

## **Established Mycological Herbaria in the U.S.**

### **What is an herbarium?**

An herbarium is a permanent depository for dried specimens of plants and fungi that supports scientific research. There are about 600 herbaria in the U.S. (about 3000 worldwide). Most are associated with universities, but other are associated with free-standing natural history museums, botanical gardens, and government agencies. *Index Herbariorum* (<http://sweetgum.nybg.org/ih/>) is searchable database for all the world's public herbaria, meaning that the herbaria included all will allow access to their collections by users that they deem appropriate. There are also many private herbaria, but these generally are not included in the index.

### **Interacting with an Established Herbarium**

In principle most herbaria are interested in acquiring additional scientifically valuable voucher specimens, and are welcoming to those who wish to consult their collections for scientifically valid purposes. Many, if not most herbaria in the U.S. are under-resourced, and the services they are willing to make available to users are often constrained more by budget than interest.

*Contacting an herbarium for permission to study collections.*

Most herbaria encourage visits from users with valid scientific purposes. Identification of unknown specimens, or compiling a list of species from a given area, or in-depth study of a particular group of organisms are examples of scientifically valid purposes. However, looking for localities for choice edible species is not considered valid use! Policies on visitation vary among herbaria, so it is vital to contact the herbarium before your visit.

Write an email to the Correspondent at an herbarium at least one week before you wish to visit. Explain your reason for visiting, and exactly what you would like to do (e.g., examine specimens with a microscope, enter data from the collection into your personal database, etc.). Ask if there are any restrictions on which specimens you can view. Try to be flexible about when to visit – a curator who is also a professor may only be able to accept visitors when they are not teaching a class or otherwise engaged in their paid duties. If you wish to bring in your own specimens to compare with those stored in the herbarium, notify the Correspondent and ask about their policies – for pest management purposes, most will require that specimens you bring in be

frozen for at least 24 hours and perhaps longer before they will be allowed into the collection. At the end of this document is a list of the major U.S. herbaria and the correspondent for each.

Herbarium Use Etiquette. When you arrive for an herbarium visit, ask about policies such as those listed below, which may differ, which differ among herbaria:

1. Annotation – most herbaria encourage visitors to update the names on specimens in the herbarium, or to correct misidentifications. Herbaria also appreciate an annotation affirming a determination. However, herbaria differ on the protocol for doing this- some may provide their own annotation slips for your to use, and some may have explicit instructions about how to attach these to the specimens.
2. Destructive sampling: If you plan to examine material with a microscope, you are effectively destroying part of the specimen, even though the amount is small and may not significantly diminish the scientific value of the specimen. Most herbaria understand that small amounts of destructive sampling are necessary, and therefore have policies on how the use should be documented, what should be done with the material after examination, etc.
3. Re-filing: Ask whether you should re-file specimens you have examined, or leave them out for herbaria staff to put away.

Leaving the Herbarium Better Than You Found it. While perusing the herbarium you may find many problems that need attention – specimens with outdated names, specimen packets or boxes that have been damaged, misfiled specimens, evidence of bug damage, etc. Call these problems to the attention of the herbarium staff immediately, and ask them what you should do when you encounter such issues. Most herbaria have more problems of this nature than they have staff to fix them, so the curator may just add the problems you encounter to a long list of curatorial tasks to be accomplished.

If the herbarium is near where you live, consider becoming a volunteer curator there so that you can help solve these problems! Most herbaria will be delighted to have your help. Benefits for volunteers differ from herbarium to herbarium, but may include access to library materials and microscopes, attending seminars, or free membership, for herbaria associated with museums or botanical gardens.

### *Depositing Specimens in an Established Herbarium*

Depositing an entire herbarium. If you don't want to maintain a private herbarium, or when you no longer want to maintain one, it is likely that an established herbarium (probably one of those listed below) will be interested in incorporating it. Whether or not an herbarium is interested in taking your herbarium will depend on a number of factors, so when approaching the herbarium, be prepared to provide information about:

1. The size, taxonomic and geographical emphasis of your herbarium.
2. State of curation of your herbarium – do specimens have labels? Are most identified to at least genus? Will you also be depositing copies of notes and images? Are the contents of your herbarium recorded in a database or written catalog
3. Does the herbarium contain vouchers for newly described species (types) or other studies you or your collaborators have published?
4. Do you want to deposit the herbarium all at once, or over a period of time?
5. Were all of your specimens collected with appropriate permits, where required, and do you have copies of these permits?
6. Do you plan to put any particular conditions on your specimens, e.g., do they have to be kept together, are there any restrictions on the use of these specimens? [Most herbaria will be reluctant to take herbaria with a lot of conditions, because over time these often prove to be onerous or impossible to comply with].

If you intend to continue to consult your specimens after you deposit them, be sure to mention this, in order to be sure you will be able to access the collections when you wish.

Depositing occasional specimens in an established herbarium. Good scientific practice dictates that specimens, or portions of you collect that are the basis of your publications, especially type specimens for new species, be deposited in an established public herbarium, such as those listed below.

### **Herbaria Participating in the MaCC Project**

This list includes almost all the herbaria in the U.S. that have significant collections of macrofungi. Although there may well be other herbaria that would be interested in receiving specimens for deposit, this list includes those herbaria that are most likely to be interested. Inclusion on this list

should not be taken as an affirmation that the herbarium is indeed able to accept collections at this time – please contact the Correspondent to discuss their policies on accepting specimens for deposit, and about access to those collections once deposited.

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