Mushroom Collector's Journal

Fungi are some of the least understood but potentially most fascinating organisms on the planet. Only about 1 of every 10 fungi has even been named!

Without fungi, we would soon be over-run by decaying plant debris. Fungi help to recycle dead stuff. Some fungi partner with algae to make lichens, and some partner with trees (as mycorrhizae) to support forests. Some are used to produce medicines like penicillin. Yeasts make bread rise and beer fizz. In addition, some mushrooms may be a tasty treat—BUT you need to know which ones to EAT!

Through this project we hope you will learn some of the skills that a real mycologist uses when collecting and identifying mushrooms. Where the project leads you from here, is up to YOU!

Instructions

Please note: Although you are not required to submit your fungal specimens in a neat display case, you are encouraged to dry and preserve your specimens, and present them for examination alongside of your journal.

1. A minimum of 6 specimens should be collected for this project. For each specimen, a minimum of 3 photos of each fungus should be submitted. Include a view of the fungus from the top, bottom and side.
2. Print out and fill in forms 1-4 for each specimen.
3. Fill in all fields for each specimen as best as you can.
4. Take a minimum of three color photos of each specimen from different viewpoints, i.e. the top of the pileus (cap) or upper surface of a conk, a side view showing the stem or area that is attached to a tree, and a view from the bottom clearly showing pores, gills, teeth, etc. Photos can be printed on photo paper or good quality paper.
5. Make a spore print to include in the journal (see page 2), and note its color.
6. Identify the fungus to the genus level using at least three references. List references used for each specimen. Internet references are acceptable, but at least one book reference is required for each specimen. Proper identification to the species level may earn extra points.
7. Sign and date your journal entries.
8. Don't forget to put all of your pages together in a binder, and neatness counts (1)!

How to make a spore print.

1. A spore print can be made from a fresh, mature specimen of a fleshy fungus with gills or pores.
2. Take a piece of black paper and a piece of white paper and overlap them.
3. Carefully remove stem and lay the cap gill or pore side down on the paper so that half is on the white paper and half on the black paper. Cover the cap with a bowl or other container and leave for 24 hours. Then remove the cover and carefully lift off the cap. If a spore print is visible on one or both sheets, note the color of the print(s). To save your print, cover it with clear packaging tape, and add it to your notebook.

As an alternative: take a digital color photo of your spore print to add to your notebook.

Some **suggested** reference books for fungi collected in New York State or the Northeastern U.S.

Macrofungi Associated With Oaks of Eastern North America. D. E. Binion, H.H. Burdsall, Jr., S. L. Stephenson, O. K Miller, Jr., W. C. Roody, and L. N. Vasilyeva.

Mushrooms of Northeast North America; Midwest to New England. George Barron. Lone Pine Publishing.

Mushrooms of Northeastern North America. Alan E. Bessette, Arleen R. Bessette, and David W. Fischer, Syracuse University Press.

National Audubon Society Field Guide to North American Mushrooms. Gary H. Lincoff, (visual key by Carol Nehring). Alfred A. Knopf.

North American Mushrooms: A Field guide to Edible and Inedible Fungi Orson K. Miller, Jr., Hope H. Miller - Globe Pequot Press.

Peterson Field Guides: Mushrooms. Kent H. McKnight and Vera B. McKnight. Houghton Mifflin.

Simon & Schuster's Guide to Mushrooms. Giovanni Pacioni. (U.S. editor Gary Lincoff). Fireside.

You may find many useful web sites, but one we highly recommend is:

Mushroomexpert.com by Michael Kuo. See: http://www.mushroomexpert.com/.

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Specimen information (5)

Date of Collection and Location:

Location Found (forest, meadow, tree stump, etc.):

Condition of Specimen (immature, fresh, dried out, etc.):

Cap/Pileus Characteristics (dry, sticky, smooth, rounded, flat, sunken in center, rough textured, speckled, etc.):

Stem/Stipe Characteristics (thin, straight, tapered, smooth, rough, striated, veil or partial veil present, bulbous base, etc.):

Measurements (2)

Size of Cap or Basidiocarp (Diameter & height if round, or length, width & height if not round):

Length & diameter of stipe (stem) if present:

Spore Print (1 bonus point* possible):

Color of Spores:

Attach spore print here and cover with clear tape, or attach on separate sheet If larger area needed.

Note: Mushrooms should be gently dug from the soil, not pulled or broken away. One important feature used in identification of some genera is the presence or absence of a bulbous base. If the mushroom is broken off or pulled from the ground, this feature may be lost.

Your Notes (1)

Describe additional features that you noted for this specimen such as color or texture of various parts. Was the specimen growing by itself or in a cluster, were clusters attached or separate at the base, etc.?

References Used (1)

List all references used in identification of this specimen. Include the URL for web sites.

Attachments (3)

Attach **photos** and **large spore print(s)** here. Include additional sheets if needed, and label each photo (top, side, underside, etc.).

Conclusions (2)

Based on all of the information you have collected, what fungus do you think this specimen is, and why?

Genus: _____

Species (1 bonus point* possible): _____

Common name(s) (if available): _____

_____

_____

List some key features that you used to identify this fungus.

_____

_____

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What have you learned from this process?

_____

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_____

Sign & date this journal entry!

Name: _____

Date this page was completed: _____

* Numbers in parentheses () indicate the value of each section for each sample submitted. For the entire journal (6 entries), there are 112 possible points if each bonus section is completed correctly.