthus mollis	Gibraltar			Gibraltar	Gibraltar			0	4	1907	0	0
<input type="checkbox"/>		Howard, R.A.	19155	Acanthaceae	Avicennia germinans	Monts...	Monts...	Silver...	Little B...			Tree o...	16	4	1979	0	0
<input checked="" type="checkbox"/>		Fishlock, W.C.	T218	Acanthaceae	Avicennia nitida	British...	Tortola		Tortola				8	10	1918	0	0
<input checked="" type="checkbox"/>		Fishlock, W.C.	T353	Acanthaceae	Blechnum pyramidatum	British...	Tortola		Tortola				26	1	1919	0	0
<input type="checkbox"/>		Field, A.	25	Acanthaceae	Hemigraphis alternata	British...	Salom...	Ile Bo...				Overall...	24	4	1979	0	0
<input checked="" type="checkbox"/>		Field, A.	181	Acanthaceae	Hemigraphis alternata	British...	Diego...		East P...	behind man...	Sandy...	Overall...	22	5	1979	0	0
<input type="checkbox"/>		Stoddart, D...	811	Acanthaceae	Hemigraphis alternata	British...	Diego...		Minni...	middle of ol...		Groun...	8	7	1967	0	0

An online data query result page showing some botanic records. Many of the data processing tools available in BRAHMS online are the same as those found in BRAHMS itself including tools to tag, sort, zoom, filter, calculate, export and map.



Two example BOL website homepages

BRAHMS WebConnect

BRAHMS **WebConnect** is the software that connects your BRAHMS system to BOL allowing you to develop and edit websites and upload selected data and additional resource files.

WebConnect options are accessed in BRAHMS from the **PublishOnline** menu. This menu is enabled from **Utilities > My setup**.

BRAHMS WebConnect and **BRAHMS online** provide you with the tools to develop your own online service on the server you select.

BOL servers

BRAHMS online websites can be developed and published on any computer where the BRAHMS online system is installed. You can request permission to publish on the BRAHMS server (located in Oxford) or on another server that has BOL in your country. Increasingly, projects are installing BOL on a computer (configured as a server) in their own institution.

Server location influences the URL address of your website. You may want to install BOL on your own server and register a meaningful Domain Name System (DNS) for the server such as <http://newworldfloras.org> and thus be able to have a URL <http://newworldfloras.org/ericaceae>. Read more on e.g. http://en.wikipedia.org/wiki/Domain_Name_System.

You can install and operate BRAHMS online on almost any Windows computer (32 and 64 bit machines). A 'server' can be any computer which has an internet connection and runs Windows. You don't need dedicated server hardware. For example, you can install and run BRAHMS online from a Windows XP box which has an internet connection.

Clearly, applications that expect heavy demand and/or have large volumes of data/images will need appropriate hardware resources. In general, dedicated server machines are more efficient than ordinary non-server computers. Contact the BRAHMS project for details.

Editing permissions

When you create BOL websites, only you (and/or those you designate) and the server administrator have access to editing your websites. You can work on the development of your sites from any location (office, home, overseas trip). As well as editing and developing your

site, you can temporarily hide it online, delete it, or delete data linked to it. You have full control over your site.

In a larger project with different collaborators, individual researchers/contributors can be given editing rights to specific parts of a developing website and the data linked to it.

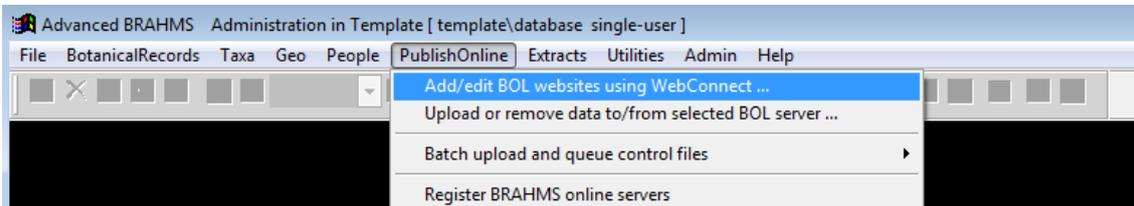
BOL and global networks

Global networks and BOL are not mutually exclusive. As well as contributing data to a global network, many projects and herbaria also want to develop a personal institutional or project-specific web interface. A personal website can include more than data. You can provide attractive, focused and informative online content describing your projects.

Checking your connection to BOL

Checking communication port 11301

The purpose of this section is to check whether you can successfully log into BOL *via* BRAHMS **WebConnect**. If you can, this means that you are clear to move onto the next stages of website development on any server. If not, there is a simple step to take with the firewalls of your institution.



- If you do not see the BRAHMS **PublishOnline** menu option, select **Utilities > My Setup > Active modules** and activate that menu.

BRAHMS communicates to BRAHMS online *via* BRAHMS **WebConnect** using a network communication port. This is normal for any client-server connection. By default, **WebConnect** uses port number 11301. It is possible to change this port number by selecting **Admin > Project configuration > System wide settings > BOL** but unless your institution has some special reason for changing this, we recommend you use the default setting 11301. If you leave the BOL setting blank, it will use 11301.



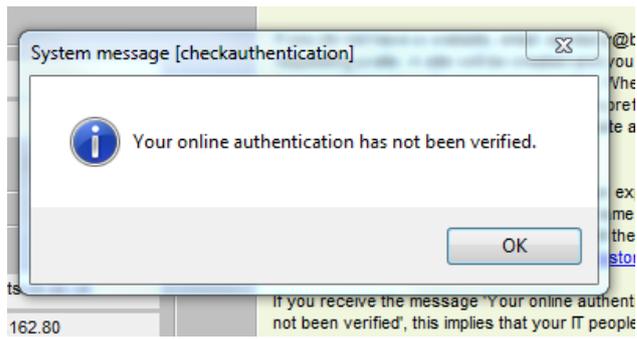
Attempting to log in to BOL as user 'webtest'

To test if you can link to BOL *via* **WebConnect**:

- Select PublishOnline > Add/edit BOL websites using WebConnect ...
- Check that the BRAHMS server in Oxford (herbaria.plants.ac.uk) is selected on the form.
- Try to login using the credentials Username: Webtest + Password: 12345.
- If successful, this will open up the main **WebConnect** editing screen (see below) with access a website named 'testonly'.
- Assuming you have successfully reached this stage, you can log out of **WebConnect**.

Failure to log in

If the above log in test has failed, most likely you will receive a message as below:



Assuming you used the login credentials provided above, this error is almost always due to network communication port 11301 being blocked by a local/institute firewall setting.

In this case, you need to request that your IT administrator opens port 11301. It is completely safe and easy to open this port. At Plant Sciences in Oxford University, communication ports such as 11301 are open by default for outward communications.

Note that if the 11301 connection port is blocked in your institute, you will probably be able to log into to BOL from your own internet connection at home or elsewhere outside an institutional firewall.

Creating a new website

The basics

The requirements to create a new website on your selected server are as follows:

- Firstly, you must be registered on that server and thus have a user name and password. See below for the registration process.
- Secondly, your server administrator must create a website entry for you on the server using the BRAHMS WebConnect **Create website** option. See below.

Are you registered on the selected server?

In order to develop a BOL website, you must be registered on the selected server and thus have a username and password. These will be required to provide secure access and editing privileges for your website(s).

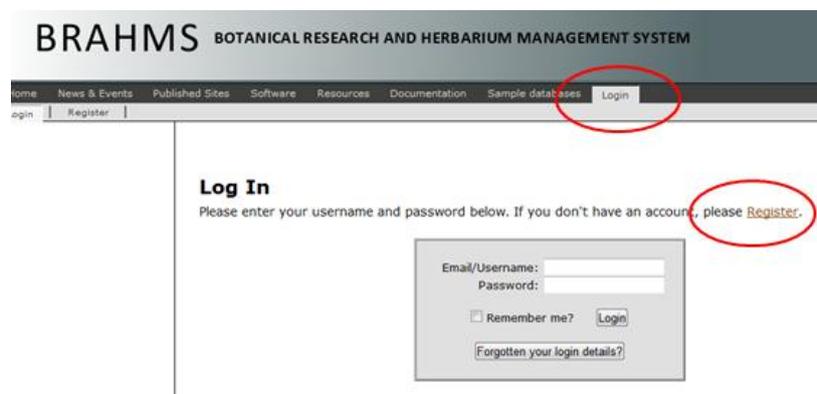
NB: The username and password you use to log into your normal BRAHMS database are different to those discussed here.

You may already be registered on the main BRAHMS website/server for access to software activation keys. If your website is to be on that server, you do not need to register again. You do however need to contact the BRAHMS project to initiate your website.

If you are developing your website on another server, then you must register on that server, even if you are registered on the main BRAHMS server. When you register, your user credentials will then be available on that server for website development. The server administrator or BRAHMS project manager will be able to process your request to create a website.

How to register?

- Go to the main BRAHMS website address for the server you are working on. For the main BRAHMS server, this is <http://herbaria.plants.ox.ac.uk/bol>. If you are logging into another server, you will need to know the address to use.
- Select the **Login** menu and choose the Register option.



The screenshot shows the BRAHMS (Botanical Research and Herbarium Management System) website interface. At the top, there is a navigation menu with items: Home, News & Events, Published Sites, Software, Resources, Documentation, Sample databases, and Login. The 'Login' menu item is circled in red. Below the navigation menu, there is a 'Log In' section with the text: 'Please enter your username and password below. If you don't have an account, please Register.' The 'Register' link is also circled in red. Below this text is a login form with fields for 'Email/Username:' and 'Password:', a 'Remember me?' checkbox, a 'Login' button, and a 'Forgotten your login details?' link.

Registering on the main BRAHMS server.

Create/register a website

Once you are registered, the next step is to contact advisory@brahmsonline.com (or the administrator of the selected server) to get your website created.

Your website address will be composed of the root address on the selected server + the ID of your website. All you need to provide is a single text string or word that will be used at the end of the web address.

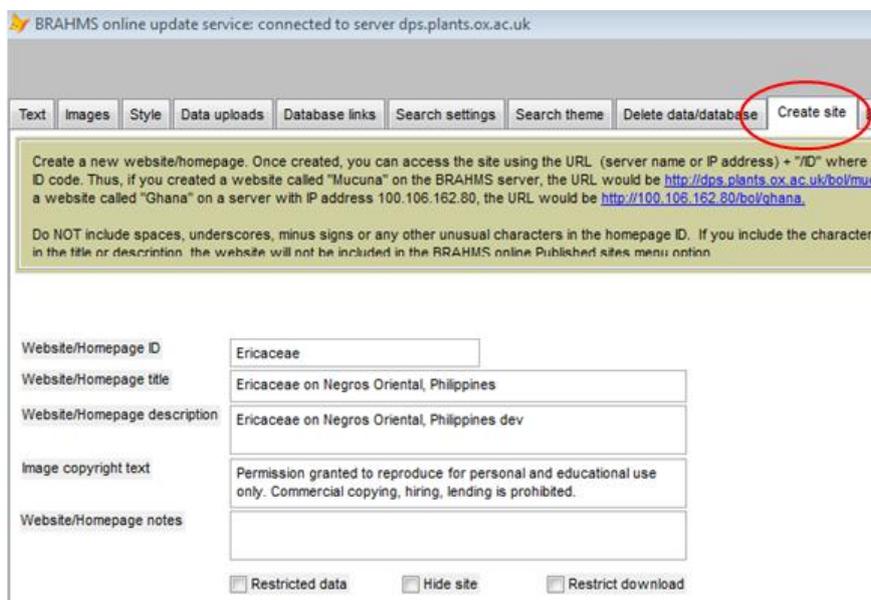
For example, if you are developing a site for the UEC herbarium, most likely, you would request the ID 'UEC'. The administrator will then register this ID on the selected server using the *Create site* function. If this is on the main BRAHMS, the website address will then be <http://herbaria.plants.ox.ac.uk/bol/uec>. Similarly, if you are developing a website for the Ericaceae, you may choose the website ID 'Ericaceae' this leading to the address <http://herbaria.plants.ox.ac.uk/bol/ericaceae> or <http://brahms.inpa.gov.br/bol/ericaceae> on a server in Brazil.

Once your request has been received, the server administrator will register your website using the WebConnect **Create site** option as described below. Additionally, the server administrator will link your user name and password to this website so that only you (and the administrator) have the website editing rights. In some cases, there may be several individuals with access rights to the same site. From this point on, you should be able to edit your site.

You are not restricted to developing one website. As an individual or institution, you may want to develop a series of separate websites and you can be assigned editing rights to all of these sites.

The Create site function

The Create site options are only available to those with Administration level access to BRAHMS online on the given server.



The screenshot shows the BRAHMS online update service interface. At the top, it says "BRAHMS online update service: connected to server dps.plants.ox.ac.uk". Below this is a navigation bar with several tabs: Text, Images, Style, Data uploads, Database links, Search settings, Search theme, Delete data/database, and Create site. The "Create site" tab is highlighted with a red circle. Below the navigation bar is a yellow box containing instructions: "Create a new website/homepage. Once created, you can access the site using the URL (server name or IP address) + '/ID' where ID is the website ID code. Thus, if you created a website called 'Mucuna' on the BRAHMS server, the URL would be <http://dps.plants.ox.ac.uk/bol/mucuna> and a website called 'Ghana' on a server with IP address 100.106.162.80, the URL would be <http://100.106.162.80/bol/ghana>. Do NOT include spaces, underscores, minus signs or any other unusual characters in the homepage ID. If you include the character in the title or description the website will not be included in the BRAHMS online Published sites menu option". Below this is a form with the following fields: "Website/Homepage ID" (text input with "Ericaceae"), "Website/Homepage title" (text input with "Ericaceae on Negros Oriental, Philippines"), "Website/Homepage description" (text input with "Ericaceae on Negros Oriental, Philippines dev"), "Image copyright text" (text input with "Permission granted to reproduce for personal and educational use only. Commercial copying, hiring, lending is prohibited."), and "Website/Homepage notes" (text input). At the bottom of the form are three checkboxes: "Restricted data", "Hide site", and "Restrict download".

The WebConnect **Create site** option.

The most important item on the above **Create site** form is the Website/Homepage ID. The entry here must not contain spaces or any unusual characters. Avoid accented characters, underscores and minus signs. This entry will be used as the unique identifier of your website on the selected BRAHMS online server.

If you are publishing on the BRAHMS server, the basic web address (or URL) is <http://herbaria.plants.ox.ac.uk/bol>. Your ID entry will be appended to this address. Thus, if your Website ID entry on the above form is 'Ericaceae', the unique web address will be <http://herbaria.plants.ox.ac.uk/bol/ericaceae>.

Getting started with website design

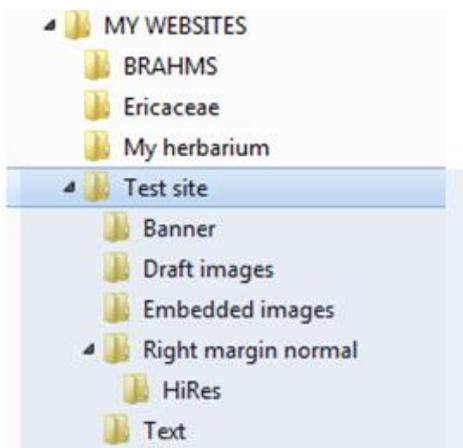
Introduction

Once your website has been registered and initiated and you have the appropriate editing rights, you can proceed to design and develop your site. A few key points to bear in mind:

- Choosing text and images to get the correct balance and to make your site attractive takes a little practice.
- The design process focuses on your BOL website homepage or 'portal'. This is the page that is opened when your site is visited.
- Bear in mind *my website looks good on my computer on my internet browser*. Not everyone has the same screen size, shape or resolution as you. What looks good on your monitor may crowd another. These days, a majority of viewers are on 1024x768 resolution and higher. As time goes by more and more people are switching to higher resolutions. However, it's important to design web sites for different resolutions. With BRAHMS online, this advice applies especially to images. If you add an image that is too big, it may overwhelm and dominate on someone else's browser. Worse, it may not fit at all.

Create a local folder for your website resources

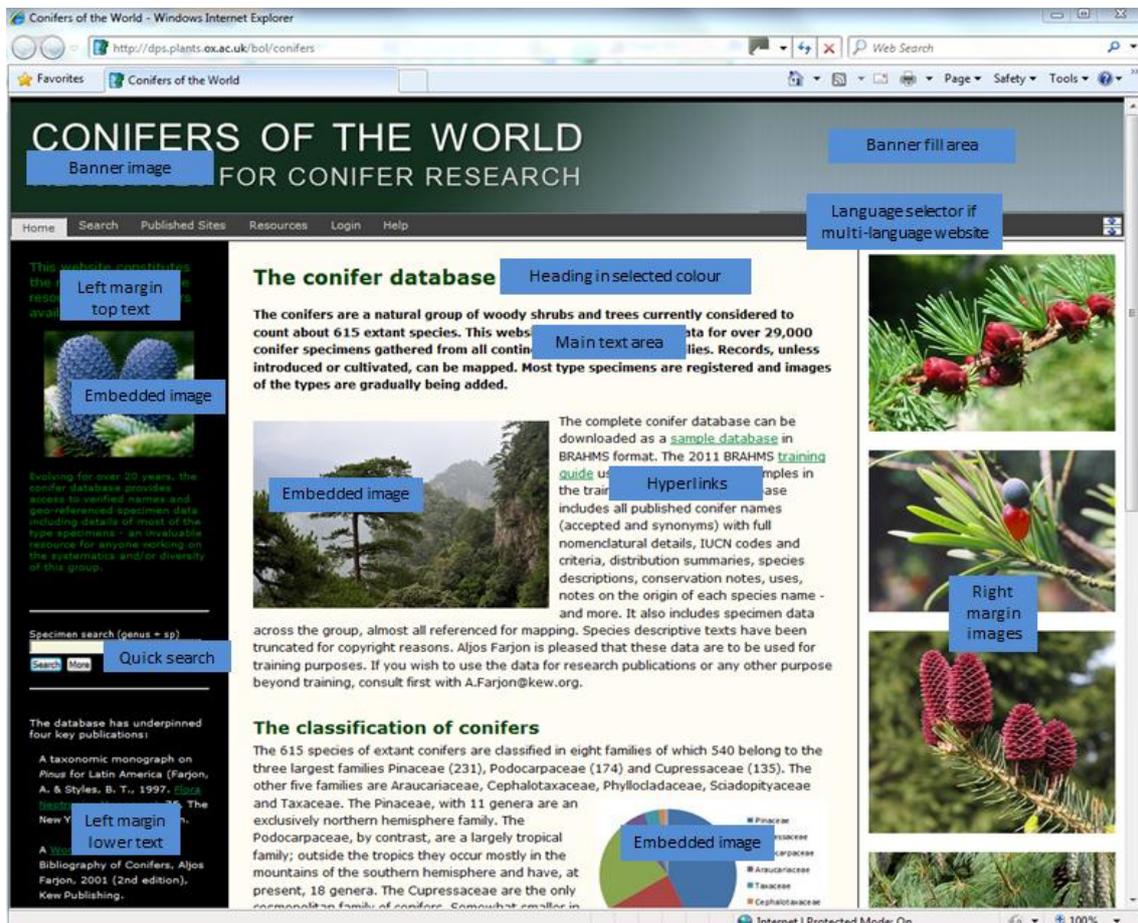
To help with website development, create a new folder on your local disk (location and name as you wish) to store and organise the various text and image files you will be assembling. Even if you only have one website to develop, you can rapidly end up with numerous text and image files. You may have a power point file for developing text/images. Image files may be resized and saved in various formats to test.



Example folder set up for several websites. With the exception of the subfolder HiRes, folder names can be as you wish. HiRes is a special folder used for high resolution images of image files stored in its parent folder.

Components of a BRAHMS online website

Look first at the main development areas of all BRAHMS online website homepages.



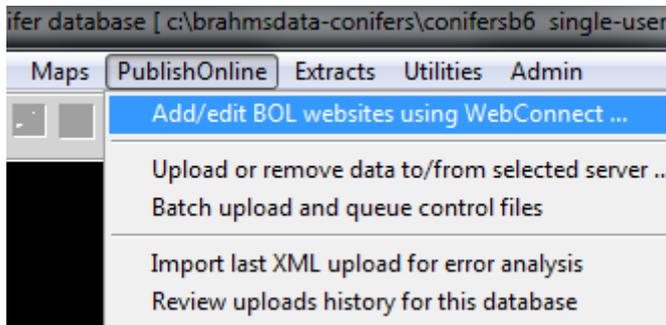
The key homepage features that can be edited.

Banner image	The rectangular image that lies at the top of your website. Recommended size approx. 800 x 100 pixels. Too deep wastes space. Too wide and it will not fit many browsers.
Banner fill area	You will want to fill the area to the right of your (fixed size) banner image with an appropriate colour or shade. The default fill is white space.
Language	The language selector will be displayed if your site has multiple languages.
Left margin top text	Text (and images) in the left pane above the <i>quick search</i> pane
Quick search	The quick search box (optionally) provides a default search for users to search you site for data.
Left margin lower text	Text (and images) in the left pane below the <i>quick search</i> pane.
Main text area	Text (and images) in the central pane.
Hyperlinks	Hyperlinks can be inserted anywhere on the page.
Embedded images	Images can be embedded in the left margin and main text areas.
Right margin images	Up to 6 decorative images can be added to your right margin area. Recommended size between 150 to 250 pixels wide. Choose the same width for all to make neat. Depths may vary. HiRes versions of these images are permitted.

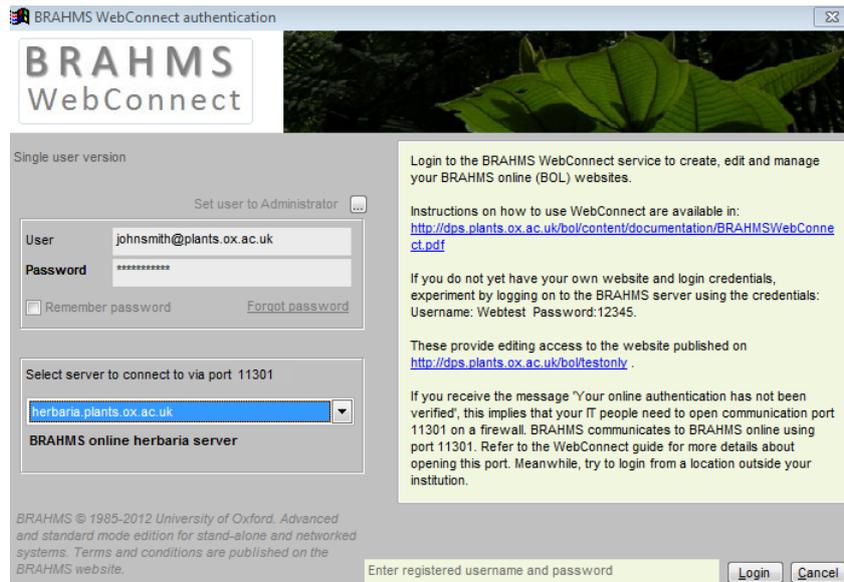
Log in using your credentials

Log in to WebConnect using your with username and password to edit your website(s). If you do not have any BOL websites to edit, refer to the relevant sections on site creation above.

- Log into BRAHMS and select **PublishOnline > Add/edit BOL websites using WebConnect**



If this menu option is not visible, select **Utilities > My Setup > Active modules** and activate the Publishing online option.



When logging in with your username and password, make sure you correctly select either the 'BRAHMS server' or the 'Selected server'.

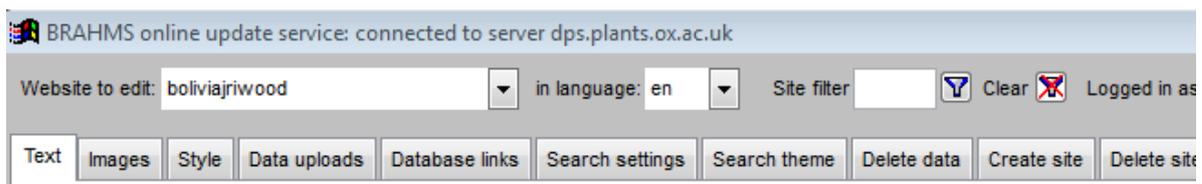
If you select **Remember password**, this speeds up subsequent access to WebConnect,

Problems connecting

Assuming your login credentials are correct and you get a message that your *authentication has not been verified*, this will be because the communication port 11301 is blocked by a firewall setting. Refer to the above section *Checking your connection to BOL*.

Your website list

After logging in, you will see the **WebConnect** screen with your registered websites listed at the top. If you have more than one website registered in your name, choose which site to edit. The last edited site is restored by default.

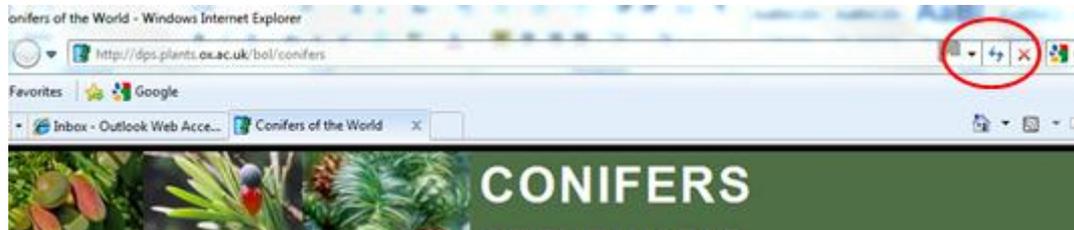


Also note the language setting. In the example above, this is set to 'en' for English. BOL stores a separate entry for each homepage + language. If you change the language, any edits you make here will be saved to a home page for that language.

If you have many websites, you can use the filter  options to restrict the list available in the dropdown.

Open your website and use Refresh

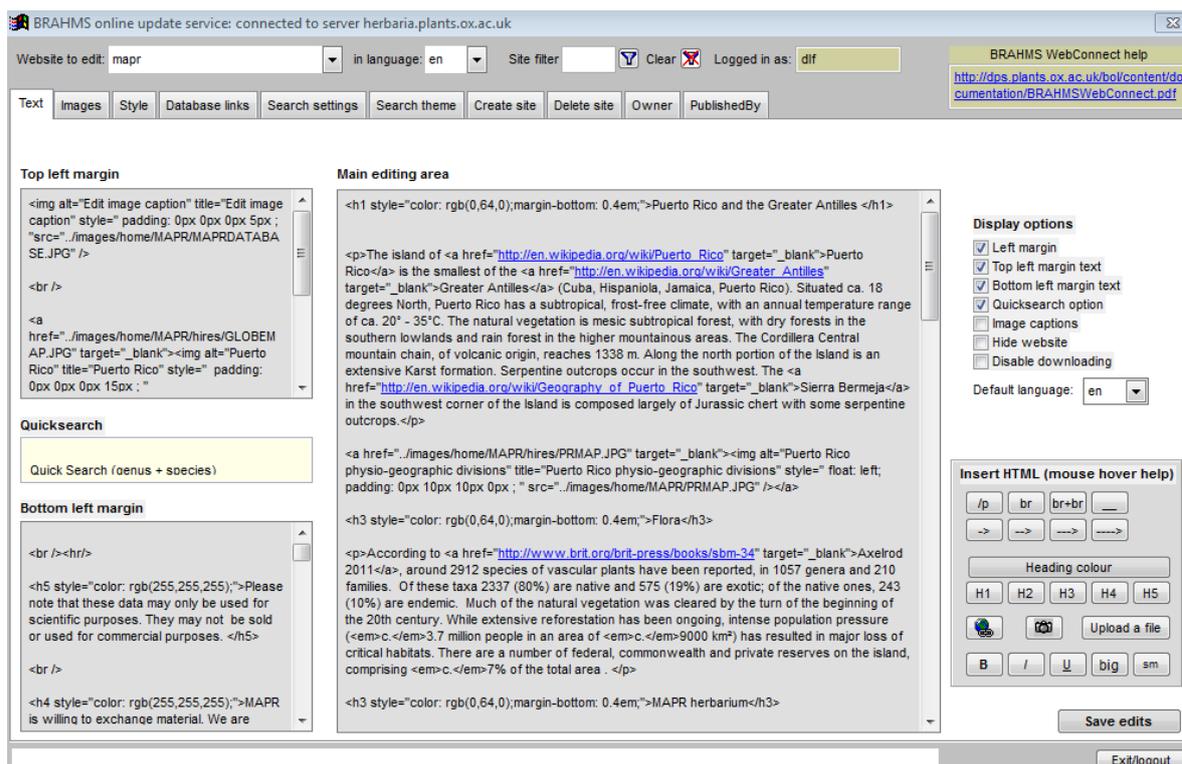
After logging in to **WebConnect**, we suggest that you open your website on the web. Thus, you will be able to see the changes live as you make them. You will need to refresh the browser screen to see any changes online.



All browsers have a refresh button. The example above Internet explorer v. 8. You can also use the F5 key.

A start with editing the text areas

The following examples refer to the website <http://herbaria.plants.ox.ac.uk/bol/testonly>. This website, on the BRAHMS server, can be edited by anyone who logs in with credentials User name: *Webtest* Password *12345* although hopefully, you will at this stage be logged in to your own website.

A screenshot of the BRAHMS online update service web interface. The page title is 'BRAHMS online update service: connected to server herbaria.plants.ox.ac.uk'. The interface includes a navigation menu with options like 'Text', 'Images', 'Style', 'Database links', 'Search settings', 'Search theme', 'Create site', 'Delete site', 'Owner', and 'PublishedBy'. The main editing area is divided into three sections: 'Top left margin', 'Main editing area', and 'Bottom left margin'. The 'Main editing area' contains HTML code for a page about Puerto Rico and the Greater Antilles. To the right of the main editing area are 'Display options' (checkboxes for Left margin, Top left margin text, Bottom left margin text, Quicksearch option, Image captions, Hide website, Disable downloading) and an 'Insert HTML (mouse hover help)' section with buttons for various HTML tags like /p, br, br+br, H1, H2, H3, H4, H5, and B, I, U, big, sm. At the bottom right, there is a 'Save edits' button and an 'Exit/logout' button.

As a first step, on the **Text** page:

- Delete all the existing, default text in all of the text areas.
- Add some text to the text areas. In the above example, some text has been added to the top left and main editing areas.
- Also note the **Display** options. These provide controls for various site attributes.
- Select **Save edits**.

- Now refresh your website (<http://herbaria.plants.ox.ac.uk/bol/testonly>) and you will see these edits visible on your live webpage.

HTML mark-up language

The internet uses a common language for formatting web pages. There are variations on this but the basic language discussed here is called HTML (HyperText Markup Language).

In brief, every formatting feature you see on a website (text in bold, text colours, image name, margin width, table dimension, etc.) is controlled by HTML mark-up. A more robust version of this language is known as XHTML.

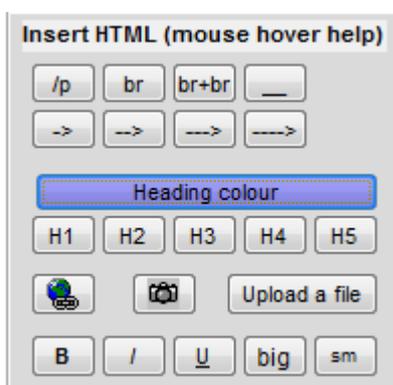
You don't need to learn this language although if you want to develop more complex websites, some knowledge will be useful. The BRAHMS WebConnect form provides toolbars to add the HTML tags you need. For those with a thirst to learn more about HTML, you can visit some of the numerous websites such as:

- <http://en.wikipedia.org/wiki/HTML>
- <http://webdesign.about.com/od/webdesignbasics/u/webdesignbasics.htm>
- <http://www.w3schools.com/html/>

A Google search on 'HTML help' lists numerous sites. As noted above, you don't need to learn any of this even to design an excellent website.

The HTML toolbar

To format your website, you need to use the website language known as HTML. HTML is discussed a little further in the next section. You don't need to know about HTML as the HTML toolbar provided on the **WebConnect** form provides all you need to create a standard website.



The HTML toolbar options are provided for some commonly used formatting options such as adding <p> and </p> to mark a paragraph.

Developing website text

As an experiment, return now to your BRAHMS **WebConnect** screen

- Type in the text: 'This is bold' in the left margin and/or the main text area.
- Drag your mouse over this text to select it and click on the **B** toolbar on right side of the screen.

Note that that text is surrounded by HTML tags as follows: This is bold

- Type in the text: 'This is italic' in the left margin and/or the main text area.
- Drag your mouse over exactly this text to select it and click on the **/** toolbar on right side of the screen.

Note that that text is surrounded by HTML tags as follows: `This is italic`.

As you can see, the tags surrounding the text and come between angle brackets. Most tags have an opening and closing tag and the closing tag uses a forward slash (/). Tags are case sensitive. Thus - `This is bold`.

Some HTML tags do not have opening and closing tags. For example, the `
` tag to make a line break. If you add `

`, it will create a blank line. A toolbar option is provided for this. If you want to add a blank line, position your cursor where you want the blank line and click on the **br+br** toolbar.

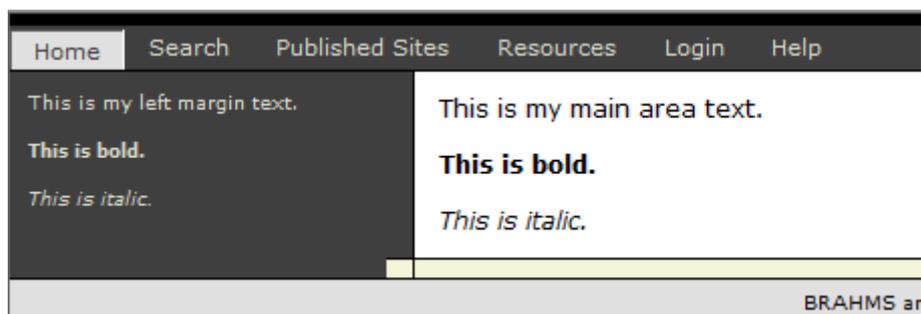
Homepage text - top left margin

```
This is my left margin text.<br /><br />
<strong>This is bold.</strong><br /><br />
<em>This is italic.</em><br />
```

Homepage text - central text area

```
This is my main area text.<br /><br />
<strong>This is bold.</strong><br /><br />
<em>This is italic.</em><br />
```

- Select **Save edits**.
- Refresh your website and you will see these edits online similar to that shown below.



You can add a colourful header in a larger text size at the top of this page.

- Type in some text, e.g. 'Welcome to my website' at the top of the main text area.
- On the HTML toolbar, select a colour using the **Heading colour** toolbar.
- Drag your mouse over exactly the entered text to select it.
- Now select the **H1** toolbar. H1 is the largest sized heading and H6 the smallest.

Homepage text - central text area

```
<h1 style="color: rgb(0,128,0);">Welcome to my website</h1>
<br />
This is my main text area.
<br /><br />
<strong>This is bold.</strong><br /><br />
<em>this is italic.</em><br />
```

Welcome to my website

This is my main text area.

This is bold.

this is italic.

The above includes a H1 header set to green.

You can manually add, edit and delete these tags rather than using the toolbars. Further HTML options are discussed below.

Internet browsers

There are several widely used internet browsers and various versions of each of these. Examples are Internet Explorer (IE), Mozilla Firefox and Google Chrome. BRAHMS online generally functions on all of these equally well – as long as your use of HTML is correct. If you use non-standard or faulty HTML, you may have problems on some browsers.

A note about 'white space'

White space and Carriage Returns (Enter key) on the web are ignored (or reduced to a single space). For example, if you enter the text 'This is a long space' and upload this you to home page, it will appear as 'This is a long space'. Extra spaces can be forced by adding the non-breaking space tag which is

Banner and margin images

Introduction

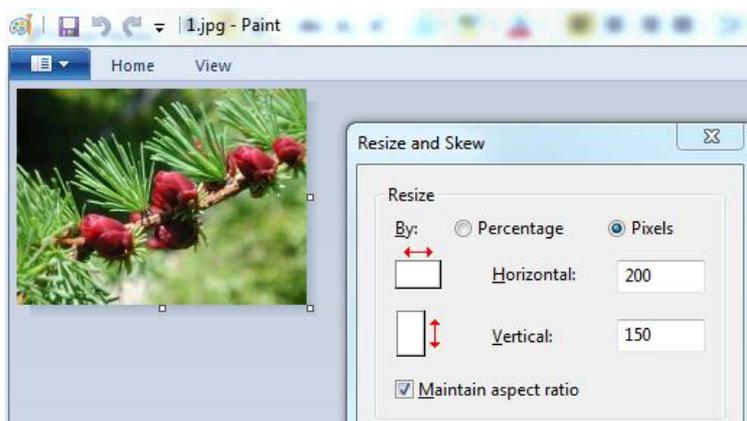
Websites use images to illustrate the pages. You can upload images to your website using tools provided on the BRAHMS **WebConnect** form. These images are not to be confused with images linked to your data records in BRAHMS.

This section discusses the top banner and right margin images. Further details about embedding images in the text areas are given later. Some general points:

- Image file names uploaded to websites should not include spaces or other strange characters. Underscores are OK. Thus not *Clusia alba.jpg*. *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. Ideally less than 50K. High resolution images may be larger. HiRes images are discussed later in this document.
- 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. Bear in mind that people browse on small screens and that resolutions differs.

Software for processing and resizing images

Learn how to crop and resize images using image processing software. The latest version of **Paint** in Windows 7 is excellent for this - but you can use any software you are familiar with.



*Using the Home menu resize option in Windows 7 **Paint**, you can resize images to a fixed pixel width. In this example, an image is resized to 200 pixels width.*

Designing a website banner image

The banner (upper rectangular image area) is an important part of your website. This is composed of a single image with dimensions approx. 800 x 100 pixels. The final dimensions may vary but if it is too deep, you will waste valuable screen space and if too wide, it may not fit on some screens. Example banner images follow:

OXFORD UNIVERSITY HERBARIA



UPR - MAYAGÜEZ HERBARIUM – MAPR
Department of Biology - University of Puerto Rico

CONIFERS OF THE WORLD
RESOURCES FOR CONIFER RESEARCH

Each of the above banner images is a single image named banner.jpg. The banners were designed using PowerPoint (or similar) with text, images and then the final image cropped out. You could easily design a banner using your word processor and cropping an image from the screen with the Windows snipping tool. Or equally, PhotoShop, PaintShop Pro, Thumbs+, etc.

The banner image must be named banner.jpg. When saving your banner jpg, also save the original copy (e.g. ppt or word file.) you used to make this image to the same folder – in case you need to modify it. Store these files in your website development folder.

The banner background

Banner images have a fixed width but browsers do not. Thus the area to the right of your banner will be blank (by default white) and this will not look good unless you have a banner with a white background.

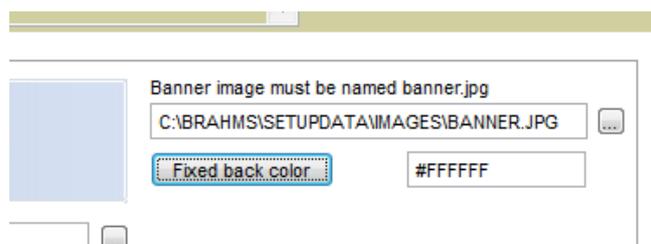


An example banner with no fill

To improve on this, you must provide a background colour or image to shade in this area. There are two ways to do this.

- Add a constant background colour that matches the right side of your banner image.
- Where the banner image has a top to bottom gradation in colour, add a background image that matches this gradation.

To add a fixed background colour, select the **Fixed back colour** option in the banner section of images tab.



Matching colours precisely can be difficult but if you get familiar with this, you can obtain the Red Green Blue (RGB) colour numbers (most image processing packages can display these codes when you click on the colour) - and then use the **Define custom colours** option on the colour select form.

Adding a background image is only necessary if your banner has a vertical colour shade



In the above example, a fixed colour fill would not look correct. The ideal solution will be to 'slice out' a narrow image from the right most side of the banner image and use this to shade in the background. The image slice need only be 1 pixel wide but must be exactly the same height as the banner image. BOL will multiply this image slice to flood fill the banner area. The image slice must be called titlebg.jpg.



- Using your image software, crop out a 1 pixel wide image from the right side of your banner and save this file as **titlebg.jpg**. It may be wider than 1 pixel but the narrower the better.
- Select the option to **Use a banner background image** on the image tab.



Uploading your banner image

To upload the banner, open **WebConnect** and select the **Images** tab.

- Locate your saved banner.jpg image using the lookup button provided. Then select the **Update images** option on the form.
- Refresh your website and you will see these edits online.

Note that on the images tab, the other margin images, by default, are set to **Hide** until you upload your own images. Thus, when you upload your banner, the default margin images will disappear. Banner images cannot have a high resolution version.

Right margin images – low and high resolution

You can optionally add up to 6 right margin decorative images with captions. Note that the right margin can be suppressed completely. Right margin images must be named 1.jpg, 2.jpg, ... 6.jpg. If you add these, choose the same image width for all – c. 150 – 250 pixels is good. The heights may vary. Refer to notes above on resizing images. Also bear in mind that these images ought to be quite small in byte size, ideally < 30K.

Your margin images may also have higher resolution versions which will be opened when you click on the respective images. If you have good images to decorate a site, viewers will be tempted to click on them to see more. The HiRes versions of the images must be named the same as the lower resolution images i.e. 1.jpg, 2.jpg, ... 6.jpg and to be correctly uploaded, they must be stored in a folder named HiRes which will be directly under your lower resolution image folder (which may have any name) – see section *Create a folder for your website resources*. If a HiRes image is uploaded, a mouse click to view HiRes is automatically activated on the lower res margin image. HiRes images may be quite large – viewers will wait after clicking the lower res image. But if > 1Mbyte, they'll be slow to load on slower connections.

Uploading right margin images

To upload margin images, open **WebConnect** and select the **Images** tab.

RIGHT MARGIN IMAGES 1 TO 6 WITH CAPTIONS

		
Larix laricina	Carl Frederich Philipp vom Martius	
setupdata\images\1.jp ...	setupdata\images\2.jp ...	setupdata\images\3.jp ...
<input checked="" type="checkbox"/> Hide image 1	<input checked="" type="checkbox"/> Hide image 2	<input checked="" type="checkbox"/> Hide image 3

- Locate the images on your local disk using the lookup button provided (or right-click on the image). You can add a caption for each selected image.
- You can selectively hide images using the **Hide** select box.
- HiRes images will be uploaded if your image folder has a child HiRes folder and you select the HiRes upload option.
- Select the **Update images** option on the form. Low and high resolution images are uploaded together.
- Refresh your website and hopefully you will see these edits online.

Further developing website text and style

Adding more text and using the header tags

Text can be typed directly into the text editing areas. You can also paste or drag text from another source such as a word document. Each of the text editing areas is treated in the same manner. To create a line break after a section of text, you can wrap the text between the `<p>` and `</p>` tags by selecting the text and clicking on the `/p` toolbar or add line breaks using the `br` toolbars. You can also use the **H1** to **H5** toolbars to mark text as a header (as in a Word document). Use these for section titles and subtitles.

then view your website after refreshing the screen.

nv valid HTML (ideally XHTML) markup tags. Some sample tags are provided on this form to help you get

Homepage text - central text area

```
<h1 style="color:green;">Welcome to the Gabon website</h1>
<br />



<p>Gabon is one of the the most heavily forested countries in the world, with 82% of the land
surface covered. Next to these extensive forests, Gabon has some savannah areas in the
South-West and the South-East and an additional small central savannah. Especially in the
Northern regions small inselbergs are scattered through the forest, which contain a quite different
flora. Botanical exploration of Gabon is coordinated from the National Herbarium of Gabon.</p>

<p>Until now, almost 5000 (plant) species, of which about 10% are endemic or near-endemic,
have been recorded in Gabon. Each year, new species for the country and to science are found.
A printed checklist of these Gabonese plants, including specimen citation, floristic status and an
```

Display options

- Left margin
- Top left margin
- Bottom left margin
- Quicksearch
- Image caption

Display website
 Hide website

HTML - hover n

The above text example produces the result online as displayed below. The `` tag is introduced below.

Resources Login Help

Welcome to the Gabon website



Gabon is one of the the most heavily forested countries in the world, with 82% of the land surface covered. Next to these extensive forests, Gabon has some savannah areas in the South-West and the South-East and an additional small central savannah. Especially in the Northern regions small inselbergs are scattered through the forest, which contain a quite different flora. Botanical exploration of Gabon is coordinated from the National Herbarium of Gabon.

Until now, almost 5000 (plant) species, of which about 10% are endemic or near-endemic, have been recorded in Gabon. Each year, new species for the country and to science are found. A printed checklist of these Gabonese plants, including specimen citation, floristic status and an analysis of collection patterns and species distribution was prepared in Wageningen and has appeared in 2006.

Website style

To edit margin background, default text and hyperlink colours as well as left margin width, select the options on the **Style** tab.

Adding hyperlinks

You can insert hyperlinks to other sites, documents, etc. Mark the text you want to hyperlink then use the  toolbar.



Adding a hyperlink after selecting the  toolbar.



The hyperlink tag `<a href>` added to the text.

Adding lines

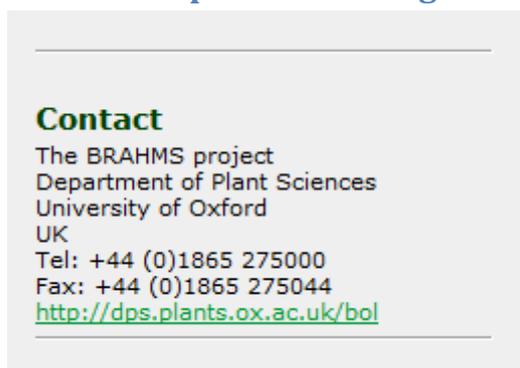
Use the **Underscore toolbar** to add a line to the text area. The line tag is a simple `<hr />` although you can add a more complex syntax to control line attributes as in `<hr style='\"width: 100%; height: 2px;\"' />`.

You can add lines to all text areas.



In the above example, lines have been added above and below the Quick search area.

Some example text: adding an address



The address example above taken from a website is simply some text marked up with HTML, all created using the HTML toolbar. The actual text with HTML:

```
<hr/>
<h3 style="color: rgb(0,64,0);">Contact</h3>
<strong>The BRAHMS project</strong><br />
Department of Plant Sciences<br />
University of Oxford<br />
UK<br />
Tel: +44 (0)1865 275000<br />
Fax: +44 (0)1865 275044<br />
<a href="http://herbaria.plants.ox.ac.uk/bol"
target="_blank">http://herbaria.plants.ox.ac.uk/bol<br/>
</a>
<hr/>
```

Notes:

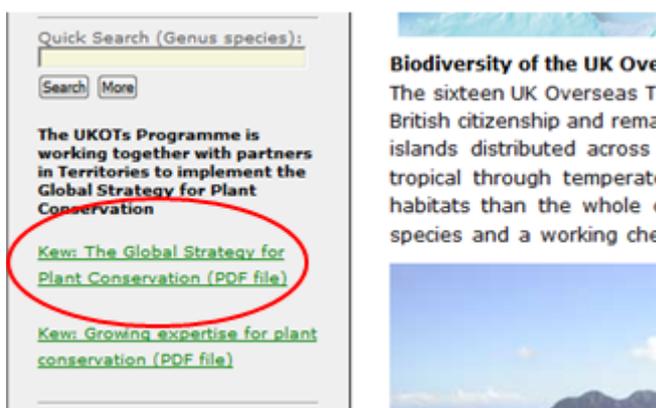
- `<hr/>` is a horizontal line added using the toolbar.
- `<h3 style="color: rgb(0,64,0);">Contact</h3>` is a level 3 heading and the toolbar option has added a colour setting.
- `The BRAHMS project` puts text in bold.
- `
` is a line break.
- `http://herbaria.plants.ox.ac.uk/bol
` is a hyperlink and the `target="_blank"` part ensures that the link opens in a new page.

It looks a bit complicated but you can easily create the above using the HTML toolbar.

As an experiment, cut and paste the above text (not the notes) into your own text area, save it and then view your website. You should see the same as in the above screen image.

Uploading a file such as a PDF, a video or interactive key

As well as adding hyperlinks to other sites, you can upload any document or file to your webpage and create a link to it.

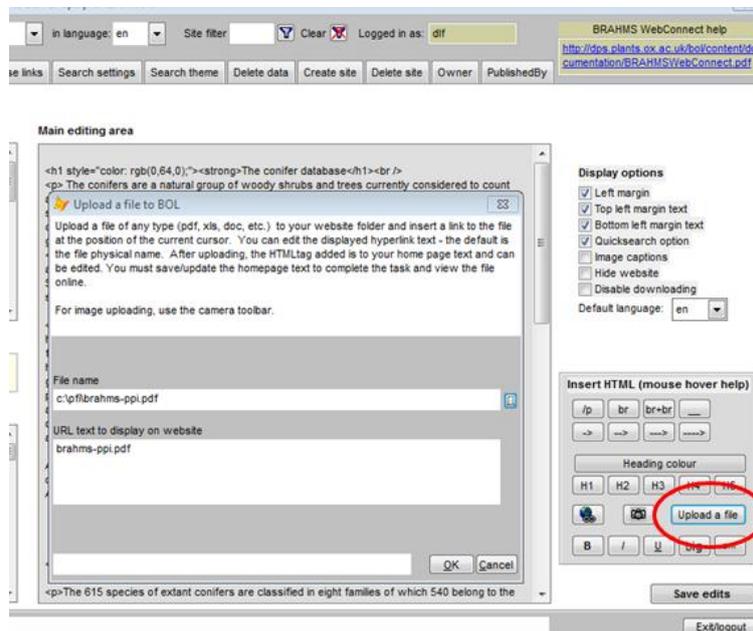


In the above example on the site <http://herbaria.plants.ox.ac.uk/bol/ukot>, PDF files have been uploaded and the links added to the left margin area.

To do this:

- Click in the text area where you want to add the hyperlink

- Select the **Upload a file** option on the WebConnect form and locate the file to upload as prompted. Add the text you want to appear on your website for the hyperlink.
- The hyperlink will be added to the website at the cursor position (you can cut and paste this entry later if needed to re-position it) and the selected file (of any type) will be uploaded to your personal website folder.



The Upload file option

Embedding images in your home page text

In addition to the banner and margin images, you can embed other images in the text areas themselves using the  toolbar. This action does two things:

- Adds the formatted HTML image tag to your home page text area. This will include your selected image name (remember, no spaces in image file names). This is added where your cursor is located in the text area.
- Uploads the image (plus optional HiRes version of it) to your website folder on the server to which you are connected.

You can embed as many images as you want to your text areas. Remember to keep the images to a sensible size. You can add space (padding) around your image to separate it from wrapped text.

If you have a high resolution version of the image, ensure it is stored in a child subfolder called HiRes and select the **HiRes** option on the form.

Home page images

This option uploads a selected image to your website images folder and adds the HTML image tag to your home page text at the position of the current cursor. The result is an image embedded in your text. You can embed many images on your home page.

To upload a high resolution version of the image, ensure there is a (larger sized) copy of the file in a subfolder named 'HiRes' directly under the folder where the selected image is located - and tick the HiRes upload option. You can add padding space to surround your image and set the text wrap style. Images may have borders. Image dimensions ought to be defined before you upload rather than using the height/width options to adjust. Uploading a large image and then displaying it at a lower size is very inefficient.

After adding the image details, save the homepage text to complete the task and view your image(s) online.

Locate image to add to website
 C:\WEBSITES-BOL\GABON\COLLECTIONDENSITY\SMALL.JPG

Image caption (mouse hover text)
 Edit image caption

Upload HiRes version if located
 Show border around image

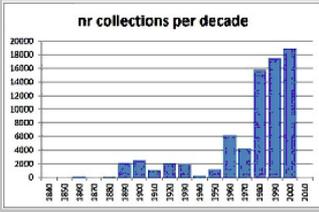
Image padding (space around image) in pixels

Top	Right	Bottom	Left
10	10	10	0

Width Height Leave settings as 0 for default
 Adjust image size As % of browser central text area

This setting influences how text wraps around your image
 Image/text alignment on page **Wrap text right of image**

OK Exit



Adding and embedding an image in the home page text.

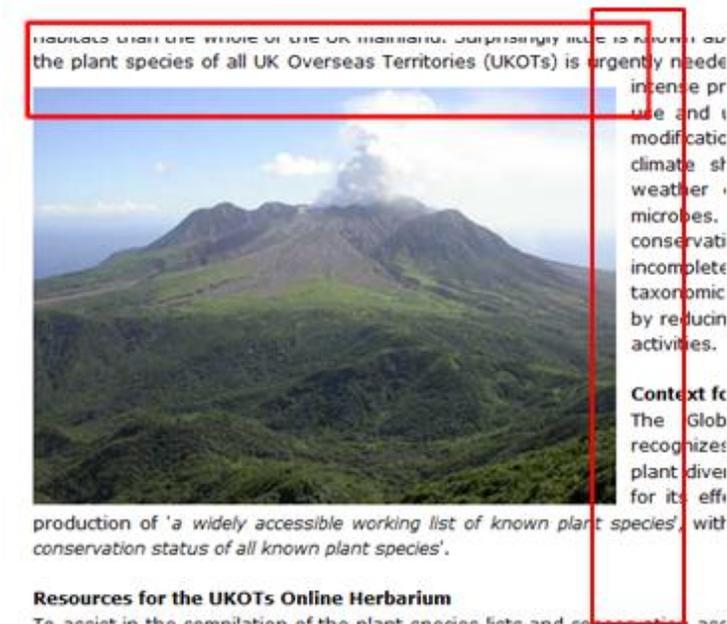


Image padding separates images from text as shown here top and right.

Homepage text - central text area

```
<h1 style="color:green;">Welcome to the Gabon website</h1>
<br/>



<p>Gabon is one of the the most heavily forested countries in the world, with 82% of the land
```

The above image tag includes padding and is set to float left. This means that the image will be posted on the left side of the text and that the text will wrap around it. Note the folder reference is “../images/home/Gabon”. This is the relative path on the server for the ‘Gabon’

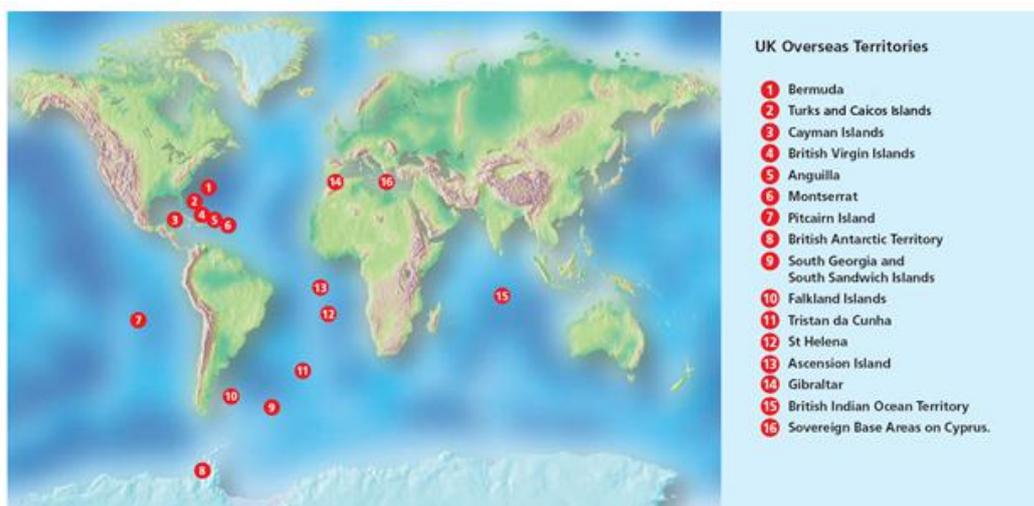
project. The image file name (Africa.jpg) has no spaces. The displayed result is shown in the **Welcome to the Gabon website** Image above.

If you want to remove an embedded image from your website, delete the relevant added HTML tag.

Image maps

Adding images, for example maps, to your website and being able to add clickable hyperlinks to the image is also possible as on the website <http://herbaria.plants.ox.ac.uk/bol/ukot>. Adding the necessary HTML to your WebConnect editing screen is simpler than you may imagine. A free editor for creating HTML Maps X-MAP is available on <http://www.carlosag.net/Tools/XMap/>. BRAHMS online includes code that will respect the image hyperlink coordinates when your browser is resized.

The following example is an image of a map with hyperlinks added to the red, numbered circles on the map and in the margin.



Below is a sample of the actual code that is added to the BRAHMS WebConnect text area with 3 hyperlinked coordinate points. The created HTML code will consist of one or more area tags and their attributes contained within an opening/closing map tag.

```

<map name="ukotmap" id="ukotmap">
  <area shape="circle" coords="267,234,12" href="http://herbaria.plants.ox.ac.uk/bol/Bermuda/Home/Index" alt="Bermuda" title="Bermuda" target="_blank" />
  <area shape="circle" coords="248,253,12" href="http://herbaria.plants.ox.ac.uk/bol/TCI/Home/Index" alt="Turks and Caicos Islands" title="Turks and Caicos Islands" target="_blank" />
  <area shape="circle" coords="223,277,12" href="http://herbaria.plants.ox.ac.uk/bol/Cayman/Home/Index" alt="Cayman Islands" title="Cayman Islands" target="_blank" />
  - more points added as needed until the closing tag ...
</map>
<script type="text/javascript">
  $(document).ready(function () { new imageMapScaler().init({ nativeImageWidth: 1377, imageld: "ukotimage", mapId: "ukotmap" }); });
</script>
```

Much of this code including the coordinates is auto-generated by the above mentioned X-MAP.

Adding slide a show

A flexible control for presenting moving images on your BRAHMS online website is available based on Novo Slider <http://nivo.dev7studios.com/>. The necessary components are built into BOL – all you have to do is add some code to your web page text area. You do not need to download any extra software.

Step 1: Prepare images

Prepare all the images you want to include in your slide show. Make all the images the same height and width. Try to keep file size down otherwise it will slow your site.

Step 2: Add images to image list

Carefully copy and paste the below HTML code into your text area at the position where you want the image show to appear.

```
<div class="slider-wrapper theme-default">
  <div id="slider" class="nivoSlider ">
    
    

    
```

- a) copy the text src="../images/home/namibia/NAMIBIA.JPG" into place in the nov slider image list.
- b) Delete the HTML code added by default to text area the when using the camera icon to upload the image. If you do not delete, the image will appear again on your page.
- c) Repeat for the next image. Add as many images as you wish to the list for your online show.

When done, your HTML section will look like:

```
<div class="slider-wrapper theme-default">
  <div id="slider" class="nivoSlider ">
    
    
    
```

```

    
    
    
</div>
</div>

```

The "images/home/Namibia/" part will change depending in your website url.

Step 3: Add the novo slider settings

Carefully copy and paste the below code into a text area of your webpage. This code can be anywhere. Its position is not relevant. Best to put it at the end of the text area so it doesn't interfere with routine webpage editing.

The script below includes all the possible settings for your slide show. You can delete lines as you wish. Some are more important than others. To edit the speed of slide change, you would edit the pauseTime tag. For a full explanation of these, hunt around on the site <http://nivo.dev7studios.com/>.

```

<script type="text/javascript">
    $(document).ready(function() {

    $('#slider').nivoSlider({
        effect: 'fade', // Specify sets like: 'fold,fade,sliceDown'
        slices: 15, // For slice animations
        boxCols: 8, // For box animations
        boxRows: 4, // For box animations
        animSpeed: 800, // Slide transition speed
        pauseTime: 3000, // How long each slide will show
        startSlide: 0, // Set starting Slide (0 index)
        directionNav: true, // Next & Prev navigation
        directionNavHide: true, // Only show on hover
        controlNav: true, // 1,2,3... navigation
        controlNavThumbs: false, // Use thumbnails for Control Nav
        pauseOnHover: true, // Stop animation while hovering
        manualAdvance: false, // Force manual transitions
        prevText: 'Prev', // Prev directionNav text
        nextText: 'Next', // Next directionNav text
        randomStart: false, // Start on a random slide
        beforeChange: function({}), // Triggers before a slide transition
        afterChange: function({}), // Triggers after a slide transition
        slideshowEnd: function({}), // Triggers after all slides have been shown
        lastSlide: function({}), // Triggers when last slide is shown
        afterLoad: function({}) // Triggers when slider has loaded
    });
    });
</script>

```

Further comments

Even if your images are sized to e.g. 500px width, the images will auto-resize to the width of your page. To control width, you can add the image list code inside a <div> tag as follows (here set to 600px width and shown in red):

```
<div style="max-width:600px; margin:0 auto;font-size:small; ">
```

```
<div class="slider-wrapper theme-default">
```

```
<div id="slider" class="nivoSlider ">
```

```

```

```

```

```
Mike Hopkins</a>                  | The site at present includes data and National Amazon Research Institute (INPA).                                                                                                                                                                                                                                                          |
| Florescer                             | UB Server      | <a href="#">Carol Proença</a>                 | O objetivo do Projeto FloResCer é disseminar informações sobre a diversidade biológica do Cerrado e do Pantanal do Mato Grosso do Sul e Tocantins.                                                                                                                                                                                        |
| Herbário UEC                          | UNICAMP Server | <a href="#">Washington Marcondes Ferreira</a> | Criado em 1974 por docentes do Departamento de Botânica da UEC, o Herbário UEC passou a ser o principal centro de pesquisas em herborização e conservação de plantas e hoje um importante centro de pesquisas em herborização e conservação de plantas e hoje um importante centro de pesquisas em herborização e conservação de plantas. |
| Reflora Amazonica                     | INPA Server    | <a href="#">Mike Hopkins</a>                  | Plants collected in the States comprising the Amazon basin.                                                                                                                                                                                                                                                                               |
| University of Brasilia herbarium (UB) | UB Server      | <a href="#">Cássia Munhoz</a>                 | UB é o herbário de referência primária para o Cerrado Central dos Cerrados, sendo também o maior acervo de exsiccatas (cerca de 200.000 exsiccatas).                                                                                                                                                                                      |
| BRAHMS Server examples (38)           |                |                                               |                                                                                                                                                                                                                                                                                                                                           |
| Aglaiia                               | BRAHMS Online  | <a href="#">Caroline Pannell</a>              | The genus Aglaia (family Meliaceae) is one of the most diverse genera in the world with about 120 species. It occurs in the lowland rainforests of Borneo, Sumatra and the Philippines.                                                                                                                                                   |
| Anguilla database                     | BRAHMS Online  | <a href="#">Martin Hamilton</a>               | Anguilla - RBG Kew UK Overseas Territories Programme                                                                                                                                                                                                                                                                                      |
| Ascension Island database             | BRAHMS Online  | <a href="#">Martin Hamilton</a>               | Ascension Island - RBG Kew UK Overseas Territories Programme                                                                                                                                                                                                                                                                              |
| Belize Savanna Ecosystem Assessment   | BRAHMS Online  | <a href="#">Zoe Goodwin</a>                   | This website provides access to a set of records from the lowland savanna ecosystem of Belize.                                                                                                                                                                                                                                            |
| Bermuda database                      | BRAHMS Online  | <a href="#">Martin Hamilton</a>               | Bermuda - RBG Kew UK Overseas Territories Programme                                                                                                                                                                                                                                                                                       |
| Bobart                                | BRAHMS Online  | <a href="#">University of Oxford Herbaria</a> | Jacob Bobart the Younger (1640-1711) was a Dutch collector and succeeded his father as Director of the University of Oxford Herbarium.                                                                                                                                                                                                    |
| British Antarctic Survey              | BRAHMS Online  | <a href="#">Martin Hamilton</a>               | British Antarctic Survey                                                                                                                                                                                                                                                                                                                  |
| British Indian Ocean Territory        | BRAHMS Online  | <a href="#">Martin Hamilton</a>               | British Indian Ocean Territory - RBG Kew UK Overseas Territories Programme                                                                                                                                                                                                                                                                |

If you want to exclude your website entry from the Published sites menu

# Publishing data online

## Introduction

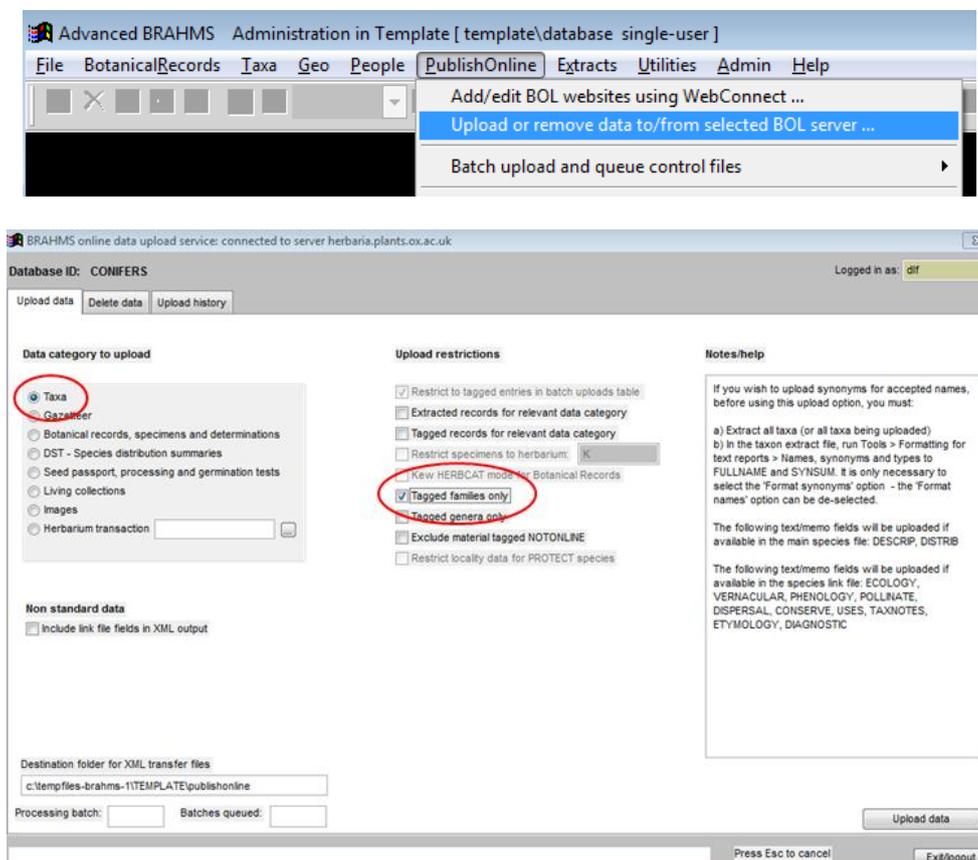
Data can be uploaded from BRAHMS to a server running BOL, assuming you have access rights to that server. When the data arrive on the server, they are added to the BOL SQL Server database.

Data cannot be uploaded directly from RDE – they must first be imported to your BRAHMS database. Some key points:

- Data you upload are uniquely identified by your database identity as on **Admin > Project configuration > DatabaseID**.
- When you upload data, you can restrict the records uploaded using the restrict options provided.
- With Botanical Records, Seed and Images, you can upload data in batches of a selected size. This is essential when uploading large volumes of data to reduce the size of the uploaded XML files.
- Data you upload can later be deleted and/or replaced.
- Linking and unlinking an uploaded database to/from a website is a separate process.

## Uploading data as XML

Data uploading involves selecting the type of data you want to upload, adding any restrictions and then uploading to the correct server. All uploading is done from **PublishOnline > Upload or remove data to/from selected BOL server**.



*In the example above, Taxa are going to be uploaded from a database named CONIFERS. A restriction has been set to tagged families.*

- Ensure that the database ID is correct as specified at the top of the form page.
- Choose the **Data category to upload/update**.
- Set upload restriction options you wish to apply.
- Select the **Upload data** option.

The upload process undertakes the following tasks:

- The relevant data in your database are extracted to files in your local tempfile-brahms 'publishonline' folder in XML format.
- These data are then locally compressed to a zip file.
- The zip file is transferred to an uploads folder on the selected server and incorporated into the online database.

At this stage, these data will be available on the server but not necessarily linked to a homepage.

## Upload restrictions

You can restrict the data being uploaded from your database in several ways. Upload restrictions can be combined. The available restrictions vary depending on the category of data being uploaded.

### Data category to upload

### Upload restrictions

*In the above example, all possible restrictions have been selected for a botanical records upload.*

## Uploading data in batches – essential for larger databases.

One of the restriction methods provided for botanical records, seed and image data is **Restrict to tagged entries in batch upload table**. The use of this option is essential when uploading large amounts of data. This is because the generation of XML files and the transfer of these files to the server would be slow. Also, a single error in a large file could prevent all records being uploaded. Thus, this option enables you to divide the task into batches of smaller XML upload files. If any one of these goes wrong, the others can still upload.

The relevant batch uploads file is opened using **PublishOnline > Batch upload and queue control files**. Initially, the separate files for botanical records and seed are empty. Use the **Tools** option provided to populate the file with record batches at the selected size.

The screenshot shows the 'Advanced BRAHMS Administration in Conifer db' window. The main window displays a table titled 'BOL uploads [c:\brahmsdata-conifers\conifersb6\boluploadlog.dbf (alias= BOLUPLOAD) ]'. The table has columns: tag, del, id, upload, brahmsfrom, brahmsto, located, uploaddate, and uploadtime. The data is as follows:

| tag | del | id | upload | brahmsfrom | brahmsto | located | uploaddate | uploadtime | notes |
|-----|-----|----|--------|------------|----------|---------|------------|------------|-------|
| *   |     | 1  |        | 1          | 200      | 0       | /          | /          |       |
| *   |     | 2  |        | 201        | 400      | 0       | /          | /          |       |
| *   |     | 3  |        | 401        | 600      | 0       | /          | /          |       |
| *   |     | 4  |        | 601        | 800      | 0       | /          | /          |       |
| *   |     | 5  |        | 801        | 1000     | 14      | /          | /          |       |
| *   |     | 6  |        | 1001       | 1200     | 71      | /          | /          |       |
| *   |     | 7  |        | 1201       | 1400     | 91      | /          | /          |       |
| *   |     | 8  |        | 1401       | 1600     | 39      | /          | /          |       |
| *   |     | 9  |        | 1601       | 1800     | 39      | /          | /          |       |
| *   |     | 10 |        | 1801       | 2000     | 90      | /          | /          |       |
| *   |     | 11 |        | 2001       | 2200     | 130     | /          | /          |       |
| *   |     | 12 |        | 2201       | 2400     | 82      | /          | /          |       |
| *   |     | 13 |        | 2401       | 2600     | 105     | /          | /          |       |
| *   |     | 14 |        | 2601       | 2800     | 88      | /          | /          |       |
| *   |     | 15 |        | 2801       | 3000     | 42      | /          | /          |       |
| *   |     | 16 |        | 3001       | 3200     | 73      | /          | /          |       |
| *   |     | 17 |        | 3201       | 3400     | 127     | /          | /          |       |
| *   |     | 18 |        | 3401       | 3600     | 63      | /          | /          |       |
| *   |     | 19 |        | 3601       | 3800     | 57      | /          | /          |       |
| *   |     | 20 |        | 3801       | 4000     | 45      | /          | /          |       |
| *   |     | 21 |        | 4001       | 4200     | 29      | /          | /          |       |
| *   |     | 22 |        | 4201       | 4400     | 64      | /          | /          |       |
| *   |     | 23 |        | 4401       | 4600     | 59      | /          | /          |       |

An overlay dialog box titled 'BRAHMS online batch uploading' is visible. It contains the following text: 'Generating XML files to upload to BRAHMS online can be slow. For larger databases, you can progressively upload your data using a batch process. The process generates XML files and uploads these files to the server. Using this option, you can control the number of records to include with each upload file. Records in this file can be tagged and uploaded as a sequence of batch files. Uploading a sequence of smaller files (up to a maximum of 1000 records per file) is recommended. If any one file fails (e.g. due to an xml transcription error), the other files can still upload. On the BOL data upload form, select the restrict option 'Restrict to tagged entries in batch uploads table' to use this batch upload control file.' At the bottom, there is a 'Select batch size:' dropdown menu set to '200', and 'Process' and 'Exit' buttons.

*In the above example for botanical records, the batch file has been set to batches of 200 BRAHMS numbers. Note that in all the records shown above, the actual number of records located in these batch groupings varies as in this database, many early records were deleted. Some batches have no records.*

In the batch uploads file, you must tag the batches to process and upload. If you have a very large database, for example a million records, you may want to set the batch size a little higher, for example 500 (which is the maximum), tag all records in the batch file and then start the upload process which will slowly work its way through this file, uploading the data in batches.

As each batch is uploaded, the upload status is written back to the file so you can trace which files have been successfully uploaded.

## Uploading botanical records

The botanical records upload option includes all specimens and the determination history for each specimen. WebConnect offers you the option to check that numeric data do not exceed permitted values. This applies to all date, altitude and map fields. If errors are found, you will be asked to fix these before uploading. The quickest way to find illegal numeric values (e.g. month=13) is to sort the field concerned.

As with other data categories, you can restrict the botanical records to upload. This will be essential if uploading from a large database.

## Uploading taxa

The Taxa upload functions will upload data to the separate family, genus and species files on the server. Some notes on taxa uploads are provided here.

BOL, when installed on the server includes a list of family/genus names in APG3 format. If you upload a new genus, it will be added to the list. The family name you provide (which may be different to the APG3 name) is added to the alternate family field.

BRAHMS databases may include species names that are identical. The upload process checks for duplicated names and if it finds any, it will add homonym numbering to make the names different and allow their uploading.

The family, genus and species file fields that can be uploaded are the taxa name(s) with rank and author, TAXSTAT, DESCRIP, DISTRIB, ORDER, DIAGNOSTIC, LEGITIMACY, SYNOF, CITATION, YEAR, NOMNOTE, TYPENOTE. The fields TRIBE and SUBFAM are also uploaded if provided in the genus file.

Species file uploads also include the fields IUCN, CRITERIA, STAR, ECOLOGY\*, HABIT, VERNACULAR\*, PHENOLOGY\*, POLLINATE\*, DISPERSAL\*, TAXNOTES\*, CONSERVE\*, USES\* and ETYMOLOGY\*. Fields marked \* are non-standard fields and will be taken from the species link file.

When uploading species, the accepted name for any synonyms (assuming the link is provided in BRAHMS) is uploaded to the ACCEPTED field.

If you have formatted synonyms to the SYNLIST memo and a specimen list to the SPECLIST memo in the taxon extract file using the formatting tools provided, these data will also be uploaded and can be viewed online. To use these latter options, you must extract the taxa and run the **Tools** options provided to pre-format these data to their respective memo fields.

## Uploading images

Details about your images (as linked to the data) are uploaded using the Images upload option. This option transfers details about the image file names, the links between images and data in your database, image key word if linked, image copyright and some other image details. If uploading data for large numbers of images, use the batch upload option provided.

The image files themselves must be copied to the server and stored in the correct folder. The default folder on the server is brahmsonline\images\databaseID where databaseID is the ID of the database the images are linked to. Server image locations are discussed further below.

BRAHMS online images can be viewed as a single image file or using the Zoomify image view. Zoomify must be licensed on the server.

## Problems when uploading data

XML files must be correctly formatted and must not include any illegal characters. Such characters are, in general, detected by WebConnect and converted to a valid format or excluded. However, in some cases, unusual characters may not be detected and the XML file is badly formed. Such files are rejected by the server and an error message is returned, usually with the line number within the XML file.

You can use the option **PublishOnline > Import last XML file for error analysis** to help track down the error and then edit this in your database before trying to re-submit to the server.

## Deleting data and databases

As owner of your online database, you can remove data at any stage. There are two delete options:

- Removing all of the data associated with your database identity – but leaving details about the database including who owns it and what website(s) it is linked to. Most important, leaving any images on the server.
- Removing the data, the database details and any images that were associated with the database.

Both these options are available on the **Delete data/database** tab.

## Linking and unlinking a database to a website

A website homepage may have no linked database. It may simply be a web page. To provide a data query service, you must link at least one uploaded database to the website using the **Database links** option on **PublishOnline > Add/edit BOL websites using WebConnect**.

BRAHMS online update service: connected to server dps.plants.ox.ac.uk

Website to edit: OXFORD in language: en Website filter Clear filter

Text Images Style Data uploads **Database links** Search settings Search theme Delete data/database Create site Delete site Ownership

Use this option to link or unlink databases to/from the current homepage. The databases that you have permissions to work with will be listed here.

A given homepage may have 1 to many linked databases; A given database can be linked to more than one homepage. If multiple databases are linked, these will be searched simultaneously and the results presented together.

Link or unlink the database selected below to/from the homepage OXFORD

List of available databases

TROWER Link Unlink

| Groupid | Database |
|---------|----------|
| OXFORD  | muscorum |
| OXFORD  | oxford   |
| OXFORD  | trower   |

*In the example above, the Oxford website is being edited. This website has three linked databases. You can only link/unlink databases that you have ownership rights to.*

- Ensure that the website/homepage name is correct (you may have several websites).
- Ensure that the correct database is selected in the List of available databases
- Select the **Link** option.

This database will now be available for querying from this website (subject to **Search settings** as discussed below).

To unlink a database from a website, select the criteria as above and then use the **Unlink** option. This process does not delete the database from the server, rather, it disconnects it from the website. Bear in mind that a single database can be linked to more than one website.

## Linking multiple databases to a website

You can link more than one database to a single website. You may have a series of databases with a common theme, for example a group of regional herbarium databases or related taxonomic / floristic works research databases. Each of the individual databases may be accessed via their own separate website but also linked to a collective website.

The ability to link databases into groups opens up options for regional collaboration, sharing data for curation purposes and any research that benefits from access to data from multiple herbaria or projects. When multiple databases are linked to a single website, any query will search all the databases together. There is no limit to the number of databases that can be linked to a single website. When linking multiple databases, it makes sense to include the database ID or the herbarium code in your default online query/results field list so that users know the data origin.

An example use of this is to compare determinations from different herbaria. And of course, it becomes possible to create distribution maps and related outputs based on a wider selection of data.

# Image folders on your server

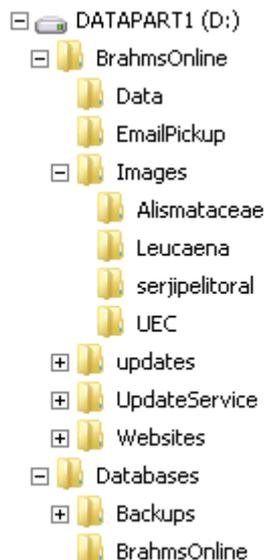
## Introduction

By default, images linked to data held in BRAHMS online, are stored in the default images folder on the server. This folders location is defined in the 'web.config' configuration file found in the websites root folder (e.g. C:\BrahmsOnline\Websites\Bol4\web.config). The images folder location is defined in the 'appSettings' section of the web.config file (about 1/3 of the way down the file) and looks something like this:

```
<appSettings>
 <!-- Other key/value settings may be here -->
 <add key="BaselImagesLocation" value="C:\BrahmsOnline\Images\" />
 <!-- Other key/value settings may be here -->
</appSettings>
```

The base location of the images folder can be changed by editing the value (highlighted above) of the 'BaselImagesLocation' key – DO NOT EDIT THE KEY, just edit the quoted value if necessary but you should leave the trailing slash ('\') in place. The web.config file is a plain text file which can be viewed and edited using Windows Notepad.

The value of BaselImagesLocation is where the system starts its search for images. Within the base images folder (%BaselImagesLocation%), images associated with a database are placed in a folder named using the database identifier (i.e. NOT the group/website name - although in some cases these happen to be the same). Thus, each database has a separate folder for its images. The example below shows 4 database image folders as an example.



*A typical installation of BOL showing default folders including 'Images'.*

These 'database' directories within the base images location (as set in web.config) are where you either put your images directly or you can elect to store images in different folders from the default structure outlined above by creating a 'locations.xml' file detailing the paths to search for the images for that database.

Storing your images in folders different from the default structure outlined above may be important as:

- it reduces the total number of images in any given folder
- if you have images already on your server that are linked to your BRAHMS database, you do not need to duplicate these to a special BOL server folder

The location paths given in the locations.xml file for any given database can be either local (e.g. C:\<someimagefolder>\ ) or Universal Naming Convention (UNC) paths (e.g. [\\<someserver>\<someshare>\<someimagefolder>](#) ). UNC paths are usually used for network locations (i.e. a shared folder on another host server on your network).

**Example:** Let's assume that you want to associate some images with the example Leucaena database, some of the images are held on a local harddisk at 'd:\Images\MyLeucanaImages' and some additional images are hosted on another computer on the network (named 'BollImageServer' in a network shared folder called 'BollImages' in 'Leuc' subfolder, this makes the remote UNC path '[\\BollImageServer\BollImages\Leuc](#)'. So first we need to create a file called 'locations.xml' in the Leucaena folder (leucaena is the database identifier) at the location given in the web.config appSettings section, so, by default, the locations.xml file would be created at c:\brahmsonline\images\leucaena\locations.xml. The contents of locations.xml would look like this:

```
<?xml version="1.0" encoding="UTF-8" ?>
<locations>
 <location path=" D:\Images\MyLeucanaImages" />
 <location path="\\BollImageServer\BollImages\Leuc" />
</locations>
```

In XML, case-sensitivity is an issue, make sure all entities (the word 'location' or 'locations') and attributes (the word 'path') are in lowercase. The path values (between the quotes) are not case-sensitive.

## Specifying Network Locations (UNC Paths)

There are a few things to note about specifying network image location paths. First a little background...

Every process running on a computer is run by some authenticated identity (windows account). When you are logged on to a computer and run any program (such as a word processor or e-mail program) then that authenticated identity is yourself. The permissions associated with your identity limits what the program can do and what it can access. Of course there are many processes running on a computer that run automatically (e.g. system services or tasks that run regardless of whether anyone is logged in). These processes (services/programmes etc.) are also started by an authenticated identity such as the Local System, Local Service or Network Service accounts which are built in as Windows system accounts that have varying levels of associated privileges.

MailWasherPro.exe *32	3428	ADL
mdm.exe *32	2068	SYSTEM
MsDepSvc.exe	2108	NETWORK SERVICE
MsMpEng.exe	904	SYSTEM
msseces.exe	160	ADL
notepad.exe	372	ADL
nusb3mon.exe *32	3244	ADL
OSPPSVC.EXE	5064	NETWORK SERVICE
OUTLOOK.EXE *32	3968	ADL
PDFProFiltSrv.exe *32	2232	SYSTEM
Pen_Tablet.exe	1372	SYSTEM
Pen_Tablet.exe	2712	SYSTEM
Pen_TabletUser.exe	2688	ADL
PresentationFontCache.exe	1712	LOCAL SERVICE
SearchIndexer.exe	4044	SYSTEM

A snapshot of running processes showing the identity running it ('ADL' is a logged on user)

The process that runs BRAHMS Online is, by default, the Network Service account and so it is this identity that needs to be able to access the image storage locations both locally and on the network (if network locations are used).

Now we get to the important point - system accounts have NO knowledge of mapped network drives. That is, if you log in on your computer and have some network shared folder mapped to a drive letter, say Z:\, then you can easily access files through Windows Explorer just by browsing to the 'Z:\' drive listed. However, none of the built in system accounts have any knowledge of that mapping, so to them the Z:\ drive does not exist – also some other user who later logs on to that same computer will not necessarily have that exact mapping - they may have used a different network drive letter or they may have mapped a completely different folder to the same drive. Network mapped drives are only relevant to the logged in user account that creates the mapping, not to any built in system accounts or to any other user.

Mapping network shares to a network drive letter is only a convenience for human users, the underlying path is actually specified as a 'UNC path'. See the section on Uniform Naming Convention (UNC) at [http://en.wikipedia.org/wiki/Path\\_\(computing\)](http://en.wikipedia.org/wiki/Path_(computing)). You can view the UNC path of any of your own mapped drives by opening a command prompt and typing 'NET USE' – The resulting display shows the UNC path in the 'Remote' column, e.g.:

```

C:\Users\ADL>net use
New connections will not be remembered.

Status Local Remote Network

OK S: \\herbaria\d$ Microsoft Windows Network
OK I: \\herbaria\c$ Microsoft Windows Network
OK U: \\dps1\public Microsoft Windows Network
OK V: \\dps1\images Microsoft Windows Network
OK X: \\dps3\IT Support Microsoft Windows Network
OK Y: \\dps\f$ Microsoft Windows Network
OK Z: \\dps\c$ Microsoft Windows Network
The command completed successfully.

```

The result of running 'NET USE' showing UNC paths in the 'Remote' column

UNC paths normally start with a double backslash (\\) and are followed by the name of a network host (herbaria, dps, dps1, dps3 etc) – after that comes the share names of the folders shared from that host (c\$, d\$, public, images), optionally the names of subfolders can also be specified after the share name.

The last important piece of information that needs to be considered in order to use network locations for image storage is the share access and folder access permissions. Assuming that the Network Service account (or indeed any other local system account) is the process that will be running the BRAHMS Online system as is the usual case, then the Network Service account on the local machine (the one hosting BRAHMS Online) will not be recognised on a remote host. The remote host, if it is another Windows server, will have its own Network Service account but it will only be identifiable on that server. The upshot of all this is that the share permissions and the image folder permissions will both need to be set to allow the built in 'Everyone' identity to have read-only access (write/modify permissions are not recommended in case of accidental or malicious data corruption or destruction).

There is another potentially more secure way to do this if your servers (BRAHMS Online and Images) are all members of a domain and that is to create a domain user and make that user account responsible for running the BRAHMS Online process (by editing the IIS server application pool that has responsibility for BRAHMS Online, this is most easily done in IIS 7 or later). Security permissions on all of the BRAHMS Online folders will need to be altered to include this new domain identity, a login will need to be added for the domain user in SQL Server and the appropriate read/write access granted to that login for the two hosted BRAHMS Online databases. Finally the share and folder permissions on the images folder will need to be altered to allow access to that same domain user account. What's the drawback – none really unless the domain policy includes a strict password expiration policy which means that everything will stop working if a password expires until it is updated, not usually a big concern. How is it more secure – well you can have very fine grained control over what that user can access on any particular host by judicious use of security groups (i.e. don't put the domain users account into the local Administrators group or you might as well have not bothered!).

Of course not all servers are Windows based and if your image host server happens to be Linux for example then you will need to use Samba in order to share the images folder with windows users over the network. Network Attached Storage (NAS) devices may also present some issues and many of them come with their own built in user administration console and open public access may end up as the only solution for some of these devices – the possible sharing combinations are almost endless but hopefully there will already be examples of cross-platform sharing within your institution to provide some inspiration.

## Creating the images location XML

Ok, so now you know how to specify UNC paths for network storage locations. The format of the locations.xml file was discussed earlier but you can let BRAHMS create the locations.xml file for you:

- Select **Images > BRAHMS online Image Folders** and add all the folder names/UNC paths.
- When in this open file, select **Tools > Generate XML file**

This generates an XML file similar to that shown below (locations.xml also shows some examples of UNC path use).

tag	del	hires	directory (folder location)
*			c:\images\10000\
*			c:\images\20000\
*			c:\images\30000\
*			c:\images\40000\
*			c:\images\50000\
*			c:\images\60000\
*			d:\images\ex001\
*			d:\images\ex002\
*			d:\images\ex003\

Example image folder list

```
<?xml version="1.0" encoding="UTF-8"?>
- <locations>
 <location path="c:\images\10000\"/>
 <location path="c:\images\20000\"/>
 <location path="c:\images\30000\"/>
 <location path="c:\images\40000\"/>
 <location path="c:\images\50000\"/>
 <location path="c:\images\60000\"/>
 <location path="d:\images\ex001\"/>
 <location path="d:\images\ex002\"/>
 <location path="d:\images\ex003\"/>
 <location path="\\localhost\images\ex004\"/>
 <location path="\\somehost\someshare\someSubFolder\"/>
 <location path="\\anotherhost\anothershare\"/>
</locations>
```

Example LOCATIONS.XML generated by BRAHMS

The XML file must then be copied to the default images folder/database subfolder on your server. If using the Oxford BRAHMS server, the file should be emailed to the BRAHMS project.

A separate locations.xml can be created to indicate where BOL should look for any HiRes versions of the file. High resolution images must have the same filename as their standard resolution counterparts. This locations.xml file should be placed in a 'HiRes' subfolder of your base database e images folder (e.g. c:\BrahmsOnline\Images\Leucaena\HiRes\locations.xml)

## How the images are located

When an image is requested the following events occur:

1. the path given in the system databases images table is checked first,
2. if no path is found or the image is not discovered at that location (maybe the first time the image is requested for example, or the image has been deleted) then the default image location given by the base images location (from web.config) combined with the database name is checked

3. if the image is found then that path is recorded in the database and the file is returned  
- if the image isn't found then the all paths given in locations.xml are checked one at a time until the image is found or all paths have been checked
4. if the image is found then the path is recorded for quicker future access in the system databases images table and the file is returned. If the image is not found then those paths that have been checked are recorded in the images table (as a check) but no path is recorded and the image file will, obviously, not be returned.

# Using Zoomify

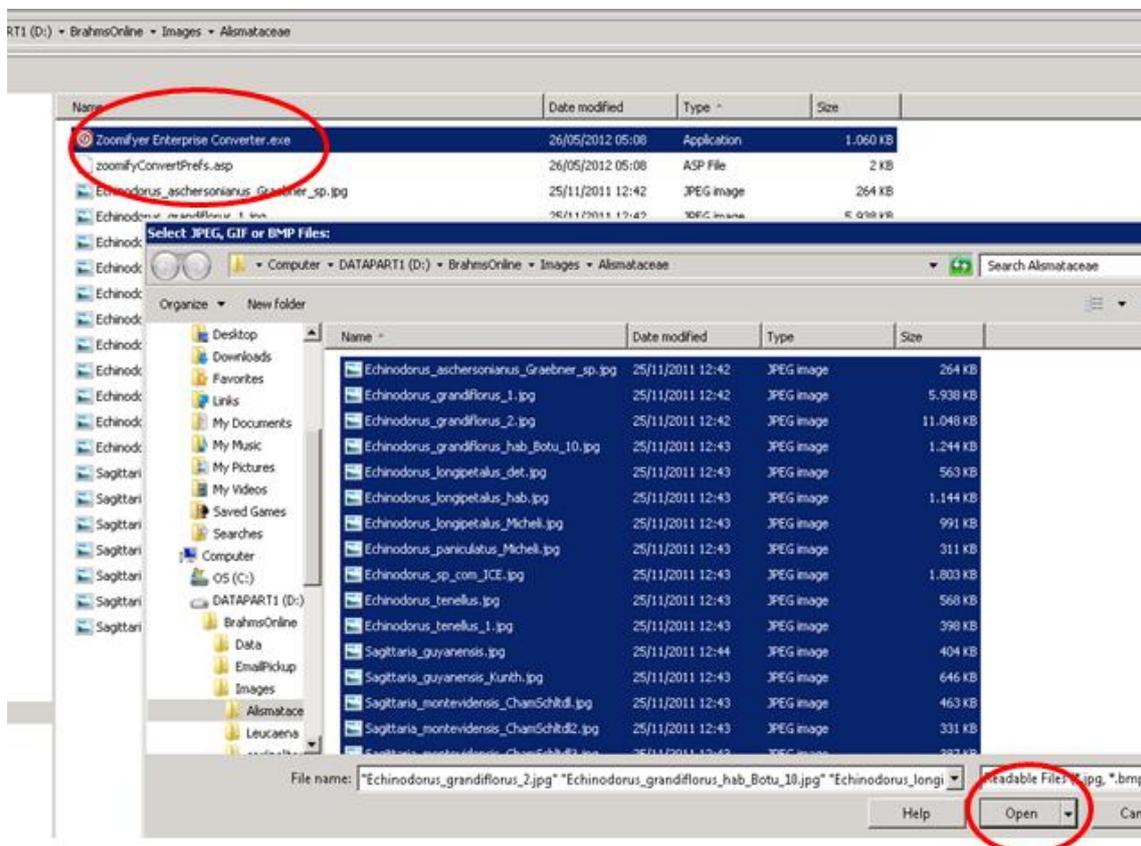
## Introduction

Zoomify (<http://www.zoomify.com/>) makes high-quality images zoom-and-pan for fast, interactive viewing on the web. BRAHMS online uses Zoomify to present images.

When Zoomified, your images (e.g. .jpg files) are converted to .pff files. You can batch process images on the server using the Zoomify convert tool.

 Echinodorus_aschersonianus_Graebner_sp.jpg	25/11/2011 12:42	JPEG image	264 KB
 Echinodorus_aschersonianus_Graebner_sp.pff	22/05/2012 05:13	PFF File	193 KB
 Echinodorus_grandiflorus_1.jpg	25/11/2011 12:42	JPEG image	5.938 KB
 Echinodorus_grandiflorus_1.pff	22/05/2012 05:13	PFF File	2.402 KB
 Echinodorus_grandiflorus_2.jpg	25/11/2011 12:42	JPEG image	11.048 KB
 Echinodorus_grandiflorus_2.pff	22/05/2012 05:14	PFF File	3.763 KB
 Echinodorus_grandiflorus_hab_Botu_10.jpg	25/11/2011 12:43	JPEG image	1.244 KB

A folder showing some jpg images converted to pff files.



The program Zoomifyer Enterprise Converter.exe, here copied into the image folder, allows you to select many images to batch process into pff files. After selecting all the files to process, select Open to convert the files.

## Licensing Zoomify

The BRAHMS online server in Oxford has a licence to run Zoomify. A new licence is required for each server installation. Thus, if you have BRAHMS online installed on your server and you want to use Zoomify to display images, you will need to purchase a licence. The Enterprise license is recommended so that .pff files can be used rather than tiled files in a folder hierarchy which would be harder to manage (the .pff files keep the entire equivalent generated image

tiles within a single file) - see <http://www.zoomify.com/enterprise.htm> for more details - the cost of an educational enterprise license is currently (2012) approx. US\$195 (~\$295 for non-educational). See also [http://www.zoomify.com/support.htm#q\\_ZEv3](http://www.zoomify.com/support.htm#q_ZEv3)

### Getting Zoomify in on the act:

All that is required to make use of Zoomify is to create pff images at the location given for the image, if a pff image is found then that will be used otherwise an attempt is made to locate the normal image and use that. There is nothing to prevent having the pff files at a different location to the non-pff image files but the pff location should be given first in the locations.xml file. As an example, suppose the Leucaena database had some images that were located on an image server called MyImageServer in a share called BollImages, then the locations.xml file at c:\brahmsonline\images would look like this...

```
<?xml version="1.0" encoding="UTF-8" ?>
<locations>
 <location path="// MyImageServer \ BollImages \Leucaena" />
</locations>
```

Now suppose you created pff files but wanted to keep them locally in a directory called c:\PffFiles, then this location must come first and the locations.xml file would look like this -

```
<?xml version="1.0" encoding="UTF-8" ?>
<locations>
 <location path="C:\PffFiles\Leucaena" />
 <location path="// MyImageServer \ BollImages \Leucaena" />
</locations>
```

If you know that all of your online images are in .pff format then there is no necessity to give the non-pff image location.

### Creating PFF's with Zoomify Enterprise

Once you have a license for Zoomify Enterprise then nothing actually needs to be installed, you really only need the Zoomifyer Enterprise Converter.exe file (found in the extracted files at \ZoomifyEnterpriseDeveloper4-Win\3 Converter\1 Zoomify Enterprise Converter). Then you just need to create a config file to go with it and you can then copy and run that executable anywhere to create your pff files - i.e. no installation required.

The config file is very important, it is a plain text file (i.e. created with notepad):

1. It must reside in the same folder as the Zoomifyer Enterprise Converter.exe executable
2. It must be named 'zoomifyConvertPrefs.asp'
3. It must contain the following line 'ZOOM\_OUTPUT\_TYPE: 1' (without the quote marks)

ZOOM\_OUTPUT\_TYPE: 1 indicates that you want a pff file output.

Nothing else is required, once you have the zoomifyConvertPrefs.asp file containing the line ZOOM\_OUTPUT\_TYPE: 1 just put it somewhere convenient for you to run it and double click the exe file then browse to the folder that contains the images you want to convert and select all the images you want to convert and click ok. The converter will just work through all of the images and put the resulting .pff image into the same folder, nothing else to it, nothing else needed.

There are other config options that could be used and other ways of running the tool but this is the most straightforward and easy way to do it, just remember to keep the zoomifyConvertPrefs.asp in the same place as the converter executable.

## Gaining Direct Access to images – some tests

Note that file and directory permissions, share permissions for network locations and folder locations (locations.xml) must be set up correctly as previously detailed.

In the absence of a .pff file the equivalent .jpg will be displayed (without Zoomify) assuming it can be found in one of the provided image search locations, and with the additional drawback that if the image is high resolution then the entire image is downloaded which could take a considerable time (although you could create lower resolution versions of the image for display but obviously there is also a storage issue and processing time issue with that route).

Images can be referenced directly in both Zoomify and jpg format (assuming both formats are discoverable on the provided image paths and the appropriate permissions are set). This means you can test whether or not a particular image is available and potentially allows you to provide a direct image url to someone and/or use the image url independently of the BOL website (e.g. as a link in the text of another website or as the source of an img tag). The format for image display is given by the examples provided below:

1. To display an image named 96475.jpg from the AGLAIA database on the Oxford BOL server at herbaria.plants.ox.ac.uk/bol and with the Zoomify window set to 800px w x h use...

<http://herbaria.plants.ox.ac.uk/bol/AGLAIA/image/96475.JPG/Zoom?width=800px&height=800px>

In general the format is: `http://<base bol website address>/<the database id>/image/<jpg filename>/Zoom?width=<width>px&height=<height>px` where everything within angle brackets is replaced with your desired data, note that the group name is not used, only the database identifier (sometimes they are one and the same of course), the width and height are given for the Zoomify window size *not* the image size, the image will be automatically scaled to the given Zoomify window height).

2. If you specifically want the jpg file then use the same url format but replace the word 'Zoom' (after the filename) with the word 'Index' so the above image url for the jpg would be:

<http://herbaria.plants.ox.ac.uk/bol/AGLAIA/image/96475.JPG/Index>

The width and height are not used here and would be ignored if added; the result will be the entire image at full size with some additional data (e.g. the species name at the top)

3. It is also possible to get just the jpg image by omitting the '/Index' part

e.g. <http://herbaria.plants.ox.ac.uk/bol/AGLAIA/image/96475.JPG>

If the image is requested in Zoomify format but is not available as a pff but can be found as a jpg then the jpg is automatically returned instead (i.e. if Aglaia image 96475.pff could not be found then 96475.jpg would be returned as in the second url).

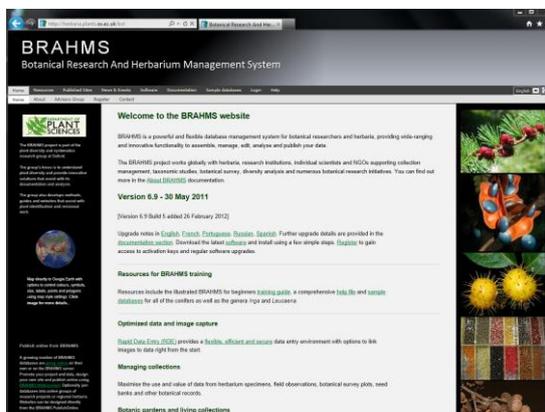
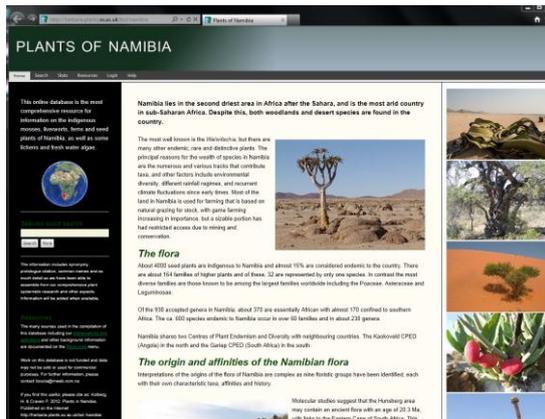
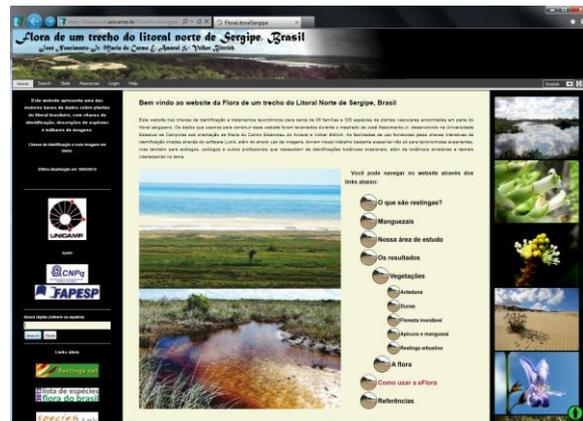
Using these URL formats also allows quick testing of your image setup without doing a search (assuming you have the database identifier and the filename of an image (as .jpg regardless of whether it is in pff format or not)).

# BRAHMS online in use

The focus of this document is on BRAHMS WebConnect rather than on BRAHMS online itself. A few sample screens showing BRAHMS online in use are provided here :

## Home page samples

Web pages can be designed imaginatively using text, images, hyperlinks, animation and any other standard features available in the HTML language.



## Data grids

Data grids provide tools to select records, sort, select display columns, filter, calculate, download and more. Text wrap can be selectively enabled. Images linked to specific records can be viewed.



Herbário da Universidade Estadual de Campinas

Home Pesquisa Stats Recursos Login Ajuda

Summary Family Genus Species Bot. Recs Specimens Map Images

Botanical Records

Tagging |

Página 1 de 106

Tag	Collector	Number	Family
<input type="checkbox"/>	Kinoshita, L.S.	98183	Acanthaceae
<input type="checkbox"/>	Ribeiro, J.F.	E-109	Acanthaceae
<input type="checkbox"/>	Weyland Vieira, M.C.	361	Acanthaceae
<input checked="" type="checkbox"/>	Sartori, A.L.B.	28996	Acanthaceae
<input checked="" type="checkbox"/>	Torres, R.B.	23964	Acanthaceae
<input checked="" type="checkbox"/>	Hofstätter, P.G.	72	Acanthaceae
<input checked="" type="checkbox"/>	Kinoshita, L.S.	280	Acanthaceae
<input type="checkbox"/>	Cunha, C.N.	468	Acanthaceae
<input type="checkbox"/>	Koch, I.	689	Acanthaceae
<input type="checkbox"/>	Webster, G.L.	25295	Acanthaceae
<input checked="" type="checkbox"/>	Lopes, F.S.	13260	Acanthaceae
<input checked="" type="checkbox"/>	Zickel, C.S.	23492	Acanthaceae
<input checked="" type="checkbox"/>	Leitão Filho, H.F.	16347	Acanthaceae
<input checked="" type="checkbox"/>	Leitão Filho, H.F.	16376	Acanthaceae
<input checked="" type="checkbox"/>	Montechio, M.	16414	Acanthaceae
<input checked="" type="checkbox"/>	Fillietz, A.M.	50	Acanthaceae

Result Columns

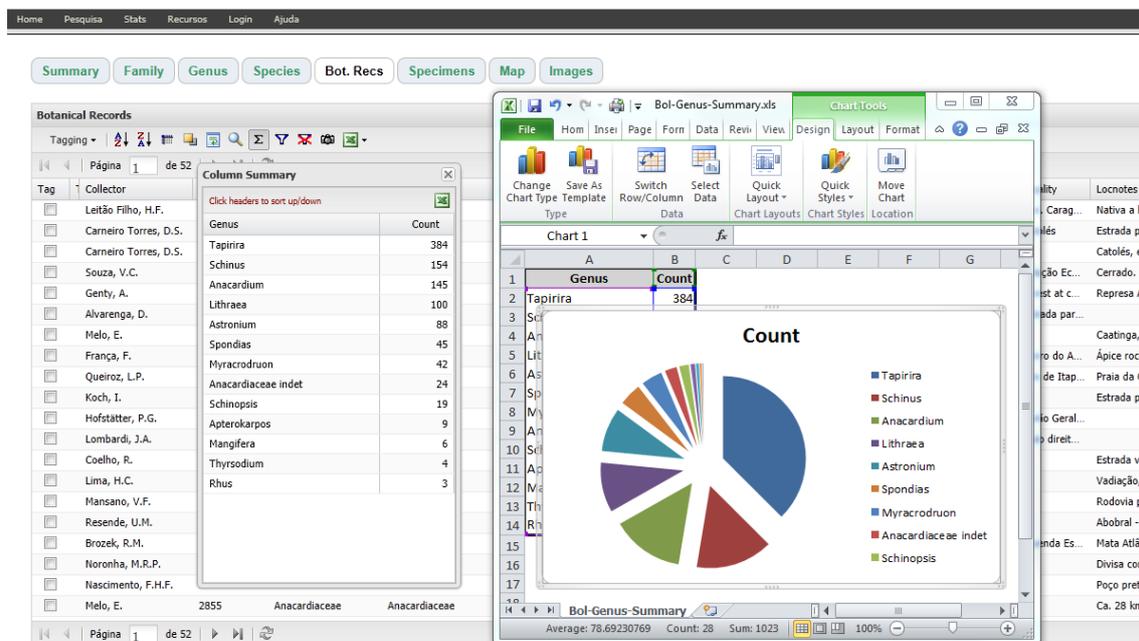
Column	Visible
Tag	<input checked="" type="checkbox"/>
DB	<input type="checkbox"/>
Type	<input checked="" type="checkbox"/>
Collector	<input checked="" type="checkbox"/>
Add. Coll.	<input type="checkbox"/>
Prefix	<input type="checkbox"/>
Coll. No.	<input type="checkbox"/>
Suffix	<input type="checkbox"/>
Number	<input checked="" type="checkbox"/>
Family	<input checked="" type="checkbox"/>
Alt. Family	<input checked="" type="checkbox"/>
Species	<input checked="" type="checkbox"/>
Genus	<input checked="" type="checkbox"/>
Sp1	<input type="checkbox"/>
Country	<input checked="" type="checkbox"/>
Major	<input checked="" type="checkbox"/>
Author1	<input type="checkbox"/>
Rank1	<input type="checkbox"/>

Collector	Country	Major
...ae indet sp.	Brazil	Minas Gerais
...ae indet sp.	Brazil	Goiás
...ae indet sp.	Brazil	Minas Gerais
...ae indet sp.	Brazil	São Paulo
...ae indet sp.	Brazil	São Paulo
...ae indet sp.	Brazil	São Paulo
...ae indet sp.	Brazil	São Paulo
...ae indet sp.	Brazil	Mato Grosso
...ae indet sp.	Brazil	Bahia
...ae indet sp.	Brazil	Distrito Federal
...ae indet sp.	Brazil	São Paulo
...ae indet sp.	Brazil	São Paulo
...ae indet sp.	Brazil	São Paulo
...ae indet sp.	Brazil	São Paulo
...ae indet sp.	Brazil	São Paulo
...ae indet sp.	Brazil	São Paulo
...ae indet sp.	Brazil	São Paulo
...ae indet sp.	Brazil	São Paulo

A typical data grid, here botanical records. The columns viewed in grids can be adjusted using the toolbar feature provided.



Herbário da Universidade Estadual de Campinas



Here the summary has been exported to Excel and charted to produce a pie-chart of the relative abundance of collections in the different genera of the family Anacardiaceae based on specimens held at the UEC herbarium.

http://herbaria.plants.ox.ac.uk/bol/conifers/Results/ Zoomify Support - Frequently ... Species

# CONIFERS OF THE WORLD

## RESOURCES FOR CONIFER RESEARCH

Home Search Stats Resources Login Help

Summary Family Genus Species Bot. Recs Specimens Map

Species

Tagging 

Page 1 of 1

Tag	Taxstat	Family	Genus	Sp1	Author1	Rank1	Sp2	Author2	Citation
<input type="checkbox"/>	acc	Podocarpaceae	Dacrycarpus	imbricatus	(Blume) de Laub.	var. curvulus	(Miq.) de Laub.	J. Arnold Arbor. 50: 326.	
<input type="checkbox"/>	acc	Podocarpaceae	Dacrycarpus	imbricatus	(Blume) de Laub.	var. imbricatus			
<input type="checkbox"/>	acc	Podocarpaceae	Dacrycarpus	imbricatus	(Blume) de Laub.	var. robustus	de Laub.	J. Arnold Arbor. 50: 323.	
<input type="checkbox"/>	acc	Podocarpaceae	Podocarpus	brassii	Pilg.	var. brassii			
<input type="checkbox"/>	acc	Podocarpaceae	Podocarpus	brassii	Pilg.	var. humilis	de Laub.	Blumea 30 (2): 274. 1985	
<input type="checkbox"/>	acc	Podocarpaceae	Podocarpus	macrophyllus	(Thunb.) Sweet	var. macrophyllus			
<input type="checkbox"/>	acc	Podocarpaceae	Podocarpus	macrophyllus	(Thunb.) Sweet	var. makii	Siebold & Zucc.	Abh. Math.-Phys. Cl. Königl. Akad. Wiss. Berlin 1845: 103.	
<input type="checkbox"/>	acc	Podocarpaceae	Podocarpus	madagascariensis	Baker	var. madagascariensis			
<input type="checkbox"/>	acc	Podocarpaceae	Podocarpus	madagascariensis	Baker	var. procerus	de Laub.	Adansonia 11 (4): 715. 1985	
<input type="checkbox"/>	acc	Podocarpaceae	Podocarpus	madagascariensis	Baker	var. rotundus	L. Laurent	Ann. Fac. Sci. Marseille 23: 103. 1955	
<input type="checkbox"/>	acc	Podocarpaceae	Podocarpus	nerifolius	D. Don	var. degeneri	N.E. Gray	J. Arnold Arbor. 39: 467. 1916	
<input type="checkbox"/>	acc	Podocarpaceae	Podocarpus	nerifolius	D. Don	var. nerifolius			

Species grid with a filter applied to show only records with 'var.' in the rank1 column.

# ALISMATACEAE

## Flora do Estado de São Paulo

Home Pesquisa Stats Recursos Login Ajuda Português

Summary Family Genus Species Bot. Recs Specimens Map Images Grid View Reports

Species

Tagging 

Página 1 de 1 Display 20 records per page

Tag	Taxstat	Family	Alt. Family	Genus	Sp1	Author1	Rank1	Sp2	Author2	Citation	Accepted Name	Image
<input type="checkbox"/>	acc	Alismataceae	Alismataceae	Echinodorus	aschersonianus	Graebn.				Bot. Jahrb. Syst. 45: 433. 1929		
<input type="checkbox"/>	syn	Alismataceae	Alismataceae	Echinodorus	bolivianus	(Rusby) Holm...				Brittonia 31: 276. 1979	Helanthium tenellu...	0
<input type="checkbox"/>	acc	Alismataceae	Alismataceae	Echinodorus	grandiflorus	(Cham. & Schl...				in A. & C. DeCandolle, Mon...		
<input type="checkbox"/>	syn	Alismataceae	Alismataceae	Echinodorus	grandiflorus	(Cham. & Schl...						
<input type="checkbox"/>	syn	Alismataceae	Alismataceae	Echinodorus	lanceolatus	(Cham. & Schl...						
<input type="checkbox"/>	acc	Alismataceae	Alismataceae	Echinodorus	longipetalus	(Cham. & Schl...						
<input type="checkbox"/>	acc	Alismataceae	Alismataceae	Echinodorus	macrophyllus	(Cham. & Schl...						
<input type="checkbox"/>	Alismataceae	Alismataceae	Echinodorus	macrophyllus	(Cham. & Schl...							
<input type="checkbox"/>	Alismataceae	Alismataceae	Echinodorus	palaeifolius	(Cham. & Schl...							
<input type="checkbox"/>	acc	Alismataceae	Alismataceae	Echinodorus	paniculatus	(Cham. & Schl...						
<input type="checkbox"/>	Alismataceae	Alismataceae	Echinodorus	pubescens	(Cham. & Schl...							
<input type="checkbox"/>	syn	Alismataceae	Alismataceae	Echinodorus	tenellus	(Cham. & Schl...						
<input type="checkbox"/>	Alismataceae	Alismataceae	Echinodorus	trialatus	(Cham. & Schl...							

http://www.theplantlist... Search results — The Plant ...

## The Plant List

A working list of all plant species

Home About Browse Statistics Feedback How to use this site

### Results

12 plant name records match your search criteria **Echinodorus grandiflorus**. The results at

- Genus *Echinodorus* is in the family *Alismataceae*.

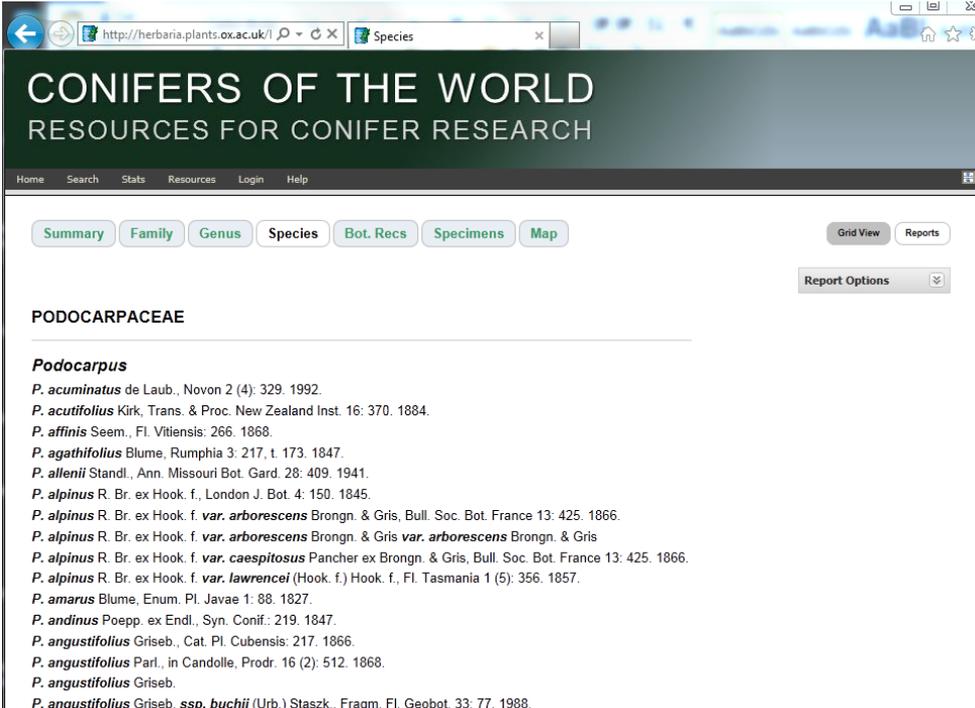
The results can also be downloaded as a CSV file.

See "Status" "Confidence level" "Source" for definitions

Dynamic links are provided to lookup external websites, here the Plant List.

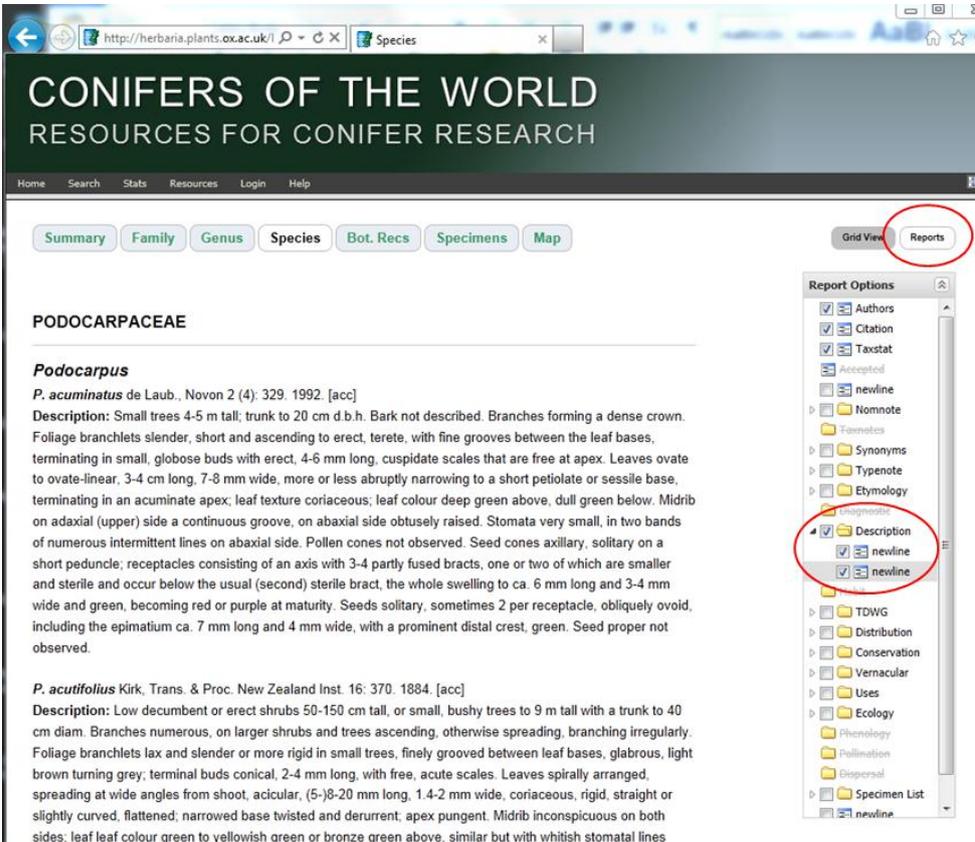
## Reports

Reports are used to create formatted text pages.



The screenshot shows the 'CONIFERS OF THE WORLD' website interface. The main heading is 'CONIFERS OF THE WORLD' with the subtitle 'RESOURCES FOR CONIFER RESEARCH'. Below the heading is a navigation bar with links for Home, Search, Stats, Resources, Login, and Help. A secondary navigation bar contains buttons for Summary, Family, Genus, Species, Bot. Recs, Specimens, and Map. On the right side, there are buttons for Grid View and Reports, and a Report Options dropdown menu. The main content area is titled 'PODOCARPACEAE' and lists several species of the genus *Podocarpus* with their authors and citations, such as *P. acuminatus* de Laub., *P. acutifolius* Kirk, *P. affinis* Seem., *P. agathifolius* Blume, *P. allenii* Standl., *P. alpinus* R. Br., *P. alpinus* R. Br. ex Hook. f. var. *arborescens* Brongn. & Gris, *P. alpinus* R. Br. ex Hook. f. var. *arborescens* Brongn. & Gris var. *arborescens* Brongn. & Gris, *P. alpinus* R. Br. ex Hook. f. var. *caespitosus* Pancher ex Brongn. & Gris, *P. alpinus* R. Br. ex Hook. f. var. *lawrencei* (Hook. f.) Hook. f., *P. amarus* Blume, *P. andinus* Poepp. ex Endl., *P. angustifolius* Griseb., *P. angustifolius* Parl., and *P. angustifolius* Griseb. ssp. *buchii* (Urb.) Stasz. & Fragn.

Species data reporting to create a simple list of names with authors and citation



The screenshot shows the same website interface as the previous image, but with the 'Reports' button highlighted in a red circle. A 'Report Options' dropdown menu is open on the right side, showing a list of report items with checkboxes and expandable arrows. The 'Description' item is highlighted in a red circle, and its sub-items 'newline' and 'newline' are also highlighted in red circles. The main content area displays the detailed report for the species *Podocarpus*. It includes the genus name *Podocarpus* and the species *P. acuminatus* de Laub., Novon 2 (4): 329. 1992. [acc]. The description is: 'Description: Small trees 4-5 m tall; trunk to 20 cm d.b.h. Bark not described. Branches forming a dense crown. Foliage branchlets slender, short and ascending to erect, terete, with fine grooves between the leaf bases, terminating in small, globose buds with erect, 4-6 mm long, cuspidate scales that are free at apex. Leaves ovate to ovate-linear, 3-4 cm long, 7-8 mm wide, more or less abruptly narrowing to a short petiolate or sessile base, terminating in an acuminate apex; leaf texture coriaceous; leaf colour deep green above, dull green below. Midrib on adaxial (upper) side a continuous groove, on abaxial side obtusely raised. Stomata very small, in two bands of numerous intermittent lines on abaxial side. Pollen cones not observed. Seed cones axillary, solitary on a short peduncle; receptacles consisting of an axis with 3-4 partly fused bracts, one or two of which are smaller and sterile and occur below the usual (second) sterile bract, the whole swelling to ca. 6 mm long and 3-4 mm wide and green, becoming red or purple at maturity. Seeds solitary, sometimes 2 per receptacle, obliquely ovoid, including the epimatium ca. 7 mm long and 4 mm wide, with a prominent distal crest, green. Seed proper not observed.' Below this is the species *P. acutifolius* Kirk, Trans. & Proc. New Zealand Inst. 16: 370. 1884. [acc]. The description is: 'Description: Low decumbent or erect shrubs 50-150 cm tall, or small, bushy trees to 9 m tall with a trunk to 40 cm diam. Branches numerous, on larger shrubs and trees ascending, otherwise spreading, branching irregularly. Foliage branchlets lax and slender or more rigid in small trees, finely grooved between leaf bases, glabrous, light brown turning grey; terminal buds conical, 2-4 mm long, with free, acute scales. Leaves spirally arranged, spreading at wide angles from shoot, acicular, (5-)8-20 mm long, 1.4-2 mm wide, coriaceous, rigid, straight or slightly curved, flattened; narrowed base twisted and derurrent; apex pungent. Midrib inconspicuous on both sides; leaf colour green to yellowish green or bronze green above, similar but with whitish stomatal lines'.

Species data reports formatted online to include showing descriptions. Report options available depend on the data uploaded to the website. Report items on the report options menu can be expanded to add spacing. They can also be dragged higher or lower to alter their position in the report.





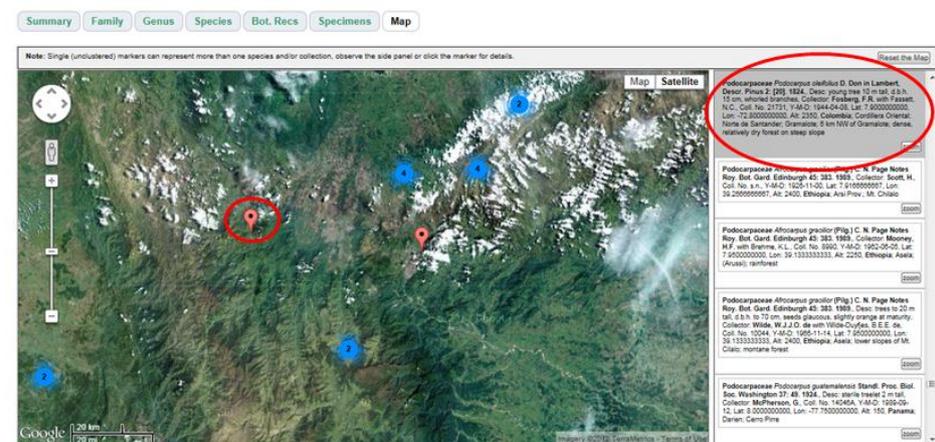
# Mapping



Mapping online with point clustering - here the distribution of the genus *Podocarpus*.



Zooming into the same map



Clicking on an individual point displays the point details in the top of right-side zoom pane