

Macroscopic Identification of Mushrooms

- Note the date and recent weather conditions when the mushrooms were collected
- Note the geographic location where it was collected
- Note the immediate habitat– what kinds of trees and other plants were in the immediate vicinity, including what kinds of trees was overhead and what the mushrooms were growing on or in (e.g., dirt, wood, grass, etc.)
- Photograph the mushrooms in a number of different stages of development (button, cap fully expanded, cap partially expanded) and from several different points of view (from above at a 45° angle, from the side, from above with some of the mushrooms turned upside down), trying to fill the picture frame in a close-up but also including a shot showing the entire patch
- Carefully uproot several entire specimens by digging them up from beneath so that the very bottom of the stem can be inspected for features such as the presence of an enlargement, ornamentation, or other attached material
- Note the nature of the underside of the cap or fruiting body (gills, teeth, or pores)
- Take a spore print on clear plastic or black and white paper; preserve it by wrapping it in plastic
- Note the attachment of any gills to the stem (decurrent, adnate, adnexed, or free), edges (even or uneven), spacing (crowded, widely spaced, split), and presence of partial gills or cross-veins
- If pores or spines are present, note their attachment, size, shape, and arrangement
- See if the cap cuticle has a distinctive appearance or texture such as smooth, velvety or hairy, slimy when wet, scales, attached bits of membrane, raised bump in the middle, irregularities, etc.; if there are striations around the cap margin; and whether the margin is even or uneven
- Check for the presence or absence of an annulus (ring), even just remnants, on the stalk or around the margin of the cap, and note whether it is a membrane or fibrous
- Note the shape of the mushrooms (cap and stem or other shapes); measure the dimensions (length and width) of the various parts, and note the aspect ratio (height vs. width)
- Note the color of all parts of the mushrooms in various stages of development
- See if the stalk is attached centrally to the cap, off to one side, or altogether lacking; is fibrous or hollow; has any kind of surface ornamentation such as fibrils, dots, or irregularities; is uniform in diameter or is wider at the top or bottom; and is firmly attached or easily separates from the cap
- Scratch and break all parts to see if there is or has been any staining reaction (change of color) in response to bruising or aging; and if a latex is released, its color and clarity
- Sniff the gills or pores to see if there's any odor
- Taste a very small bit– about 1/32 of a teaspoon will do– of the mushroom (or its latex if there is any) to see if it is acrid or bitter, but keep it between teeth and lips, and spit it out when done
- Preserve several specimens by wrapping them in waxed paper and keeping them refrigerated