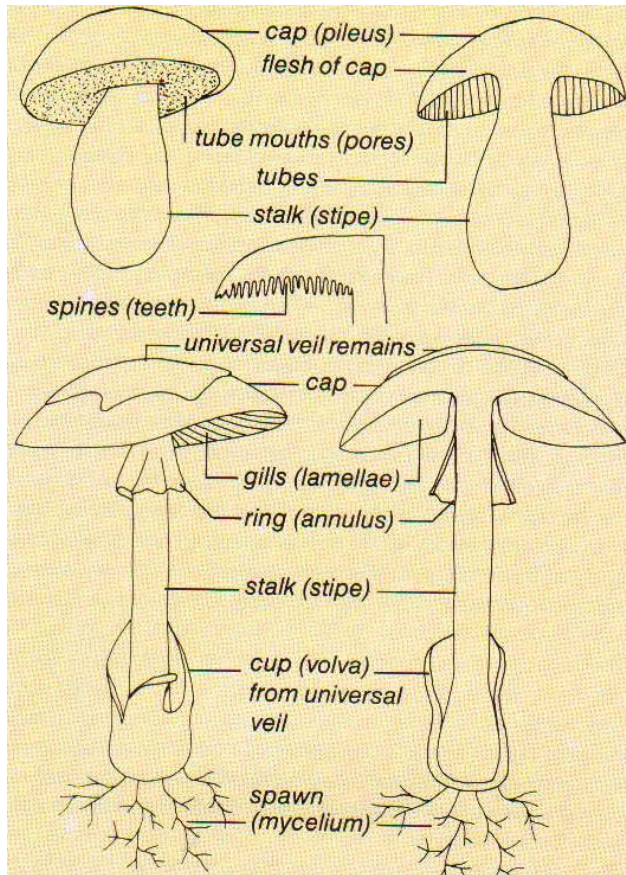


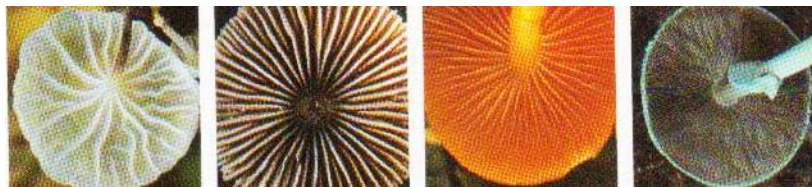
The Mushroom Fruiting Body

A Brief Introduction.



The greatest challenge to the amateur (and professional) mycologist is trying to identify your latest “find”. The first step is to decide which group the mushroom belongs to. The groups are Sac fungi, Puffballs, Jelly fungi, Coral fungi, Tooth fungi, Polypores, Boletes and finally the biggest group of all, Gill fungi. The next step is to become intimately acquainted with a mushroom's various parts so that you may accurately describe it. The diagram (at left) shows the various parts of a mushroom that are analogous to the different groups. I always start with the cap (pileus), since that is usually the first thing that you see. The size, shape and colour are all important indicators. Too much stock must not be put in the colour since many mushrooms are affected by weather conditions. The underside of the cap is also an important identifying characteristic. Does it have gills (lamellae),

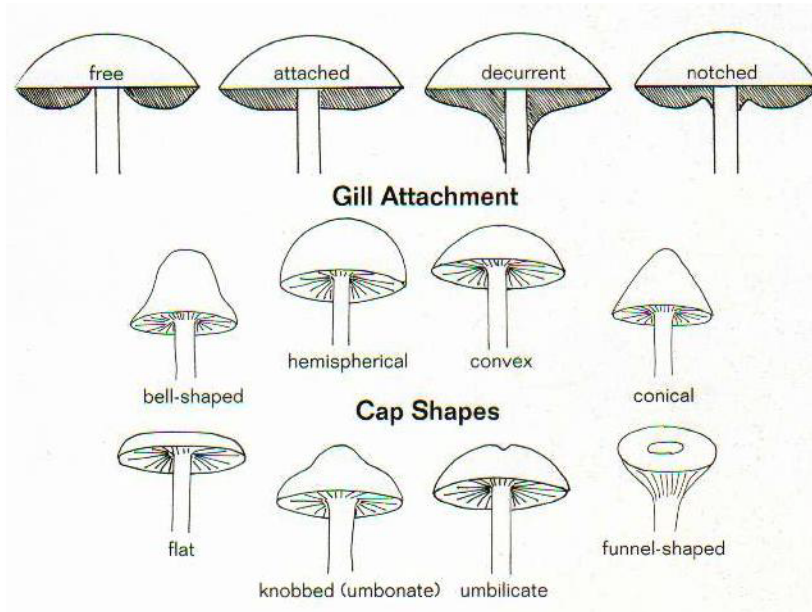
pores or teeth? What colour are they? Are they the same colour as the cap or coloured differently? If the mushroom is gilled what are the spacing of the gills? (See photograph below).



On the far right the gills are tightly packed together. In the photograph second from the right the gills are close, but not crowded. At second from left the gills are well spaced whereas the one on the far left shows gills that are far apart (distant). The gills perform an important part in reproduction since this is where the spores are borne. Tighter spacing of the gills will increase the surface area of the spore bearing surface and so increase the number of spores. The depth of the respective gills is also important for the same reasons.

That brings us to the stalk. Things to look for here are the height and diameter of the stalk (**stipe**) and whether it has a veil (**annulus**). Is the stalk hollow, fibrous or stuffed (pithy) Also does it have a cup (**volva**) below ground level?

The attachment of the gills and the shape of the cap are also very important when describing a specimen. The various shaped caps and attachments are indicated in the sketch below.



Finally, that brings us to the spore print. As mentioned above, gilled mushrooms reproduce by dispersal of their spores. The **colour of the spore deposit** is an important tool in establishing which **genus** the mushroom belongs to. This is done by detaching the stalk from the cap and laying the mushroom gill side down on a piece of white paper. Depending on the age and freshness of the mushroom a spore deposit will be deposited shortly after. If you are “in the field” this can be done by segregating your specimens in to paper bags with a piece of white paper inside the bag that will collect the spores. Unfortunately not all mushrooms will cooperate in this method. Sometimes the spores can take several hours to “drop” and even over night in some cases.



The mushroom above is *Psathyrella condolleana*. Listed below are the characteristics that I used to identify it.

1. The 4" convex honey coloured cap with a raised umba (**umbonate**) is significant. The cap is also **hygrophanous** i.e. the ability of the mushroom cap to lose or absorb water and the change in colour that takes place during this process.
2. The gills are **close** and are broadly attached to the stalk.
3. The stalk is about 4" long and approximately 3/8th of an inch diameter, hollow and fragile.
4. Not easily seen in the photographs that I have taken but there are remains of a partial veil on the **margin** (periphery) of the mushroom, but no remnants on the stalk itself, which is typical for this species.
5. The spore print is dark brown.

There are approximately 400 species of **Psathyrella** in North America, with many of them not yet described. There are many genera of mushrooms, with many of them having hundreds of species. For example, the genus **Cortinarius** has approximately 1,000 species with about 300 making their home in Nova Scotia. You can readily appreciate that identifying every single mushroom you find to species is an impossible task. If you can isolate your "find" to a particular genus it is an acceptable accomplishment.

I hope the foregoing is useful and will add interest to your field trip. The information, by necessity, is brief and is not exhaustive.

Welcome to the wonderful world of mushrooms!