

Using the MycoPortal

The MycoPortal (<http://mycoportal.org>) is the central database for the MaCC project. Eventually it will hold data from about 1.3 million specimens from all the major mycological herbaria in the country. The MycoPortal also has features that allow users to create and manage their own herbarium database, including printing specimen labels, and to create on-line publications including checklists, keys and descriptions. Anyone is welcome to use the MycoPortal for their projects – there is no need to ask permission to do so, but you may find it helpful to discuss your project with either Gene Yetter at the New York Botanical Garden (gyetter@nybg.org) or Scott Bates (Scott.Thomas.Bates@gmail.com), the MycoPortal Manager. They will gladly answer any questions you have, and may be able to give you some time-saving tips.

The underlying software that supports data management, manipulation, searching etc. on the portal is called Symbiota. Symbiota is currently in use for a variety of collaborative projects: [SEINet Home - Southwest Biodiversity Consortium : HomePage](http://swbiodiversity.org/seinet/index.php) (swbiodiversity.org/seinet/index.php); [Consortium of North American Lichen Herbaria](http://lichenportal.org/portal) (lichenportal.org/portal); [Consortium of North American Bryophyte Herbaria Home](http://bryophyteportal.org/portal) (bryophyteportal.org/portal) [Consortium of North East Herbaria](http://neherbaria.org/) (neherbaria.org/).

This software is web-based, free, and open source (<http://sourceforge.net/projects/symbiota/>). More information (as well as general portal tutorials) on the Symbiota Software Project can be found on the project website (<http://symbiota.org>). A quick user's guide for using the MycoPortal is presented here. For more information, contact Gene Yetter at the New York Botanical Garden (gyetter@nybg.org) who, if he can't answer your question, will refer you to Scott Bates Bates (Scott.Thomas.Bates@gmail.com), the MycoPortal Manager.

Registering for the MycoPortal

On the opening page of the MycoPortal (<http://mycoportal.org/portal/index.php>) page, click on “New Account” on the navigation bar to the left, and then create a user ID and password to as prompted create your permanent login. You do not have to login to search the Portal, but by logging in you will be able to create and manage your own data.

Using the MyCoPortal to Search Data

We advise that you try using the Symbiota Tutorial to learn the basics about how to search in data portals such as mycoportal.org (<http://symbiota.org/tiki/tikimovies/specimenssearch.htm>). before moving on to using the portal to enter data. This tutorial outlines basic searching (e.g., using the portal's collection search interface (<http://mycoportal.org/portal/collections/index.php>)). If a user is logged onto the portal with the proper credentials, then they will be able to edit records found using this basic searching function by clicking on the editing icon (a small pencil) to the right of each record on the search results page.

Using the MyCoPortal to Add Data from Your Own Collections

On the opening page of the MycoPortal (<http://mycoportal.org/portal/index.php>) page, click on “New Account” on the navigation bar to the left, and then create a user ID and password to as prompted create your permanent login. Once logged in, you will be able to create and manage your own data.

The Symbiota software provides many useful tools for managing your own collections. These include:

- the occurrence record editor for editing and inputting records (with many functions, e.g., automatic carry over of locality data to the next record inputted, automatic duplicate searching, georeferencing and coordinate conversion tools),
- label printing for herbarium specimens
- expanded searching capabilities, administrator review/verification of record edits, ‘batch’ georeference and field updating, as well as collection database backup downloads. management.

NOTE: *If this editing icon is not visible when you are logged in with proper credentials, then check that your browser is portal-compatible (e.g., Google Chrome) and is up to date.*

If you have existing data to be transferred to the Portal, please contact Scott Bates, who will walk you through uploading data the first time. See also the chapter entitled, *Uploading Data*. Make sure you are registered and have administrative permission to create and edit records (see *Registering for the MyCoPortal*, above). You need to be authorized to create and edit records. Please contact Scott Bates (Scott.Thomas.Bates@gmail.com) for this authorization.

Enter Full Specimen Records

Add a new Occurrence Record

To manually enter data in the portal, click “Login” on the navigation bar (e.g., left-hand side of the home page). Next, go to the collection page (see above), by clicking on the icon for the home institution (it is not necessary to check the box or click on the "Next" button). You will arrive at a page displaying the institutional overview, and then click on the editing icon and select “Add a New Occurrence Record” to access the Occurrence Record Editor for inputting data.

New Occurrence Record

Collector Info

Catalog Number ?	Other Numbers ?	Collector	Number	Date	<input <="" td="" type="button" value="Dupes?"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/> Auto search

Associated Collectors

Latest Identification

Scientific Name:	Author:
<input type="text"/>	<input type="text"/>
ID Qualifier: ?	Family:
<input type="text"/>	<input type="text"/>
Identified By:	Date Identified:
<input type="text"/>	<input type="text"/>



Locality

Country	State/Province	County	Municipality
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Locality:

Locality Security

Latitude	Longitude	Uncertainty (meters) ?	Datum ?	Elevation in Meters	Verbatim Elevation
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/> - <input type="text"/>	<input type="text"/> <input type="button" value="ft."/>

Misc		
Habitat:	<input type="text"/>	
Substrate:	<input type="text"/>	
Associated Taxa:	<input type="text"/>	
Description:	<input type="text"/>	
Notes:	<input type="text"/>	
Curation		
Type Status: ?	<input type="text"/>	Disposition: ? <input type="text"/>
Reproductive Condition: ?	<input type="text"/>	Establishment Means: ? <input type="text"/> <input type="checkbox"/> Cultivated
Owner Code: ?	<input type="text"/>	Basis of Record: ? <input type="text"/> Language: <input type="text"/>
Other		
Processing Status:	<input type="text" value="Pending Review"/>	Label Project: <input type="text"/> Duplicate Quantity: <input type="text"/>
< << * of 4 >> > >*		

Add Record

Follow-up Action:

Go to New Record

Go to New Record and Carryover Locality Information

Remain on Editing Page (add images, determinations, etc)

Data Elements

Catalog Number: For all specimen data entered in the portal, it is critical to enter a unique identifying number for each specimen. For personal herbaria, you can use a sequential number, or you can duplicate the collection number – it doesn't matter what numbering system you use, as long as the numbers are unique.

Collector: Use this field to record a single collector whose collection number is associated with the record.

Number: The collection number associated with the collector entered above.

Date: Use this field to record the date that that specimen was collected with this format: year-month-day (e.g., 2012-08-24). Click on the +edit icon to enter verbatim date information (e.g., "Summer 1999").

Associated Collectors: persons accompanying the collector entered above.

Scientific Name: use this field to enter the binomial for the specimen (or subspecific taxa as "f.", "var.", or "subsp."). **Note:** *rather than inputting the taxon author and family for a particular entry, allow the software to auto-fill these fields so that author*

abbreviation and family-level taxonomy conform to the standard of the portal (auto-filled information will be visible after clicking into a new field). As a taxon is entered a drop-down menu is displayed where taxa can be selected, thus aiding proper spelling so that taxa will link properly to the “species profile.”

ID Qualifier: use this field to qualify determination confidence (e.g., “cf.” or “aff.”).

“Identified By” and “Date Identified” – use these fields to record identifier and date of the final determination (*Note: select the “Determination History” tab and then click on the green + icon to create a annotation record for the specimen*). Click on the +edit icon to record ID references or notes.

Country, State/Province, County, Locality: Use these fields to record locality data (moving from larger areas to more specific regional data; use “USA” for the United States; check “Locality Security” to prevent public access to the locality data – *Note: localities of rare, endangered, or highly sought after edible species are generally blocked from public view using the rare species administration tool*).

Latitude, Longitude, Datum: Use these fields to georeference the locality using decimal degree format (e.g., 41.7667, -111.6833. See the document on georeferencing for tips on how to georeference specimens and document those georeferences.

Elevation in Meters and Verbatim Elevation: use the former field to record an altitude range in meters (*Note: record only the lower range when a single elevation value is cited*). Use the latter field when recording verbatim values given for the elevation (e.g., “circa 1000 m”). Click on the “ft.” button to convert from feet to meters. Click on the +edit icon to record notes or verbatim data associated with the locality.

Habitat, Substrate, Associated Taxa, Description, Notes: Use these fields for recording ecological and/or morphological data or any other pertinent information not covered in the data input above. Click on the +edit icon to annotate “Dynamic Properties” associated with the specimen (e.g., “weightInGrams=120” see <http://rs.tdwg.org/dwc/terms/#dynamicProperties>).

Type Status: use this field to record type information (e.g., “holotype”, “isotype”, etc.).

Disposition: use this field to indicate particulars of specimen status (e.g., “missing”, “duplicate sent to NY”, etc.).

Reproductive Condition, Establishment Means: these fields are more suited to data related to vascular plants.

Owner Code: Typically noted only in special cases where the “owner” institution is not to the same as the institution inputting the data (e.g., specimens “owned” by a National Park but housed at the institution inputting the data).

When data entry is complete, save the record using the “Add Record” function. You can select whether or not to save the record and be presented with a new blank data entry form (“Go To New Record”), to carry over the locality portion of the record when entering multiple records from the same locality, or to save the current record but leave the record open on the screen. Use this last option when manually entering images associated with an occurrence record, select “Remain on editing page” to keep from advance to a new record, and then select the “Images” tab to upload the image by clicking on the green+ icon to enter image data and upload the jpeg file.

Select the “Admin” tab to evaluate a record for deletion (see comments below).

No duplicate or near duplicate record is found. If there is no record with the current number cited in the window, there is no duplicate, and it is appropriate to click on the "Add Record" button at the bottom of the form once all the skeletal data has been entered.

Save the Record: Select “Add Record” button with “Go to New Record and Carryover Locality Information” selected. If your next record has the same taxon name, copy it (CTRL+C) before saving the previous record and paste (CTRL+V) the value into the Scientific Name field. If you are entering many collections with the same collector, use the "Go To New Record and carry forward locality information" button at the bottom of the form.

Edit a Single Occurrence Record

Log into mycoportal.org as an institutional user (editing credentials for the collection are required). Search for an existing record either using the basic or advanced search interface (see above for details). **Note:** *this option is used primarily for institution using the “live” data management – see Data Management on the Portal*

If using the basic search interface, click on the pencil icon next to the found record to open the occurrence record editor and proceed with editing.

If using the advanced search interface, click on “Edit an Existing Occurrence Record” and search for the record of interest using the desired field/s (e.g., “Catalog Number”). Results (single or multiple records) can be displayed in a table format (select the “Display Table” button, then click on the link under “Symbiota ID” for the desired record to open in the occurrence editor), or directly in the Occurrence Record Editor (select the “Display Editor” button) as a single record or a sequence of records. Make edits in the occurrence editor window, and then be sure to click on “Save Edits” button in order to make those edits permanent within the portal database.

Make edits and click on “Save Edits” button. Close tab.

Edit a Range of Records

If multiple records are recovered via the advanced search interface, then they can be accessed sequentially in the occurrence editor by using the toggle options at the upper right-hand side of the editor: “|<” or “>|” to access the first or last record in the range, “<<” or “>>” to move up and down through the sequence of records, or “>*” to open a new occurrence record.

After logging in with the proper credentials as above, navigate to the Data Management Control Panel (see above) and click on “Edit an Existing Occurrence Record.”

Multiple records in sequential order (e.g., a series of collection numbers) can be searched by entering the collector name (again using the “wildcard” search may be desired, e.g., %Smith), and then in the “Number” field type the collection number range separated by *space+hyphen+space* (e.g., 2269 – 2284). Next, click on the “Display Editor” or “Display Table” button to see the search results.

Delete a Record

From the occurrence editor, occurrence records can be deleted by anyone with editing credentials for a given collection associated with the particular record. This is done by first selecting the “Admin” tab, and then the “Evaluate record for deletion” button. At this point, the record is evaluated and “Warning” flags will appear if the record is linked to images, or if it serves as a voucher for a checklist or survey. If warnings do appear, then conflicts should be resolved prior to deleting the record. If no warnings appear, then the record can be safely deleted (*caution should obviously be exercised before deleting any record from the portal database*).

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