Mushroom Documentation 2: Collecting and Describing

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Collection and description forms and other handouts available online: http://www.mycoguide.com/guide/methods
See also the guides to studying mushrooms by Kuo: http://www.mushroomexpert.com (lower left on page)

Field methods of mycology: collecting, photography, writing descriptions, and recording collection data.

- Mushrooms are carefully collected to minimize damage and loss of their various features.
- Notes are taken for habitat, trees, substrate. Can use field label. GPS readings and location data.
- Spore prints can be made to reveal the spore color.
- Photographs of fresh specimens can be worth a thousand words.
- Notes and descriptions record characters of the fresh mushrooms. When writing a description you examine the mushroom's features and size. This information is important for later identification.
- Collections are dried to preserve them. Thoroughly dried specimens can be stored in re-sealable bags (Ziploc).
- A notebook, spreadsheet, or database can be used to manage collection data for location, date, collector, specimen numbers and other information.

Collecting equipment

- Paper bags (various sizes small to large), wax paper bags or roll (Waxtex), basket or large bag with handle.
- Tackle boxes (Plano), egg cartons (good with kids), other containers or vials as you wish.
- Knife, note paper, pens or pencils, hand lens, whistle, compass, map, GPS unit or smart phone app.
- Dress for the weather, sturdy shoes, hat, bandana, bug repellent (if bugs severe use head netting and gloves).
- Water, beverage, snacks, lunch. First aid kit and other personal items.
- Camera and related equipment (charge your batteries, bring spares).
- Remote hiking: tell someone where you are going. Can bring flashlight, flagging, emergency supplies.
- Research or collection permit or permission of site owner.

Photographs can be done in field and at home. Photos are required for the Mycoflora Project – upload them with data to iNaturalist or Mushroom Observer. A home studio has background, tripod, natural light source (Ott Lite).

When back at home take notes on the location, weather, who was with you, etc. Keep a notebook (like a journal) or files on your computer. Make a list of species seen at each location. Process collections with collection numbers, photos, descriptions. Later enter collection data in a spreadsheet or database if desired.

Descriptions. Use a form or write it out on blank paper. Collector and collection number, collection date, location. Start with cap or top of mushroom and describe all the features: color, texture, surface characters, etc. Then describe the gills or pores or underside. Then the stem or base and partial or universal veils. Make note of the color and amount of "tomentum" or mycelium at base of stem. Slice a mushroom in half to note the characters inside. Record odor, staining, chemical reactions. For taste just take a small piece of the cap and mash it with the end of your tongue. Some hot tastes may be slow to develop. Taste is important for boletes, *Russula*, *Lactarius*, and various others. No need to taste dangerous mushrooms such as *Amanita*, *Lepiota*, and little brown mushrooms. But odor is important.

Spore Prints. See http://www.mushroomexpert.com/spore_print.html Use white paper and cover for several hours.

Collection numbers

Use a system that is simple to maintain and understandable to others.
I recommend starting at 1 and simply using sequential numbers. For this you will need to keep a log book.
If you are unable to keep track of your numbers from year to year, you can start over: 2015-001 … 2015-134.
If you are unable to do this then use the collection date but use hyphens, year first: 2015-08-09-05 (5th collection).

Dates

15 Aug 2014 is better than 8/15/2014. Do NOT do this: 8/15/14. Note European format 9 April 2012 = 9/4/12.