

Easy Approach to Mushrooming

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When I first started hunting mushrooms, about forty years ago, mushroom literature was really wanting. I tried my damndest to find something I could read, that is, something I could understand. Everything looked like the agenda for a day at the Roman forum. I thought I would try something different in this booklet, just to see if it was possible. The goal: absolutely no Latin!

A little basic mushroom lesson is probably the first order of the day, so we'll start along those lines.

Probably the first thing one needs to know about mushrooms is that some have gills, some have pores, some have teeth, and some are just rather oddly shaped. We also need to know where these parts exist on the mushroom so that we may investigate them and draw conclusions on just what we have in hand.

The typical mushroom has a cap, or head, that sits on top of a stem. This appears much like an umbrella atop the handle. On the underside of this cap one finds a series of radial plates that resemble a folded accordion; these plates reach from the stem to the edge of the cap. The plates are called "gills".

By the same token, a structure mimicking the one mentioned above, but presenting a layer of small round holes, rather than gills, may be encountered. At times these holes are quite discernible, but in some instances they are so small they can only be determined by using a hand lens. This layer is known as "pores".

Infrequently one may find this same structural stature with the gill or pore layer replaced by small, protruding, icicle-like teeth. This type of layer is simply called "teeth".

Mushrooms of different stature, mainly those fastened to their host by the edge of the cap, or with short stems fastened in an asymmetrical fashion (off to one side of the cap) typically still present the pore, gill or tooth layer, on the underside of the cap. The cap, in some of these instances, takes on various shapes and is not always circular.

On some species of mushrooms one will observe a structure that covers this surface beneath the cap. The presence of this membrane serves to help identify these particular groups since this phenomenon is not present in all species. This veil, as we shall call it, keeps the gills or pores (it is seldom found on tooth fungi) covered until it is time for the mushroom to drop spores.

Spores may be likened to the seeds of plants and are born on, or in, the layers found under the cap.

The membranous veil covering the layer tears away from the outer edge of the cap when the cap opens out, as one would open the umbrella. When it tears away from the edge of the cap, but is still fastened to the stem, it drops onto the stem where it forms some sort of a ring, either tire-like, or skirt-like. Sometimes it is so vague by nature that it takes no particular form and may be only a ruffed place on the stem. Whatever the form, it should be considered a veil, and used as such as a determining clue regarding identification as to genus. This type of veil is called a partial veil and is one of only two veils of interest to the amateur.

The other veil or membrane completely covers the mushroom in its very early stage of growth; because of this complete coverage it is called the "universal veil".

As the mushroom grows and extends itself to near full height, this veil tears away. The result is that part of the membrane stays with the cap, while the lower part remains intact at the base of the stem. The part that goes aloft on the cap shrivels into small particles that become known as "scales". That part remaining at the base of the stem is known as a cup or sack. These cups may be open at the top (not touching the stem) or they may cling to the stem in various ways. At times they may cling to the stem so tightly that they are hardly discernible as a separate entity from the stem itself. Typically however, if there are scales on the cap that are removable by brushing or picking them away, one

may conclude that the fruiting had a universal veil early on.

The last veil to be discussed is not a membranous one. It takes the form of a cobwebby structure and is hardly noticeable unless one suspects the genus (it is only detected easily in one genus). Even then, one needs the help of a hand lens on most occasions.

Other clues in identifying mushrooms should be applied by observing closely the separate parts of the mushroom.

Starting at the top of the mushroom (the cap), one needs to look for scales, lines at the edge of the cap, wrinkles on the surface, fuzziness, a gritty or mealy condition or whether the cap has none of these but is bald or smooth by nature. Also, whether it is slimy, sticky, or dry to the touch.

So far as shape is concerned, one needs to recognize a convex shape, a plane shape, or a concave shape. All of these are self-explanatory if you paid attention in science class at school. The extreme of concave becomes funnel shape where the mushroom takes on the appearance of a household funnel with the gills openly exposed around the outside of the funnel.

Some genera have mushrooms that exhibit a "half egg" shape, some bell shaped, and some, conic by nature. The first two here mentioned are as depicted; the last one has the mushrooms coming to a point; similar to a dunce hat.

Although shapes change during growth longevity in many instances; still some shapes give instant clues to beginning identification and are a place for the amateur to begin detective work on the genus in hand. If a mushroom has a nipple in the center of the cap it is labeled either "nippled" or "tit-shaped".

Next in sequence, as we advance downward on the mushroom, would be the underside of the cap. Even though we have already discussed the gills, teeth and pores, the manner in which these present themselves has bearing on the identification of the mushroom, typically as to genus.

The manner in which the gills associate themselves to the stem is probably the most important lesson to be learned here. Whether the posterior (inner) end of the gill touches the stem or does not touch the stem is the first consideration. If it doesn't touch the stem it is considered to be "free" from the stem. Barely fastened (as it curves upwards at the inner extremity) could be considered "next to" the stem. If it is fastened very broadly to the stem it must be considered as "broadly attached" to the stem. If the cap becomes funnel shaped, the gills typically appear as "arching down" the stem. In a couple of genera the gill takes on a peculiar form at the inner end and swings into a notch just before it fastens itself to the stem. This is simply termed "notched". If the connection appears that the gills were originally fastened to the stem but through stress became torn away, it is termed "separated". This may be evidenced by lines, or bits of remaining gill adhering to the stem where the original connection was made. This is only prevalent in a couple of genera, although may happen occasionally in others.

Pores react much the same way but may be more difficult to discern. They may not advance themselves completely to the stem and instead conclude in a bare spot ("race") between the pore surface and the stem attachment. It is then to be considered "free". If the pores touch the stem they are considered "attached". "Next to" is generally waived in the pore bearing mushrooms. If they move to the stem, and run down the stem for a ways, even though briefly, they would need to be considered as "running down" the stem.

The tooth fungi are not typically considered in this connective sense.

Next is the stature of the stem. It is most commonly seen as "even". This means that it is equal in parallel length from top to bottom, or at least nearly so.

If the stem gets narrower as it goes upwards, or as it goes downward, the term is "attenuated". Thus it may be attenuated upwards or attenuated downwards, as the case may be.

If the stem is wider in the middle than on either end it is considered as "spindle shaped". If it is swollen into a ball at the base, it is called "bulbous". If it is shaped as a teardrop or ball bat it becomes "club

shaped".

The textures of the stem are not different from those discussed regarding cap observations. If the stem is smooth and without coverings or blemishes it is termed either "smooth" or "bald". If it has a fuzzy feel, it will be called "velvety", or "fuzzy"; a grainy feel is "gritty"; if there are vertical lines present that are abnormally noticeable they are considered as "lined". If the fuzz is broken into patches or perhaps v-shaped in alignment, "patches" is the logically accepted term. If it has a cup at the base, it is simply so described, i.e. with "cup", or with a "sack". If the partial veil, discussed above under cap features, adheres to the stem it is said that the stem has a "ring" or that the stem has a "veil".

There are many more fine points to further describe these features, but for the most part they are totally irrelevant and mostly lend themselves to confusion rather than learning. It can be like describing a loaf of bread right down to the possible shape of the crumbs and the ingredients used in the baking process. From an amateur viewpoint if it is shaped like a loaf, has a brown crust, and is white within (or brown, as the case may be) it doesn't take a rocket scientist to consider it a loaf of bread.

One may consider mushrooms as "wood growing" (those that grow on wood) or "ground growing" (those that grow on the ground). Further decisions as to habitat are simply a matter of common sense. If the mushroom grows on a cow pie it is "manure growing".

Although it would be considered "wood growing" were it to be found on wood chips, such a selective habitat would need to be considered, and probably termed as "growing on wood chips." One need only to look at where the mushroom is growing and label it as such.

Thus habitat becomes one of the most important features to consider when trying to identify a mushroom, and is not to be taken lightly.

One needs to be able to identify some of the more common trees because mushrooms form a root growing association with certain trees in some instances. Generally speaking, however, if one knows the difference between a hardwood tree (one that drops its leaves in the wintertime and has broad leaves) and a conifer tree (one with typically needle like leaves that stay on the tree winter and summer alike), the problem is probably at least half way conquered. More discussion regarding trees and mushroom association will appear later in this book.

Beyond where they grow and using "ground growing" and "wood growing" as a base point, the selective habitat of mushrooms is the clue to having success as a hunter. Different genera, and species of those genera, may be located as one would seek species of mammals, fish, fowl, or anything else in nature. Anyone specializing in a given subject learns where to pursue his or her quest. Even a drunk knows to seek a bar to get a drink.

The final important feature to remember in this beginning mushroom booklet is that mushrooms are very seasonal. Each successive mushroom discussed herein will have with it the best time to look for it. Take heed and always consider when you should seek your mushroom from a seasonal standpoint.

I think, after the first 2-1/2 pages I've written thus far, that you will discover there are no Latin terms used. That is my goal in this booklet.

I would challenge you to pick up any field guide on the subject of mushrooms, and find even one not fraught with Latin terminology. Most of the descriptions regarding cap characters, stem characters, and even habitat, are described in Latin terms. In my opinion this simply forces the interested reader into confusion, frustration, and a final decision to simply forget the study of mushrooms, and move on to something they can more easily understand.

The study of mushrooms is one of the most challenging of the natural sciences. It is a pity that such an interesting subject should be so packed with Latin to turn otherwise would-be mushroomers away.

There haven't been, until recently, common names for mushrooms. The common names that have finally infiltrated the study were most recently brought about in *The Audubon Society Field Guide to North American Mushrooms*, by Gary Lincoff. This manual was published in 1981, and since then

some authors, realizing the need for common names, have supported Lincoff's guide by using some of the names suggested therein. Many authors, though, being professional mycologists, do not subscribe to the use of common terminology regarding it as unscientific and undesirable, even for amateur use. This is nothing short of ludicrous; it has always been my theory that if one writes for the amateur ranks one should use language they understand. In writing or speaking, there is nothing that turns an audience off as much as speaking over their heads! I hope this booklet surmounts that problem.

The approach to mushrooming may be twofold. One either hunts to collect, or hunts to eat. Most guides take the collecting approach even though edibility is typically mentioned with each species listed.

Most of these books list hundreds of mushrooms with scientific data on each one. I personally am a collector of mushrooms and have spent the last forty years pursuing the hobby for the pure love of collecting.

I have seen so many enthusiastic beginners fade away within a year simply because of the Latin involved and the overly scientific orientation forced upon them.

After meeting many, many enthusiasts, I could coin one single phrase that typifies a beginning amateur's interest: "Can I eat it?" This question is invariably asked when one takes a group into the field for the first time. Probably less than 30 percent of those who begin to hunt mushrooms are interested in anything but the culinary value of mushrooms.

In addition to an abundance of Latin, and an abundance of technical data, many manuals contain far too many species of fungi to be of any interest for beginners—assuming, of course, that they are among the 70 percent who want to eat them.

It would be as having ten bushels of mixed varieties of apples and sorting through them all to find the few designated good eating. Even though these manuals impart a lot of very valuable knowledge, unless you are a collector of mushrooms, they are virtually useless because you would have to stumble through all of the Latin and technical data to try and figure out what to eat!

The following pages will include some of the edible mushrooms that over the past four decades I have decided are the best for the skillet. One must understand that taste is a very delicate human sense, and that it varies considerably. What I may consider good, you may indeed wonder, "Why?" The decision works in reverse as well.

I would be the first to admit that I am a disorganized person. Non the less I will make an honest attempt to make the format of this book a sequential march of organized information that would give you, the reader, a systematic method for identifying wild mushrooms.

The description will read:

Common Name	
Cap	Size, Color, Texture, Stature
Gills	Color, Color change, Connection.
Stem	Length in comparison with the cap width, Color, Texture.
Spores	Color only
Season and Habitat	Described together

There will be an attempt made to compare twin-like species to lessen the chance of mistaken identity. This effort will be focus chiefly on evil twins, i.e. look-alikes where one species is prime edible, and the other is poisonous. On occasion other species may be compared also.

It is important that I include a disclaimer in this book. I cannot be held responsible for problems that arise from a misunderstanding regarding interpretation of this text. This author cannot be responsible for accidents derived from eating mushrooms. The eating of wild mushrooms can be hazardous: edibility is impacted by several unpredictable factors such as personal allergies, interactions of food, and the accidental misidentification of mushrooms,

When I was a boy in the mid-30's my friends and I used to go to the river that ran through our area. Our visit, in this instance, was in very early spring, probably early to mid April.

We actually looked as if we were a bunch of house painters. We carried the tallest of stepladders along with a long bamboo cane pole. Fastened to this pole was a heavy piece of cotton fish line, and to the end of that line, a large treble hook adjacent to a very heavy sinker; all of this an unlikely gear for sports fishing. Back in those days one didn't need a 15,000-dollar bass boat and 200 dollars worth of fishing tackle to catch a fish.

Well anyhow, the four of us did indeed turn some heads as we marched down the road in a wide open rural area with such paraphernalia. "Goin' fishin'" seemed a remote answer to the visual riddle.

We had a special place in the river where the spring run of Red Horse suckers would congregate to do their sexual courting. Understand, our goal was not voyeurism; with fish the process is hardly exciting. Our goal was to take our ladders onto the riffle, which is a very shallow area of active water, and set them up as tall observation towers.

Immediately below these riffles, in a slightly deeper area, is calming, quiet, water where these fish come to spawn.

We would surmount our ladders, and at the greater height, we could easily see the masses of flashing white and black colors in frantic turmoil going about their propagating duties.

At that time, in our very unsportsmanlike way we would heave the treble hook and sinker into the mass of crazed reproduction, and with a solid jerk on the pole, sink the hooks home.

This concludes my tale of springtime--sucker snaggin', as we dubbed it.

So now you are asking, "What does all of this have to do with mushroom hunting?" In itself not very much, but this is one of those little tales that has a moral. This story carries with it the answer to being a successful mushroom hunter--not in text, but rather in synonymy. If you always remember this short fish tail, you can always apply its meaning to your own advantage in your quest for finding specific mushrooms.

Remember the river as the first and foremost prerequisite to hunting mushrooms: *water!*

"If the season is dry, set home and cry;" is the mushroomer's lament. H₂O is like your American express card: don't leave home without it!

Secondly: remember the riffle. This represents the correct *habitat*. No riffle, no spawning suckers. Over, and out. When you hunt mushrooms, with rare exception, you must be in the right habitat for the particular mushroom you seek. I am the first to admit there are exceptions to the rule. My neighbors' dog really poops a lot. In winter, the piles appear as molehills on a glacier. In summer, previous to mowing, she spends the better part of a day (my neighbor, not the dog) just scooping piles of repugnancy and toting it to her trash burner. When she sets the fire the smoke carries with it a rather indescribable odor. I always pray that the day she mows, the wind will be in my favor. However, she mows so frequently the odds are not good.

Anyhow, to return to the exception to the rule, occasionally the dog will cross the lot line and deposit one of his repulsive samples in my yard. So you see, there are exceptions to the general rule. Same with mushrooms: one may turn up out of sync on occasion. The dog's deposit in my yard doesn't happen enough for me to confront my neighbor with the problem. No use having neighbor friction over such a triviality. We have had words about it now and again, and it's a very touch and go situation. In compliance with the mode of the text, as well as a possibly explosive situation, I remember the words

of Harry Truman to evade such a potentially sensitive encounter: "Never kick a hot turd!"

What I am trying to say here, if I can only keep on track, is that certain species of mushrooms are found often in very selective habitats. One searches for Pink Bottoms in the open grassy areas as opposed to the woods. One seeks several edible species of Slippery Jacks nearly always under pine. Shaggy Manes are best found in hard packed ground, roadsides, forsaken construction sites, and completed construction sites where the lawn has been sown with a rather cheap mix of grasses. (Look about 2 to 3 years after completion of the project.) The *Psilocybes* and the *Panaeolus*' are most frequently dung-growing species and one should visit the bovine residential areas to find them. The intermediate sized puffballs such as Vase Puffball and Skull Puffball frequent open hillsides and lawn areas. The Wine Stropharia are typically in wood chips; Hen of the Woods is nearly always at the base of old oak trees. And the list goes on and on. Make a special effort to check habitat information in your various field guides before you seek your favorite mushroom. You will save lots of time in the field!

You recall in the fish story, I said we went on our sojourn in early spring. This relates to *season*. It is the only time these fish appear, in hordes, at the base of the river riffles. It's no use going in July, September, November, or any other month of the year.

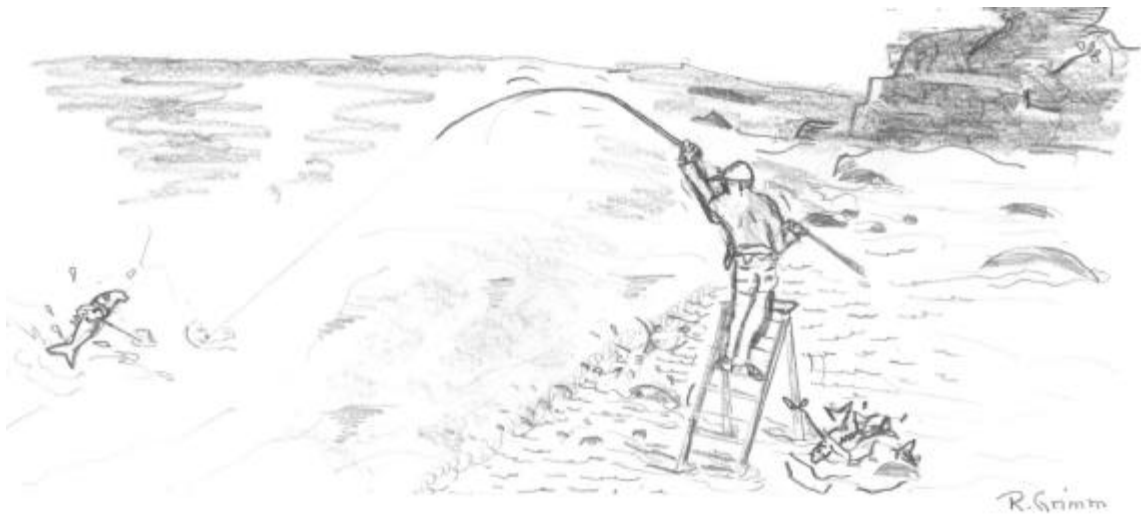
Mushrooms are like wild flowers or any perennial plant, they fruit (or bloom) at their designated blooming period. This varies slightly with weather conditions, but be persistent and you won't be disappointed. Perhaps morels are one of the more temperamental types but over the years I have learned to coincide my efforts with other blooming flora that appear, nearly without reservation, along with the Sponge. Forget the calendar; watch the perennials.

It would do you well, if you are a pot hunter, to keep a diary of blooming plants when you seek your favorite mushroom. When you see these plants blooming as you drive about, then go to your favorite haunts and fill the basket.

Perhaps an additional thought is the *equipment*. Thank God one doesn't need ladders and long clumsy poles to collect mushrooms, although I have seen *Pleurotus* high on aspen and cottonwood when I would have given a lot to have had such equipment.

Pot hunters only need a basket or a sturdy bag. I like a bag because if you have a bad day, you can keep your container folded up in your pocket rather than carry a basket around with oneself all day long. On the other hand, a paper grocery bag, often the receptacle of choice, may be a bad choice on a wet and rainy day. If you feel the bag getting lighter you have encountered Hansel and Gretel syndrome. Your morels, or whatever, may be dispersed onto the ground, intermittently in a long line of fruitings from whence you came. Better line that bag with a plastic inner liner!

Before you start on your mushrooming quest the next time, remember the little story at the beginning of this article. The secret to finding mushrooms is not left to luck if you follow the "river, riffle, spring" clues to success. Don't dwell on the dog poop, it's unimportant!



Remembering the promise to attempt organization suppose we approach the mushrooms of edible interest by first the season of growth (spring, summer, fall, and winter), and then the concept of cap, gills, stem, and spores. You see already that I have made a slight switch in the sequence, but the season, which appears at the end of the proposed list on page 4, becomes a place to start in a general sense, and will be also addressed in its proper position (first) within the discussion of each species.

Beginning, then, in the spring of the year, we choose the month of March as a possibility of something being out there to collect. I should note that I speak of growth habit in generalities geographically encompassing an area of Missouri as a western boundary, to the east coast as an eastern boundary, a southern boundary as far south as Tennessee and reaching to Virginia, and a northern boundary reaching from Minnesota east to the New England states. There are of course variables in specific times of growth with the advent of warming weather from south to north. This is typically about a week to two weeks from the more southerly reaches to the more northerly boundaries, but is not etched in stone. Since nearly all of my observations are from the state of Ohio, one might use that geographical location as a base point and take it from there. So far as I know, however, the mushrooms mentioned in this book present themselves generally in the given season but not the specific date. One must make the judgment from his or her own geographical location.

Back to March then. Some of the good edibles found in March are not limited to that month alone but may be found fruiting (growing) whenever cool, wet, weather coaxes them to fruit. The oyster mushroom would be one of these. This mushroom, also called Hickory Jack, is a wood growing species that favors poplar trees, cottonwood, and aspen being favorite habitats as well. It is not totally selective however, and does, on occasion, grow on willow, maple, and elm.

It typically invades these trees after they have been wounded--lightning strikes, wind damage, heavy pruning, or lumbering. The mushrooms then emerge from these open areas of their host. Occasionally, and mostly, in the clean sawed cut of lumbering, they may grow at the very base of the stump. In such instances the total mushroom appears as a rosette rather than a shelving growth. Oysters may be pure white, a rather grayish hue, or brownish or a slight mixing variation of these colors. Do not be concerned if one should find a slimy bright yellow covering over the gills from time to time. This in no way affects the edibility of the mushroom; simply wash it off and eat the mushroom as planned. Oysters typically grow in a shelving habit, one above the other, when they are found on the sides of trees, tall stumps, or fallen limbs. Should they grow from the very base of the host, or centrally from the top of a stump, the growth habit is rosette-like, as one would see leaf lettuce, only much thicker of course. They may show themselves by having but a few caps in the cluster, or may be in massive groups of fruitings, shelving up a tree in a lightning scar for several feet. The gills run down the stem, which is lateral, growing from one side of the cap. The smell is pleasant (not stinking or repulsive) and mushroomy, and the raw taste is as one would expect a mushroom to taste like, again, mushroomy and not hot or bitter.

In early spring, oysters are usually not wormy or ridden with beetles. Summer however finds them with this malady, and one should be selective about which to gather for the table.

So far as cooking, oysters are best prepared by the simple procedure of sautéing them in butter, margarine, or olive oil after they've been dredged in flour. If they are washed, be certain they are dry, or reasonably so, before dredging and frying them; they may cook up rather mushy otherwise and you will be unable to get a slight crust over the surface.

Some prepare them escalloped with crackers and eggs. Some put them in soups; however, this (soup) preparation leaves them a bit slimy in my personal opinion.

If oysters are frozen immediately after they are gathered, the process seems to work well. You would be well to choose the very small buttons for this method of keeping. When retrieved from the freezer, sauté them directly from the thawing process but not until they are completely dry. As mentioned before, wet mushrooms dredged in flour become mushrooms. If you don't mind this type of a finish, then ignore the drying process. My wife and I like mushrooms that may be cooked brown and with crisp edges. It is for this reason I become so adamant about getting them dry before cooking Place them on paper towels or some absorbing cloth towel for an hour or two. This process usually renders them dry to fry.

Oysters may also be dried and reconstituted; this is the method of choice for me. Usually twenty minutes to a half-hour in warm water reconstitutes them. If the caps are quite large it would be a good idea to slice them into smaller sections before drying them.

Temperatures around the 40's and 50's seem to encourage them to appear. Seek oysters in river bottoms and low lands where willow, cottonwood, and elm are usually growing (or dying). Do not forsake large, damaged, silver maple trees along city streets. Keep your eye open as you drive through the residential areas--but don't run over a dog, or up a tree!

Oyster mushrooms are one of the more successful commercially grown mushrooms. You will find them in the super markets under the name Angel Wings.

Remember that oyster mushrooms are never pinkish in color, never orange in color, and never have a gray or gray-brown, fuzzy central area on the larger caps in the cluster. Mushrooms of the latter mention also have jagged gill edges and taste excruciatingly hot! Also, oysters never have a velvety covering over the stem. Remembering these four things should steer you away from the poisonous mushrooms that look like oysters.

Oyster Mushroom

Cap:	White, brown, or gray. Smooth, usually shelving.
Gills:	White, no change, running down the stem.
Stem:	About 1/4 cap width, white, stuffed with white flesh.
Spores:	White, occasionally a very pale pink-orchid.
Season and Habitat:	From spring to fall, occasionally in warming winter.

A mushroom of lesser value as an edible, but often available when there is none other to be collected, is the Winter Mushroom, also known as the Christmas Mushroom. This mushroom gets its name by appearing in warming trends in the winter time when there have been periods of a week or more hovering around the freezing mark or a bit warmer. It is also present in very early spring and very late fall, again when cool temperatures persist. This is another commercially grown mushroom and is in super markets under the name Enoke.

The Winter Mushroom appears much differently in the wilds than in the market place. The caps are a brilliant orange and yellow blend and are very sticky or slimy to the touch. They appear in clusters of many or only a few. The fewer the count, the larger the caps, as a rule.

The gills are yellow, or yellowish-cream, and are fastened to the stem at the inner extremity (posterior end).

The stem is yellowish at the very top but graduates into a black color which, with closer observation, is found to be a fuzzy, velvety covering. For this reason the Winter Mushroom often acquires a third name--Velvet Foot. The stem is even or may be attenuated (becoming smaller) downward, often nearly pointed at the base. They are joined together forming a cluster. These stems are perhaps twice as long as the cap width at maturity, and due to the method of growth, often curve upwards before joining the cap.

The spores are white and occasionally may form a powdery white layer on the caps that grow beneath other caps in the cluster.

Although the Winter Mushroom is not totally selective in its habitat, it is found more often on dead elm trees than any other place. When one hunts the elm valleys and river bottoms for oyster mushrooms and sponge mushrooms, you are almost certain to encounter these bright orange fruitings growing out from beneath the departing bark of the dead elm trees and stumps.

There is a possible mistake to be had when collecting Winter Mushrooms. There is a small brown mushroom known as the Autumn Pholiota (sorry, no lesser common name) that grows on dead logs and could conceivably be mixed with Winter Mushrooms by careless collecting. The Autumn Pholiota is a dull cigar-brown color with a stem that matches the cap color. Although it may cluster somewhat, it tends more to grow close together but not attached at the base. It is a small mushroom but borders on the size of the Winter Mushroom, and since the season and habitat is much the same, care should be given when collecting for the table. A more detailed discussion on spores is upcoming but the difference in the spore color between the Winter Mushroom and the Autumn Pholiota is White, and brown, respectively, and will separate the two mushrooms' identities in a positive way.

There is no other mushroom in the state of Ohio that is more sought after than the morel, or sponge mushroom. This mushroom, in its various forms, is known by all mushroom enthusiasts and is frequently the only mushroom hunted by many people. The reason is probably that it is easily recognized and defies confusion with any other mushroom that may look like it and be poisonous.

Morels, more often dubbed sponge, gets its name "sponge" because it looks like a sea sponge. Usually tan in color and full of hole-like pits with surmounting ridges, the cap takes on different colors depending on the variety and also depending on the age of the fruiting. They are called white sponges, black sponges, yellow sponges, and brown sponges. Whereas these terms are descriptive in separating these mushrooms, the fact is, excluding the Black Morel, they are basically all the same mushroom. The color changes take place as the mushroom matures. In very early stages of growth they are typically gray. From this point onward in growth they turn from gray, to a very pale whitish yellow (white), to a more darkening yellow-brown (yellow) and finally a dark fawn color. This color sequence manifests itself mainly on one species.

The Black Morel, which is a more pointed morel with the pits more elongated and the ridges blackening, is a species in itself and goes through little change in color from immaturity.

The Bell Morel, which is the very earliest of the lot to appear, is technically not a morel in the strictest sense. These mushrooms may be recognized by the cap appearing as the shape of a bell and with the lower side not attaching itself to the stem (free, see page two) The stem itself reaches all the way to the top of the inside of the cap before it attaches itself. This sponge is quite common in Michigan and probably some of the more northerly lake states but is rather scarce in Ohio. It is a mushroom that could affect some people in that it causes some slowness of thought and delimits quick decisions.

Dog Peckers, or Spikes, are small capped mushrooms of this group that have rather pointed caps and may look like mini-rockets about to be launched. To call it a mini-rocket or spike seems a bit more discrete than the term Dog Pecker, but none the less, to hear it is to know it, and this book is designed to give a full education to amateur mushroom hunters.

The stem of this small morel is white and is nearly four or five times as long as the depth of the cap. In essence one is collecting more stem than cap. Both stem and cap are edible however so just cook the entire mushroom.

These mushrooms are obviously not of the gilled, pore-laden, or toothed mushrooms, and they take on an entirely different appearance from these. None the less it has a stem and a cap even though they are not of the umbrella type.

As mentioned above the Bell Morel, if it appears in your area, will be the first to appear. On a parallel with Ohio this would be around the 15th of March or a bit later. One may make one's own calculations geographically from that date.

Second in line would be the Black Morel from late March and forward to the first of May. The habitat for this delicious morel is best in tulip poplars (tulip trees) which typically grow at the higher elevations on the Ohio hill country. Black Morels are quite erratic by habit but are nearly always found in woods, or along the edges of woods. Gardens, orchards, old railroad right of ways, and fence rows are not natural habitat for this species of morel.

The mid-season morel (gray, white, yellow whatever) is usually found in Ohio from early May until the first of June. Heavy foliage of other plants makes hunting quite difficult after the 15th or 20th of May

however, and combined with the fact that the pickings get slim after mid May, the season could be considered ended by that time.

Very old apple orchards of little care, elm valleys, or any elm habitat, are in my estimation the very best of habitats for morels. These morels however are delightfully erratic and are often found in off beat habitats of unsuspected types. I hunted morels for a whole day one spring with little success. When I arrived home beaten and discouraged, my neighbor, who hardly knew what a morel was, knocked on my door with a large sponge in each hand asking me if they were morels. I had the most pressing notion to tell him that what he held were mushrooms of the poisonous type and to confiscate them for "disposal", a neighborly gesture. He had picked a half-peck bag from the rich soil of his vegetable garden when he went out to plant. I cried that night.

Usually the Dog Peckers appear about the same time as the White Morels--perhaps a few days earlier, but they overlap within the time period.

Morels may be kept in much the same way as the before-mentioned oyster mushrooms. Many mushroomers freeze them. This process is unacceptable to me for this particular mushroom; they become too slimy when cooked. There may be particular way to freeze them, but I am not familiar with it. I do know that some hunters cook them first, just as if they were going to eat them, and then freeze them. Morels dry wonderfully, however, and when reconstituted, they become not much different from their fresh counterparts.

Again, I like morels simply sautéed; why use ingredients on such an exotic flavor? Just dredge them lightly in flour, add salt and a bit of garlic (not overpowering) and sauté them in olive oil; you will find them delectable! Put the garlic in the olive oil; garlic salt or powder is fine.

In conclusion I would say that success in finding morels is a combination of season and moisture as a priority; if you don't have both in the time period of potential growth you will be hard put to find success in your hunt. Habitat is the second factor to concentrate on. You may have the correct seasonal time period and it may be very rainy and moist, but if you are looking in the wrong place, you are wasting your time. Season, for morel hunting, is not a date on the calendar. Seasonal observations tell you when to hit the woods. Observe your local apple trees--a single tree in your own yard, or your neighbors, or wherever. When those blossoms are opening, the morels are calling, and the season ends when the tree is bare of bloom. This then, is White Morel season.

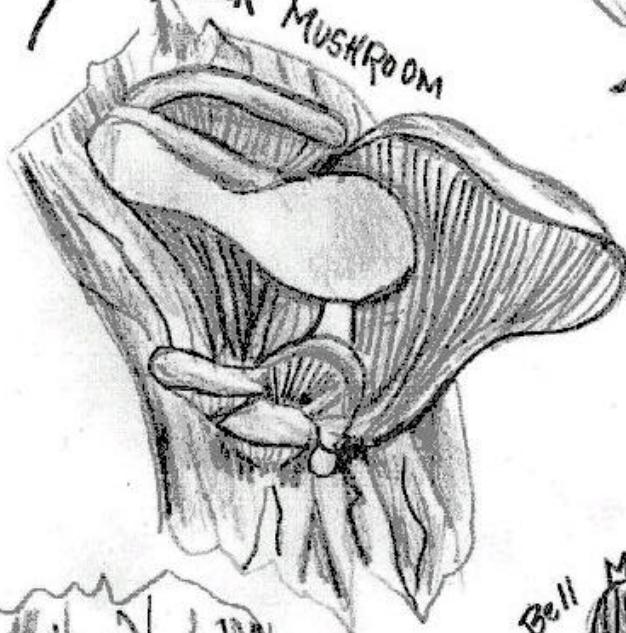
If you are familiar with plants of the field, watch for the skunk cabbage in the swampy areas. When it pushes through that peculiar blossom preceding the leaf growth, it's Black Morel time. While driving along the highway look out over the wooded area; if it's with a red haze of the red maple tree, it's Black Morel time. If you are in the woods and you see the May-apple just pushing through the woods duff, standing as a cucumber and yet to unfold. You are flirting with Black Morel season. Know that it's March, April, or May, but knowing the month is all that's necessary; learn the natural signs from then on.

One would be amiss to speak of the delicious sponges and not mention a potential hazard frequently encountered while hunting morels. It is, under certain circumstances--deadly!

What I refer to are the false morels. False morels are medium to large mushrooms that take on the texture of the morels but are folded and contorted rather than pitted and ridged. They may be brain shaped in the northern woods as well as contorted; a more southerly exposure finds mostly the contorted types. These folds and wrinkles remain constant onto the large heavy stem. The cap is rather saddle shaped (with a good imagination), and some of the fruitings attain the dimensions of a good size orange. The cap may be rather pale honey brown, or a deep reddish -brown, depending on the species. The poison is not easily displaced from the body and several meals may find a fatal build up. It's different strokes for different folks, some having more tolerance than others. These people may eat false morels unscathed provided they don't get gluttonous. Other folks are not so fortunate and could find the second or third meal fatal, if not the first. There are many deaths on record from eating false morels. Take heed.

MARCH
April
MAY

OYSTER MUSHROOM



Black Morel



white Morel



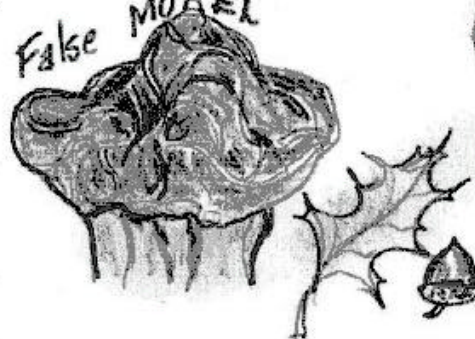
Bell MOREL



Dog
Pecker



False MOREL



Winter
Mushroom



R. Grimm

There are other mushrooms that appear in the spring months but which don't rate high as edibles. Not that they are poisonous; they just don't make it in flavor or for some other reason are not up to my standards. A personal opinion of course; take it for what it's worth.

Maude N' Me

Each spring, my trusting old basset and I, hit the trail around the lake where we live, in quest of the elusive morel. Well, at least that is my purpose; Maude's is--well, I guess it's whatever strikes her fancy en route. Whatever her reason, she loves the sojourn.

We usually head for the elm valley at the end of the lake where the water thunders over the dam, leading the water onto a spillway and then into a river valley. Since this valley is much with elm trees, I usually make this choice for my morel hunting. I have had good luck here for the most part, but have also had some faltering times, relegated to bringing home some very young Dryad's Saddle pulled from the old elm stumps. If one puts enough garlic powder in the butter when frying them, and think deeply, concentrating on sponges as you eat, you may get by--no, forget it, they taste like hell with any stretch of the imagination. Besides that, you will develop lockjaw from chewing them. One needs the constitution of a goat and a gastro-system to match.

When we reach the spillway Maude cowers and balks. It's always the same; she is a coward in whimp's clothing. I nearly have to drag her across the small bridge that leads into the valley. The water swirling beneath the small foot bridge does little to quail her fears, and rather gives her another injection of panic and her typically sad looking eyes show an unusual traumatic look. I lift, pull, jerk, shove and cuss her across the bridge. That 100 pounds of cowardice.

Once on the other side, and with the spillway now a goodly distance to the rear, Maude suddenly becomes Rin Tin Tin, the most brave of all K-9s. Her stubby bench legs now lope into the tall grasses in quest of, I'm certain, not morels. I hear her yapping and digging, probably over a molehill where her keen nose can depict the "blind miner" under the ground. The huge feet churn into the dirt and throw the soil from the excavation onto her low slung body and 'twinky'; there being no opening between her hind legs for a pass through. She becomes so intent in her digging the escaping mole usually moves ahead and away, unscathed. But oh what fun she has!

Whilst Maude is becoming filthy, I am slowly circling around my favorite elms, those with the bark just beginning to slough off on to the ground. Those elms that have lost their bark and stand gray and naked are but firewood now. The morels have vanished from this spot.

I see some Winter Mushrooms in various stages, some well represented in medium to large clusters, standing brightly, and boldly from the edges of the bark, their slimy bright orange caps showing an unusual contrasting color against their surroundings. Others shyly peek from the edges, tiny orange "blips" yet to burst forth.

I wonder if I should collect them. I rebel. They are not to my liking because of the slime; I find it hard to get a golden brown crust on them in the skillet. Just when I think I have conquered the problem, the golden covering drops away, and the bright orange cap comes smiling through. My procrastination develops into disdain for the fungi and I move ahead, hopeful for the appearance of the morel. Aha! Hiding up against the elm with only one fruiting peeking from under the fallen bark, I discover morels. I kick away the bark and they keep showing themselves, one after the other. A covey of 8 fruitings in all, some are small and rather gray in color but the rest are medium to large, whitish-yellow and fawn brown.

Maude comes streaking up. Maude's streaking is not a speed record in any sense of the word; she thinks she's streaking because her legs are at peak performance, but being so short and stubby the bench legs were not intended for speed. She stops and gives everything a healthy whiffer. If I am interested it is surely worth a look see. Instantly bored she moves off in quest of something more interesting, if it doesn't run, or at least move and smell deliciously wild by nature, it is hardly worth her attention.

Three more elms give me 20 more nice mushrooms. I have hit it just right. They are fruiting, and this being public lands I have made first contact. I leave some stem bases; it is a territorial act. I need to

let my tardy opponents know that I came, I saw, and I collected. The territorial claim of stem bases seems more human than perhaps peeing on the tree!

I hear Maude barking most intently ahead. It is a different bark, not of a holed-up chipmunk nor a treed squirrel. It is a fearful bark of inquisition. It needs attention lest it be some ferocious beast she is about to attack and rip to shreds. I hurry to the site.

Standing back against a tree is a more than portly woman with her arms reaching backwards around the tree and her hands bare knuckling the bark with clasping fingers. Her eyes hold terror of the barking beast before her who now feels more brave, sensing her cowardice--but not so much as to venture one step closer to her adversary. When I appear on the scene the barking becomes more intense but the canine body retreats quickly behind my legs to bolster her bravery.

"Is that your dog?" The woman says disdainfully, looking first at me and then the beast. It seemed a rather stupid question since Maude was all but in my hip pocket at the time.

"Yes ma'am," I replied, "but you needn't worry--she won't hurt you."

"I've heard that story before," she remarked, "that's what all dog owners say of their dog, which only means that the dog won't bite them!"

I shush Maudie who offers a few grumbles now and again as I speak with the trail lady. "I see your binoculars," I nod to the glasses around her neck, "are you a birder?" I try to get the tempo into a better beat and the crescendo toned down.

"Well I was until that unruly dog scared them all away with his infernal barking!"

"I'm truly sorry about that," I replied. "She's not used to encountering people out on the trail, I guess her trail manners need some revision," I offered.

She moved from the tree, her ruffled feathers smoothed somewhat. "Well, perhaps we scared one another." She softened her tone.

Given her size, opposed to the low slung Maudie, were I the animal, I wouldn't have stopped to bark but would have beaten a hasty retreat away from there.

"She is a very high strung animal," I lied (Maudie's highest string would have been low F), "but all truffle hounds are that way you know." I placed a crown on Maude's head.

"Isn't that one of those dogs who hunt expensive underground mushrooms of some kind?" The trail lady seemed impressed.

Since I was on a roll I played it for all it was worth. "She forsakes any other endeavor, madam; her sole reason for living is to seek the elusive black truffle" (which of course doesn't even grow in this country). "Neither, mud, snow, rain, nor heat of day would keep her from her assigned duty. Nothing would dissuade her efforts." I glanced downward to see Maudie appear to smile at the comment. I also wanted to check to see if my nose had grown to a greater length.

The birder stood in awe at the animal still hiding behind my legs. "That's wonderful, it's the first time I have ever seen a truffle hound, I can't wait until I tell my friends!"

Unfortunately at that given moment an unsuspecting chipmunk ran across the trail in front of us. The high potentate of dogdom quickly dismissed all thoughts of dissuasion regarding the black truffle and chased the brown rodent into the underbrush at the side of the trail, nearly knocking the well-fed bird watcher from her equilibrium status, needing the tree for her support.

As Maude went yapping and barking after one of her favorite targets, the lady, now most indignant looked me squarely in the eye. "Well, I think your truffle hound is in pursuit of the wrong quarry--and I think I've been had! Good day to you sir!" She stomped away up the trail, her buns, a fair assessment

size 18 stuffed into perhaps a size 16 pair of britches, went wobbling away, appearing as two pigs trying to get through a hole in a picket fence at the same time. The ground registered at least 4 on the Richter scale.

I could but shrug, feeling a bit sheepish about my fabrications. I only wanted to vindicate my canine friend. She can look so forlorn and sorrowful when being slandered.

Maude tormented her quarry for the better part of another half-hour during which time some more elm trees coughed up several more morels. As I headed back the trail along the cottonwoods, a fallen one displayed a generous row of oyster mushrooms. There were enough that I only chose to gather the very youngest and most tender of the lot. Maude had finally discovered I wasn't with her any longer and came bobbling along the trail her tongue hanging nearly to the ground, dangling and flopping like a long wet ribbon, as she jogged beside me back to our home.

Maude hunts her quarry in the great woods in the sky now. My search for the sponge mushrooms is still a spring event; however, the trail gets shorter and more difficult with each passing season. When I see a chipmunk scamper and scold across the trail in front of me, I think of the old girl, and the day she was nearly a glorified truffle hound, that one spring trip's years back.



If one needs to take a vacation from hunting the best of edibles, June is a good month to do it. Although there are some species out there that may be eaten, the taste quality is bad. The Deer Mushroom would be one of these. I only mention this mushroom because there are those that sing its praises. I could never figure out exactly why.

The Deer Mushroom has free gills (see explanation mid page 2) which are rather flesh-colored in young fruitings but become a rosy pink color as the spores ripen and cover them. The spores are pink. This mushroom always grows on wood, standing stumps and fallen logs being its favorite habitat. Outside of the woods it often grows in large clusters on the sawdust piles at sawmill sites.

Never eat a pink-spored mushroom resembling this mushroom that grows on the ground and has gills that are connected at the stem end (i.e. mid page 2). The gills *must* be free, and the fruiting *must* grow on wood. That is the double criteria for the Deer Mushroom as opposed to the ground-growing pink-spored species that are often poisonous; there are several.

The Deer Mushroom may be found in the month of May also. I didn't mention it above because I didn't think it warranted space, given the much better edible selections in May.

I have now filled in the month of June, although not proudly.

Deer Mushroom

Cap	2 to 4 inches, fawn brown, smooth, typical.
Gills	Flesh color, then rosy-pink; free.
Stem	Even, white, smooth, and often curved.
Spores	Dusty pink.
Season and Habitat	Always on wood, all season best in spring-fall.

Once we swing into July things begin to heat up. Not just the weather, but better mushroom hunting.

One must always be alert to the fact that summer mushrooms get wormy. Unless you do not have an adversity to this repugnant fact, always check the fruiting closely. The worms always travel up the stem. Carry a knife and cut the stem centrally (about 1/2 way up) and look for wormholes. If the mushroom is of the type that the stem may be easily removed from the cap, simply separate the two and look into the socket of the cap where the stem was removed, if there are worms present there will be pinholes in the socket. This is bad news because it means that the worms have probably saturated the cap, and renders an edible mushroom into an inedible one, not because of toxins but because of worm infestation.

One of the most sought-after edible in the summer months appears in Ohio the week of July 4th, give or take a week. You may be too early with your search but you won't be too late. Once chanterelles appear they grow sporadically on into fall. That first flush, however is the best time. One may collect grocery bags full if the season and habitat is correct. They stand in the woods like orange peels in color (a bit more "buttery") and extremely easy to see. One can hardly say we hunt chanterelles, but rather that we gather them.

To reiterate; chanterelles are a buttery-orange color. They are funnel shaped in profile but lack the deep funnel depression within the cap. Although the cap is concave by stature one cannot refer to it as tubular funnel, if you get my meaning. The cap is typically wavy around the edge (the margin). It is basically smooth but at times may be a bit rough or scaly. There are several species of the chanterelle. The one that grows in Ohio is clustered by habit and grows in gregarious groups of small clusters. They like rather barren areas in the woods but are not so limited. I have picked many from the leaf duff and most predominately that duff found under beech trees. They often frequent barren-splotchy-grass areas under beech trees also, if I may coin a description grammatically a catastrophe.

Chanterelles return in the same spot year after year until they finally absorb all of the "goodies" from the location. I have collected them in the same general area for at least 15 years. Who knows how long they were there before I discovered them for the first time?

These mushrooms are held in high esteem by most hunters. I have a confession to make to you, however. I only include chanterelles among my edibles here because they are so very highly touted among mushroomers. I personally see very little to rave about. I get no special flavor from them. Although they have a wonderful apricot odor when fresh, I taste nothing of that sort when they are sautéed. I have fried them, baked them, souped them, and escalloped them. Sorry, I can't get excited here. Try them for yourself, I may be missing something.

The gills of the chanterelle are not gills per se. They may not be present at all, or just appear as short, obtuse ridges at the top of the stem where the cap rounds out. These ridges may become more pronounced in some fruitings but are always obtuse. If you do not understand obtuse, it means, in this context, gills that are rounded over the top and not coming to a sharp edge as one would notice regular gills to be.

Along with being obtuse, these vein-like gills tend to inter-link with one another forming what I like to call "rivers and tributaries", veins that often fork and join other veins. The veining, obtuse gills are much more obvious in the regular chanterelle which more typically grows singly (not clustered) although may be grouped close together. This standard type of chanterelle is much larger regarding individual caps, and although probably not as common in Ohio, though as mentioned earlier they do show themselves from time to time. They are much better mushrooms than the clustered type. When I find these, they are usually in deeper leaf duff.

They must be tasty to vermin; twenty billion worms can't be wrong! If you find chanterelles without worms, consider yourself lucky--it does not happen often but it does happen.

I cannot tell you how to cook these supposed delicious mushrooms because, as I said earlier, I never found the secret. Experiment with them. I never could figure out how a mushroom that looks so very appetizing could be so--nothing!

Chanterelles

Cap	Individual caps in a cluster about half-dollar size, clusters as a whole vary in size, few to several. Color a buttery-orange.
Gills	Same as the cap, perhaps a bit lighter
Stem	Tapering downward as an extension of the cap. (Funnel)
Spores	White
Season and Habitat	Found in woods, summer through fall

While I am on the subject of these more peculiar looking mushrooms (without the typical stem-cap-umbrella look) I would like to introduce the little, black Horn of Plenty, which is also funnel shaped, but much smaller than the before mentioned chanterelle. It also goes by the name, Trumpet of Death, which I hesitate to mention since it sounds so ominous. This latter name comes about simply because the fruiting is black and trumpet shaped, and has no bearing on the mushroom as an edible. I wouldn't want you to pass up this mushroom's delicious qualities because of an ill chosen, scary name! The mushroom is quite harmless so far as toxins are concerned; it is, as a matter of fact, very tasty and ranks high with those who know it.

If the Horn of Plenty has any negatives it would be the fact that it is quite small and thin. It serves one a stingy helping unless large amounts are gathered. On the positive side however, it is often generous to the collector because it does usually grow rather prolifically in large troops.

The Horn of Plenty is erratic in seasonal habit and more typically appears after the early flush of the chanterelles. I have found it in late July but it may be more often found in August and on into fall. It likes mosses and barren soil but is not limited to these habitats. It always grows in the woods however. As does its kin, the chanterelle.

This small mushroom is nearly paper-thin and stands around 2 to 4 inches tall. It resembles a tiny black ice cream cone which flares out at the top, or, as the name suggests, a small horn with the flaring bell, as one would see a tuba stature. They are totally black and for this reason go unnoticed on a darkened soil habitat. If one did not know of its edible qualities it would certainly not be gathered because of its appetizing appearance. The inside may be a bit brownish gray. The total is edible and should be sautéed slowly else it may disappear in your skillet. Dredge it in flour and fry it just a bit crisp, then pour a beaten egg over the whole. It makes a delicious omelet.

There is a mushroom that grows on half buried small logs and twigs that is more fleshy. This mushroom carries the name Devils Urn (apparently everything about the devil is considered black) and along with being more fleshy than the Horn of Plenty, it is also larger. You will often encounter this mushroom while hunting morels in the spring of the year. Do not gather it for the skillet thinking you have the Horn of Plenty. Horn of Plenty does not grow in the spring and by the same token the Devil's Urn does not grow in the summer.

Do not overlook this small Horn of Plenty mushroom--it is very tasty.

Horn of Plenty

Cap	Black and funnel shaped, very thin textured.
Gills	Typically smooth or very vague ridges.
Stem	An elongation of the tubular cap, tapering down.
Spores	White or salmon colored.
Season and Habitat	Mid summer and on into fall. Always in the woods.

The Boletes

Other than mushrooms with gills, we have mushrooms that have small holes (pores) on the underside of the cap (see page 1), These are the boletes; pronounced, "BULL leets". Individual species have different common names but to lump them all under the name boletes is a much easier and effortless approach to learning them.

The criteria for the boletes is: if it has pores on the underside of the cap (not teeth, nor gills), if it is soft and fleshy, if it is growing on the ground and not wood (stumps, trees--fallen or standing), it is by nature a bolete. These three factors determine a bolete--over and out!

Boletes typically grow in the woods. They may however grow in grassy areas under trees, both hardwoods and conifers alike. The thing is, there must be trees present in close proximity no matter where they grow. A clearing in the woods may support many boletes but when traced underground they will be seen to have association with tree rootlets; these trees may be 20 or 25 feet away. Typically however the mushrooms grow within the drip line of the tree, i.e. within the diameter of the breadth of the tree, or the outreach of the limbs.

I have collected bushels of a certain species of a fall bolete, growing in lawn areas of a cemetery, under white and red pine trees. State park pine plantations in our state (Ohio) often yield immense amounts of boletes. They are extremely easy to collect because of the barren needle carpet, nearly void of any kind of vegetation. One can spot them for long distances with no trouble. Collecting mushrooms in our state parks is legal so long as it is for your sole consumption and does not include hallucinogenic species. Don't come out of the woods with a starry glaze over your eyes and a stupid

grin on your face. Also don't pick two bushels of mushrooms just because they are there. Either situation could find you in court. Of course if you have naturally glazed eyes and always carry a stupid grin on your face, I have no answer for you, other than: don't hunt mushrooms in state parks!

It is gratifying that our state park officials are so lenient with this facet of collecting because state parks, as a general rule, frown heavily on collecting anything! Typically the rule is that if it grows on bushes or trees, such as nuts or fruits, it may be picked. Our park officials have done their homework well understanding that the body of a mushroom grows underground and the part that one sees on the surface is the fruit of that main body. Picking these fruitings in no way harms the existence nor growth of that underground mushroom body. Don't collect mushrooms in any other state park outside of Ohio without settling the collecting rules before you hit the trail. I personally have spent some agonizing hours in the office of some out of state park offices, for this reason. Unfortunately many states have a blanket coverage ruling that is rather ridiculous and ill conceived. Viva our ODNR with wisdom for fair practice. Mushroomers enjoy their hobby too, you know.

Back to the boletes then. One could name several species of mushrooms that are good edibles with descriptions of in-depth and often misleading data. This book does not encourage these in-depth methods due to possible mistakes by beginners. In the bolete grouping of mushrooms, one seeks fungi that is probably more safe than in many other groups. Follow these good rules:

When collecting boletes for the table, choose fruitings that are worm free (a tough task in the summer group).

Choose mushrooms that have no red coloration on them anywhere! Most specifically the pore surface on the underside of the cap, but also including the cap surface and stem.. I am the first to admit that this rule delimits the boletes one can collect for the table for there are indeed many species with red coloration that are edible. I am not a liberal when I recommend edible mushrooms.

Typically the tubes that support the pores are removable from the flesh. These structures are like small "field tile" of old, and hang from the flesh to the pore opening. There are as many tubes as pores thus you can imagine the huge number, crammed side by side, under each cap. These tubes are also separable from one another. Remember these "tube" facts because they will separate tube fungi to be mentioned later on in this section.

Further: do not collect boletes for the table that stain on the pore surface, or on the flesh, when the mushroom is broken open. You will discover that most of the species that have red on them do this color change act--some immediately, and some with a bit of deliberation. Either way, if they change color (usually a greenish blue or a deep midnight blue), pitch them!

Taste the mushroom raw; it won't hurt to taste it and spit out the small bite after you see if it is bitter, or hot. Give it a few seconds to react; some bite back immediately, some others take a few seconds.

No common bolete is lethal. Only a few species will even make you sick. If you follow the rules presented here you should have no trouble eating this group of mushrooms. Those with white pores in early stages that turn greenish and finally yellow; and mushrooms with a white net over the extreme apex of the stem and a rather bulbous stem are best--these traits in combination on a single mushroom.

Try small amounts when you try any mushroom for the first time. You could have a personal allergy and no amount of data can overcome this situation. I can eat strawberries--but not everyone can!

If you follow the above recommendations you can try different boletes at random. Mostly you will find they are not particularly good. Most taste like a mouth full of air; you get little flavor except perhaps whatever batter you may be using to fry it in.

The other pore bearing mushrooms with good edible qualities are called polypores. This group of mushrooms grows on wood, at least for the most part. The ones that grow on the sides of trees resemble the stature of the oyster mushroom discussed earlier. They are typically without a stem, and the caps are fastened to the host at the edge. This stature, by design, makes them shelving, one above the other.

Comparing them with the boletes is rather simple in so far as identification is concerned. Most importantly of course is the fact they grow on wood and not on the ground. Beyond this, the tubes cannot be removed from the flesh of the cap as one can remove tubes of the bolete. Although the edible types of polypores are soft, the majority of polypores are corky or woody in texture. No amount of cooking could render them edible although they are probably non-toxic.

The pores on some polypores are so small one can hardly see them with the naked eye. On others, by contrast, one finds the pores well in evidence; they often appear as though "stretched", or diamond shaped rather than circular.

This seems to be enough information about these wood-growing pore mushrooms. This is not a lesson in polypores but rather a simple discussion on the edible mushrooms.

Although July doesn't offer too many good edible polypores, one could encounter the common Sulfur Shelf. The Sulfur Shelf is typically a shelving mushroom (thus the name) that is brightly colored orange and yellow with the orange probably the most dominant (at least to the eye, if not by predominance over the cap). Sulfur shelf grows on the sides of trees and is not too selective as to tree species. It does, however, favor hardwoods. Fallen limbs also have Sulfur Shelf on them. When they grow from the tops of stumps or alongside them on the ground (they are still oriented to the wood in the latter case) they are usually in rosette form rather than shelving.

They become rather tough towards the base, that is, the area in towards the tree. The best edible part is about 1 inch in from the outer margin. If they are very young and not yet expanded, one may be able to eat the entire cap. Sulfur Shelf keeps well under refrigeration; at least a week can be expected, but don't press your luck. Putrefied mushrooms are quick to make you sick.

There is one other good edible pore mushroom in this polypore group but it fruits in the fall and typically not with the mid-summer species. I will cover that species later with the fall mushroom discussion. Sulfur Shelf does not adapt itself well to any type of cooking other than simply dredging them in flour and sautéing them. Cook them slowly and test them frequently with a stabbing fork. They can cook from tender, to a rock, very quickly. I like some finely ground onion and pieces of bacon cooked with Sulfur Shelf. Better to put both of these ingredient in the skillet about half way through the cooking process since the Sulfur Shelf is tough in texture and needs to be cooked longer than the bacon and onion. Of course any good cook knows that to cook the bacon and onion to the correct consistency first, remove it, leave the grease, put in the mushrooms, cook them to the desired consistency, and then add the cooked bacon and onion.

The Sulfur Shelf rates high on some lists as an edible. Some do not consider it all that good claiming it to be woody tasting. I think that woody taste is acquired by using fruitings that are either too old, or cut too far back on the cap. Just use the outer edge.

Many mushroom books list the common name (if indeed they give it a common name) of Sulfur Shelf as Chicken of the Woods. Both names are quite acceptable. I mention the latter name only because it is used in many locations. If you hear the name now, you will know to what your conversationalist is referring.

Sulfur Shelf is probably more common in the fall of the year but I list it here in mid-summer because it does occur at this time. It is all dependent on the temps and moisture. Remember, this is a pore mushroom; do not pick and eat orange wood-growing mushrooms of medium to large size that have gills rather than pores on the underside of the cap!

Sulfur Shelf

Cap	Quite large, saucer to dinner plate in diameter. The texture may be rippled to wavy on the margin. Bright orange and yellow.
Gills	Pores; not gills.
Stem	None
Spores	Unimportant
Season and Habitat	Late summer into fall. Always on wood.

There are other summer mushrooms to be had but most of them are mediocre at best. There are two that are very good but resemble the most deadly of mushrooms so closely I resist listing them in this book. Although the temptation is great, I renege!

I mentioned early on that I would give a discussion on spores. This seems as good a place as any to do this. I will give no technical data on them simply because amateurs who want to eat mushrooms need only know the color. Spore color is necessary in some instances to separate genera that may look similar.

Perhaps it would be a good idea to describe in the simplest of manner just how spores function. Spores manifest themselves on the gills of mushrooms; or inside of the tubes on the pore-bearing or tube-bearing mushrooms.

You cannot see these spores because they are only 1 millionth of a millimeter and are measured in microns. Boiled down this means: don't look, you can't see them. They are visible only under a microscope. As a mushroom eater this is simply not important.

At any rate, spores are the "seeds" of the mushroom. Although there are technically several differences between spores and plant seeds, they react much the same way by being dispersed, when ripe, to replenish the species.

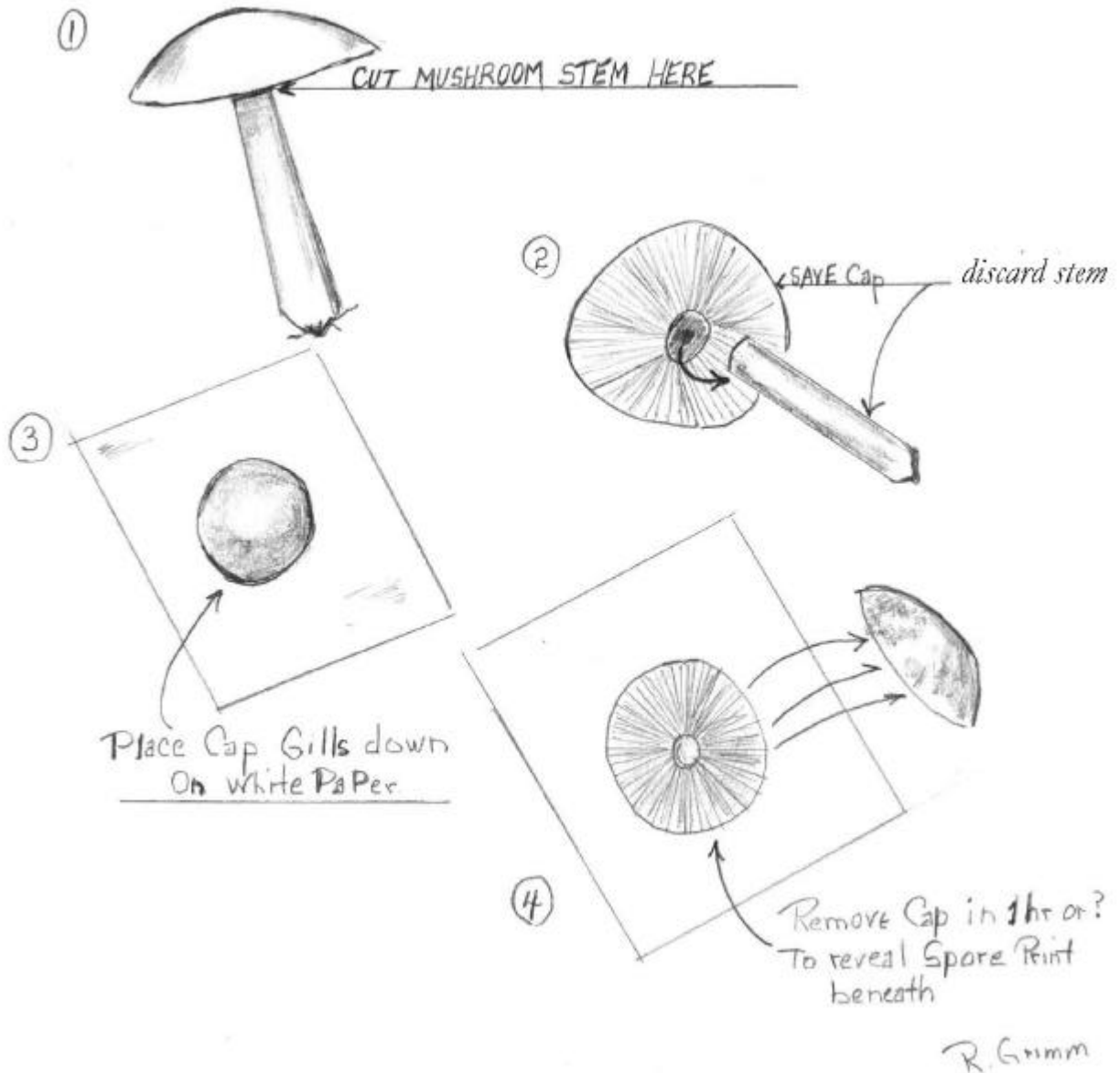
When spores fall from the gills of the mushroom (or from wherever they are born; different in the various types of fungi) they are spread by the air currents at the time they drop. They are extremely light by weight and the air movement, if very slight, may allow them to be found at or near the mushroom from whence they came--or they may wind up on the other side of the ocean should they get swept away in heavy turbulence. The single fact is, if they do not land on suitable habitat they will never grow. Since many mushrooms are quite selective as to their habitat, the odds are against them favoring reproduction. This is the brief introduction as to what spores are, and do.

As mentioned, our interest is in spore color. This color is representative for certain genera and is always the same within that genera. To obtain this spore color one must take what is termed a spore print. This is a simple procedure whereby the stem is removed from the cap at the very apex and the cap is placed gills down on a sheet of white paper. After an hour or sometimes much more, the spores will fall onto the paper and display a replica of the gill formation thereon. This replica, if complete, would be considered a perfect spore print. A perfect print is not necessary however. Only enough of a display to present a color is necessary. This process is diagrammed below.

Regarding spore color, the amateur must learn which mushrooms are associated with which color. This is extremely important for those mushroomers who wish to gather mushrooms

as a collecting hobby. Spore print information is readily available in nearly all the field manuals.

In regards to the mushrooms listed in this booklet, all of the spore colors are listed with the species and no further research is necessary. When collecting mushrooms for the table it is always a good idea, until you become absolutely certain of your collection, to take a spore print on two or three caps in the collection. Any mushroom you are unsure of within a collection, a spore print is essential.





Chanterelle

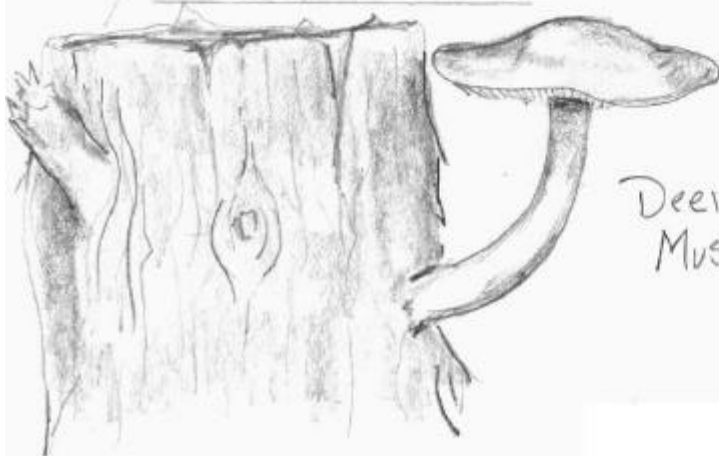


Horn o' Plenty

The
Bokete



Some
Common Summer
Edibles



Deer
Mushroom



Sulphur Shelf

R. GRIMM



When September and the fall season rolls around, mushrooms perk into action. Several of the good edibles appear now...some of my favorites.

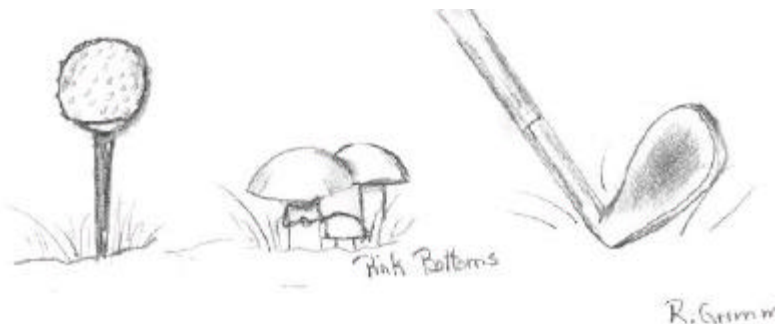
If you are a golfer you will see the Pink Bottom growing along your course of play from time to time. These are more prolific on some courses than on others. Courses that were derived from old pasture fields often produce elegantly. This is because cow manure, and/or horse manure, initiate the fruiting of this genus--at least the field and lawn growing species of this genus.

No matter how much plowing, tilling, and raking is done preparing the course, those long present underground mushroom bodies are only moved about, and not destroyed. A few passing seasons find things taking off after the mayhem of the previous cultivation. Besides that, many fairways where the pasture was lush were never interrupted, and received only mowing. Thus, the mushrooms may appear immediately. There are times of course when the mower gets to the fruitings before you do. You might check these mushrooms out as you golf. They are nearly pure white, have a ring on the stem, and are bright panty pink on the underside of the cap. Those fruitings that have matured to the point where the spores are beginning to ripen will have the gills changing to a "coffee with cream" coloration. The overly ripe fruitings (which typically may be quite wormy) may have gills that are chocolate colored. The Panty Pink color is the best type to collect for the table- buttons (those that have not yet opened) are perfect. One must always be certain that the gills are pink, however. Take a golf tee and, with the pointed end, scratch away the little veil where the cap joins the stem; those bright pink gills will come smiling through. It is only when the button is very, very young, that the gills may be quite pale in their pink beginnings. If you are in doubt, make certain the spore color is purple-brown. Poisonous mushrooms that are look-alikes have white spores.

These mushrooms (Pink Bottoms) may grow anywhere there is a grassy habitat They dwell in farm pastures (old permanent pastures), in lawns, both urban and rural, the outfields of ball parks, state park lawn areas, cemeteries, or wherever. Two points to remember. Don't collect Pink Bottoms where there are trees. They most certainly grow under trees but it must be a grassy lawn type habitat. The problem is that some poisonous types grow under trees, and they may be similar, but have white spores and white gills from the beginning. The other rule would be to not collect Pink Bottoms where lawns have undergone commercial chemical lawn care. If you do not know whether this has taken place, these lawns are typically weed free--grass only!

Pink Bottoms are a very close kin to the mushrooms you purchase in the super market. These small to medium buttons have been in grocery produce departments for years. The large brown Portabella you pay the extra bucks for is the same mushroom allowed to mature into a full size fruiting. It is only a variety with a brown cap.

Pink Bottoms are very versatile regarding cooking methods. To me they are best fried in olive oil and garlic (to taste). Dredge them in flour and cook to a golden brown. They may be used fresh, sliced over salads; they make excellent soup. They add much to steak by simply dumping them into the skillet when the steak is about half cooked. If you like your steaks really rare then put the Pink Bottoms in the skillet when you start cooking the steak. They fit well into Chinese cookery as well as an added flavor and texture to Italian cooking. They may be dried and then reconstituted or frozen in a whole form.



Pink Bottoms

Cap	Broader than the length of the stem, 1 to 4 inches. Color white to creamy white.
Gills	Bright pink, then coffee with cream, then chocolate. They are free from the stem.
Stem	Rather short, thick, and with a ring near the top.
Spores	Purple-brown
Season and Habitat	End of August, on into early October

The Pink Bottom Fiasco

I'm not a bona fide grower of mushrooms even though my life's work, for the most part, was horticulture and occupations linked to horticulture. I try not to mention my ties with horticulture to those who know of my encounter with the growing of Pink Bottoms.

I had read quite a bit about the culture of this mushroom, browsing through my many books of mushroom lore. I decided to try it; the rest is pitiful history.

The main ingredient for growing this mushroom is that one must have a weak mind for even considering it!

Other than this, one must gather either fresh horse or cow manure. If you are not of the farm set let me describe these feces to you. Cow manure is the flat dark brown pancake one finds splattered on the ground in pasture fields. Seemingly all cows suffer from semi diarrhea. "Horse hockeys", on the other hand, show themselves as piles of golf ball to baseball size brown, molded, strawish enlightenments found in the same habitat. If there is a choice, probably the horse manure is preferable to the bovine departures. Either will do however.

One may gather these necessities running from one pile to the other in any productive pasture field using a pitchfork and a wheel barrow. Be certain to ask the farmer if you may gather these niceties else he spot you in your chore and phone the sheriff, considering you a suspicious character—or a nut! This method is both slow and embarrassing to some extent.

It is much easier to simply contact a horse farm, or go to the track at your local fair grounds, where you will find piles of the stuff along with a willing giver. About a half a pick up truckload seems an adequate beginning supply.

In my first and only venture, I piled the load in the side yard, next to the kitchen window. Well, perhaps not next to the window, but close enough to encourage a suggestion from my wife, after only a few days, that the pile be removed to the back of the lot. Since each meal was well endowed with the repugnant smell of the pile, I was quick to agree. I live in a rural setting where such smells are actually part of our air quality. If you live in an urban area, take the phone off the hook!

The season to do this is around the end of February or the first week in March. I recall that we had an early March snowfall and the manure pile loomed as a volcano with the brown top protruding from the snowy mound like Helena, steaming and smoking as if about to erupt. Now, lava is one thing, but I 'm not certain what may erupt from a pile such as this.

There is an extensive heat build up in the center of a pile of horse manure. This is good because it sterilizes the pile. The problem however is that all parts of the pile must take a turn in the center. This requires a pitchfork and a strong back. Remove the top of the pile and place it to one side, remove the sides and place them into another pile. This leaves you with the center and the bottom. One must estimate where all of these positions begin and end. It isn't a pin pointed effort but rather like throwing

hand grenades, and pitching horseshoes--close counts! All of the segments (piles) must take their turn in the center of the total stack at one time or another. Keep a running account of what has been where, or you will get all screwed up in the sequence. Now all of this may seem simple enough, and it is--if you have a forklift. If you are not so endowed however, and you have only a pitchfork, make an appointment with the chiropractor early on.

When the composting is at peak quality the manure should be chocolate brown and with just enough moisture. The moisture content is important throughout the process. The pile should never dry out but should be covered with a canvas or piece of plastic; by doing this you are in control of the moisture content, eliminating possible fickle weather conditions. Water and cover the pile, on and off, as needed. It must be as Baby Bear's porridge--just right!

When one can squeeze a handful of the compost together and it adheres loosely without water dripping from the squeeze, all systems are go. After several visits to the rub doctor and deep consideration toward a back brace purchase, I finally reached this momentous pinnacle.

I packed my three 2x6 feet Styrofoam packing boxes full of the carefully prepared compost and placed them in the vegetable storage, semi-basement, under the back house. The temperature there was perfect for the project.

I then laced the compost with the spawn I had purchased from a seed company. Big mistake! If you are ever dumb enough to try this endeavor, get your spawn from a cultured spawn source. The spawn from seed companies is typically flakes of gills from unsold, or unpicked mushrooms gathered when the mushroom bed is defunct and being removed. It may grow if you are doing your project inside a large, sterilized, plastic bubble!

Several days went by, all under extensive scrutiny. I watched as would an expectant father. Nothing. Going into the second week I saw white "blips" against the chocolate compost. My hopes grew in ecstatic exuberance. That was all that grew however.

The blips developed into tiny Ink Caps of unknown origin. They dissolved, each in turn, as the days dwindled down. Nothing else grew in that compost. Nothing. Ever.

And so you have it. My encounter with growing Pink Bottoms. The story doesn't end here however; the show became a tragedy and comedy both at my expense.

Ray, my next door neighbor, came into my yard one of the following days and asked me if I knew there was raccoon in my back house (incidentally my back house is a small cottage, not the proverbial "backhouse", as in outdoor toilet). He told me the varmint was going across my roof and down the unused chimney.

I knew the chimney of course came out into the semi-basement and I thought I had better have a look see into the matter. I opened the outdoor entrance into the basement. The redolence that smacked me in the face would have made a possum vomit! It was reminiscent of a gut wagon left standing in the sun on a hot July afternoon. The odor was of wild creature, raccoon excrement, and spoiled compost all gift-wrapped into one foetid blast!

Holding my nose I crept ever closer into the basement. I shined the flashlight I had brought over the catastrophe within. It looked like an explosion in a crap factory! The coon had torn the Styrofoam boxes into bite size pieces. The compost was strewn about over the entire floor and there was coon poop garnishing the whole. I shined the light to a peculiar noise coming from the far dark corner of the basement. Peeking over the top of a cardboard box I had left there during my project fiasco were three sets of shining, beady eyes. The coon in residence was of the mama type and three babies were left temporarily while mother was out--wherever.

I plugged the chimney hole, which was the entrance to the maternity ward where mother came and went, and removed the three little critters to the world outside. Baby coons are cute as hell; my wrath softened considerably.

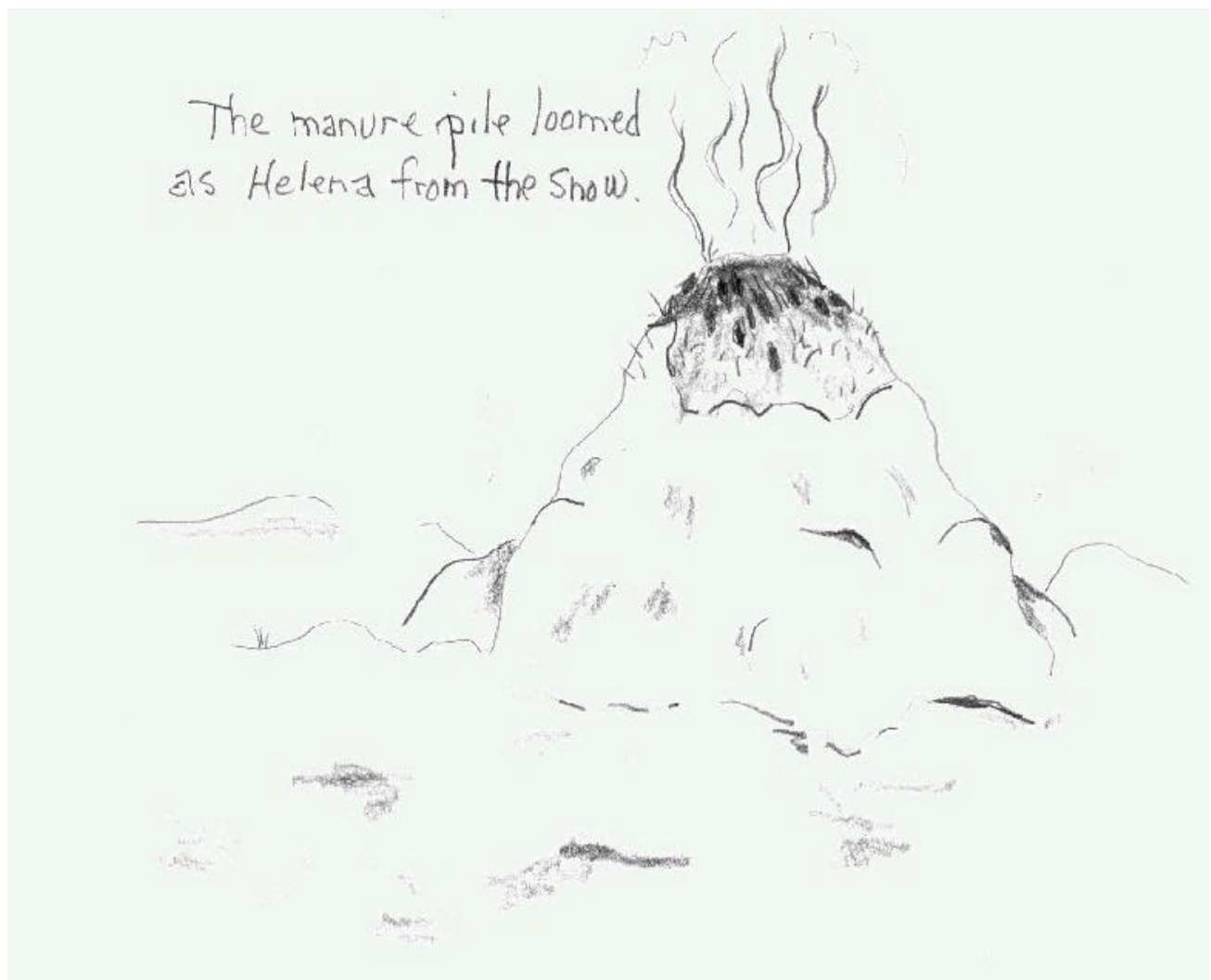
I put the little buggers in an unused dog cage I had stored away and put them under the old apple tree

close by. The grand kids were beckoned, of course, to witness the antics of the "kits". They wanted to play with them but not knowing the condition of the mama, I decided against it. My grandkids fear no outdoor creatures, they were brought up that way. They begged but I would not falter, I knew the little guys would nip, bite and scratch and I would have none of that. I thought of telling them I would allow them to play with baby coons if they would clean the basement for me. I banished the thought however--a fiendish idea for a grandfather to consider.

The coons were the center of attention for the entire day. The fun those kids had observing them made it all seem worth while--well, almost anyhow.

That late evening I put the "kits" into a box that they couldn't get out of, but I knew the mother could easily get into. I placed the open box near the chimney feeling certain it would be empty in the morning; the mama would cart them away into a small woods only a few hundred feet west of my property. My hunch was fulfilled: the box was empty the following morning. The mother coon had taken the babies somewhere to grow and raid my garbage can every Tuesday night; they had it marked on their calendar: "Garbage pick up Wednesday--raid garbage cans Tuesday night!"

So, although you may not have the coon problem (I can't believe I did) I would highly recommend you grow wood inhabiting species of mushrooms like Oyster Mushrooms, Wine Stropharia, or Shiitake. Leave the Pink Bottoms for those who know!



Lots of mushroom hunters eat puffballs. I am not certain they eat them because they like them or whether it is a case of feeling safe because they find them easy to determine. I personally am not a lover of puffball flavor. It is quite bland and unexciting. I find that if they are fried as one would cook eggplant, or at least as I would cook eggplant in its least pretentious form (sliced at 1/2 inch, dredged in flour, and fried in butter, and then served with a covering of Italian sauce) it--the puffball--becomes tasty in a new dimension. I have also cut it cubed about 1 inch square and french fried it, again with the flour crusting, and doused with malt vinegar (Long John Silver's malt vinegar is best I think) when on the plate--a change worth trying. All these suggestions withstanding, most mushroomers simply fry them in the butter after dredging in flour and consider them good. To each his own.

There are various species of puffballs. In Ohio, all are edible, although not exotic. The most excitement one can get from a puffball is simply finding one! That is, if it is the Giant Puffball. This puffball grows in a varied habitat but if you know of a place where a ditch bank that had one time been dredged, or if the ditch is an old manmade structure of rather lousy soil type (clay-sand), and beyond that the ditch bank has shrubs, small saplings, and a general growth of scrub vegetation, you'll be pleased to learn that it seems to encourage the growth of Giant Puffballs. These monsters of the fungi world are certainly not limited to such a habitat but it is a habitat of promise.

Giant puffballs also grow along wood edges, again in a scrub brush, tree habitat. I have collected them in open lawn areas, but usually with trees present. Wherever they are discovered it is always a thrill to find such an enormous oddity in the wilds. It always seems out of place as if it should be in the beach ball section of a sports store!

Section puffballs from top to bottom through the center. The inside flesh should be white and firm. If it is becoming a pale lemon yellow in the center it is too old. Check for worms. Start at the lower end where the puffball was attached to the earth. A close look will witness worm holes progressing towards the top (if they are wormy of course). If the infestation is slight, and not too advanced toward the top, one may get ahead of the visual infestation as much as an inch or two and slice the bad part off, keeping only the remaining top section for cooking. Discard the outer rind when cooking.

Usually smaller puff balls found growing on lawn areas, golf courses, sides of grassy hills, and other grass bearing terrain are not Giant Puffballs. There is one called the Vase Puffball which, with a vivid imagination, could be construed as vase-shaped, and the Skull Puffball, observed as above, and again with imagination. These two puffballs typically get a reddish-brown covering over the upper part whereas the Giant Puffball remains totally white. All of this information is actually irrelevant considering that they all taste the same, good, or bad, or "eh", as your pallet would find them. I personally prefer the smaller puffballs simply because they are more easily collected and seem more solid for a longer period of time. The same criteria goes for all puffballs regarding age and worms.

Two important factors should be exercised regarding puffballs. Never eat a puffball that is black inside. And always section a puffball that is less than the size of a baseball--especially if it is found in the woods. Puffballs should be a consistent solid flesh inside. Should there be a structure of a cap and stem within: **do not eat!** September and early October is the best time.

Shaggy Manes

In my opinion one of the very best of edible mushrooms is the Shaggy Mane. It has a delicate, nutty flavor but great care must be taken when cooking it. Most mushroom hunters who don't like the Shaggy Mane simply cook it wrong.

Shaggy manes must be dry when they are cooked. If they are collected in wet weather bring them home and pull the long tubular cap away from the stem, ending with two halves. Lay the two halves, gills down, on paper towels or an absorbing tea towel. Allow them a couple of hours to dry (unless they begin to dissolve). When dried, dredge them in flour and pop them into hot butter or olive oil turning them frequently until they become brown on both sides with a slightly crispy edge. Remove them from the skillet and place them once again on paper towels. If they are floppy and mushy you have failed the endeavor. They are still edible but pale pretenders of how they could taste if properly cooked.

Shaggy Manes dissolve into an inky irremovable mess if allowed to age--even overnight! When gathering them select only those fruitings that are pure white and not beginning to turn pink at the lower margin of the cap (the bottom). From this stage they will turn black, the black color will follow the pink color up the cap from bottom to top. Don't bother to take Shaggy Manes home in this condition; they will dissolve into a black, inky mess in your collecting vehicle before you get them home.

Shags show up about the first week in October. A cool snap with lots of rain spurs them into action. The growth period may extend well into October depending on the weather conditions. Cool, wet weather followed by a drying period of a few days is ideal. It allows the hunter to find his quarry in a dry state rather than soggy and difficult to prepare.

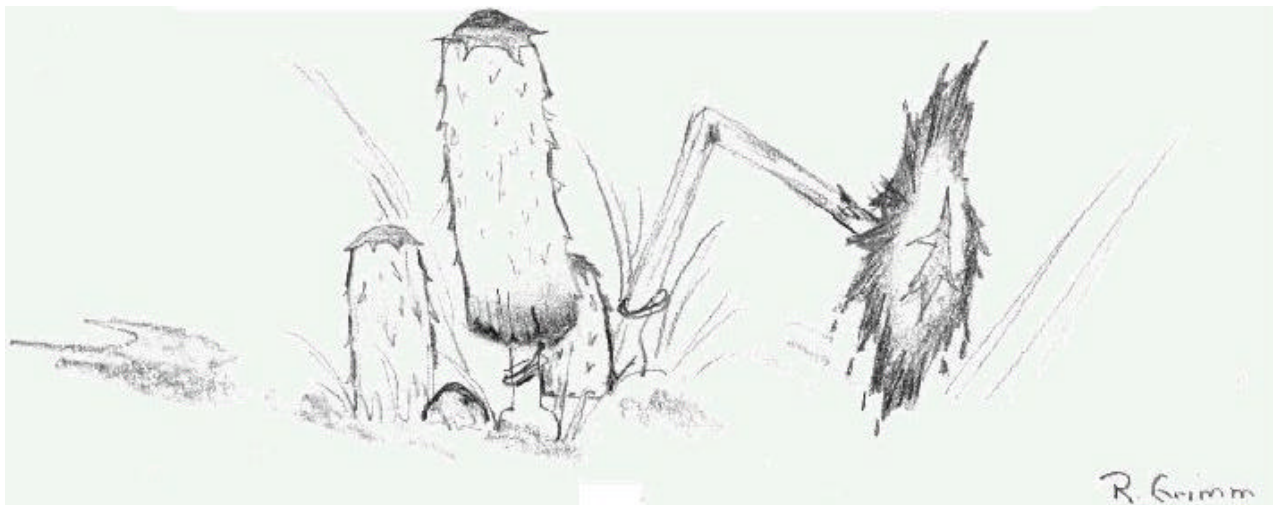
Shags like lousy soil. An old construction site of a new building, or whatever, that has had a lapsing time span of perhaps two or three years, is often very productive. Such areas find the Shags growing directly in the lawn areas. If these areas have been sodden rather than sown in grass (and I use the term "grass" reluctantly--a contractor's mix seems something less) there will probably be no mushrooms. If sown however the odds are well in favor of Shaggy Manes.

Our local park was plowed, disked, and harrowed before construction. The grass was of an inferior type and the volunteer vegetation was allowed to regroup among it. It was immaterial since most of the lawn areas are outfields of ball diamonds and soccer fields. The place has turned into a veritable Shaggy Mane farm. No one in the entire town eats Shaggy Manes but me. I have made some converts who cautiously strayed from the proverbial safe sponge but oddly enough such persuasion is difficult. I weep as I watch three fourths of those white beauties dissolve to ink. It seems such a waste!

Old tennis courts and along highways, actually anyplace where the soil is hard and mostly of clay content is likely territory for the Shaggy Mane!

Shaggy Manes

Cap:	Long, tubular and very shaggy, to 8 inches. Color white, dissolving into a black liquid.
Gills:	Grayish dissolving into a black liquid.
Stem:	Pure white, annulate. Stringy and hollow.
Spores:	Black.
Season:	Fall on hard soils or manure, occasionally spring.



There are three tooth fungi that grow in the fall of the year. Actually they are encountered in the late summer too but more frequently in the fall--September to October.

One of these mushrooms grows on the ground and has a stem and a cap. The stature is like many mushrooms already discussed but has teeth on the underside of the cap rather than either gills or pores. It is called the Hedgehog Mushroom. This mushroom is typically orange in color. There is a white one also but it grows more in the western states.

The Hedgehog Mushroom in Ohio is a medium to small mushroom typically with a cap that is wavy on the outer margin. It undulates by stature around the circumference of the cap. The stem is the same color as the orange cap but perhaps just a bit lighter. The teeth are lighter and usually come through as a rather creamy yellowish color. The color of the Michigan Hedgehog is the same but the size of the fruiting is much larger and they tend to grow in clusters of 3 or 4 fruitings. I made trips to northern Michigan's lower peninsula several years back for perch fishing and Hedgehog gathering. This sojourn was in early September. I've given it up in recent years; the fishing deteriorated and the mushrooms lost their habitat by having the woods clear cut.

Hedgehog Mushrooms are always found in the woods, or groves--always with trees in any case.

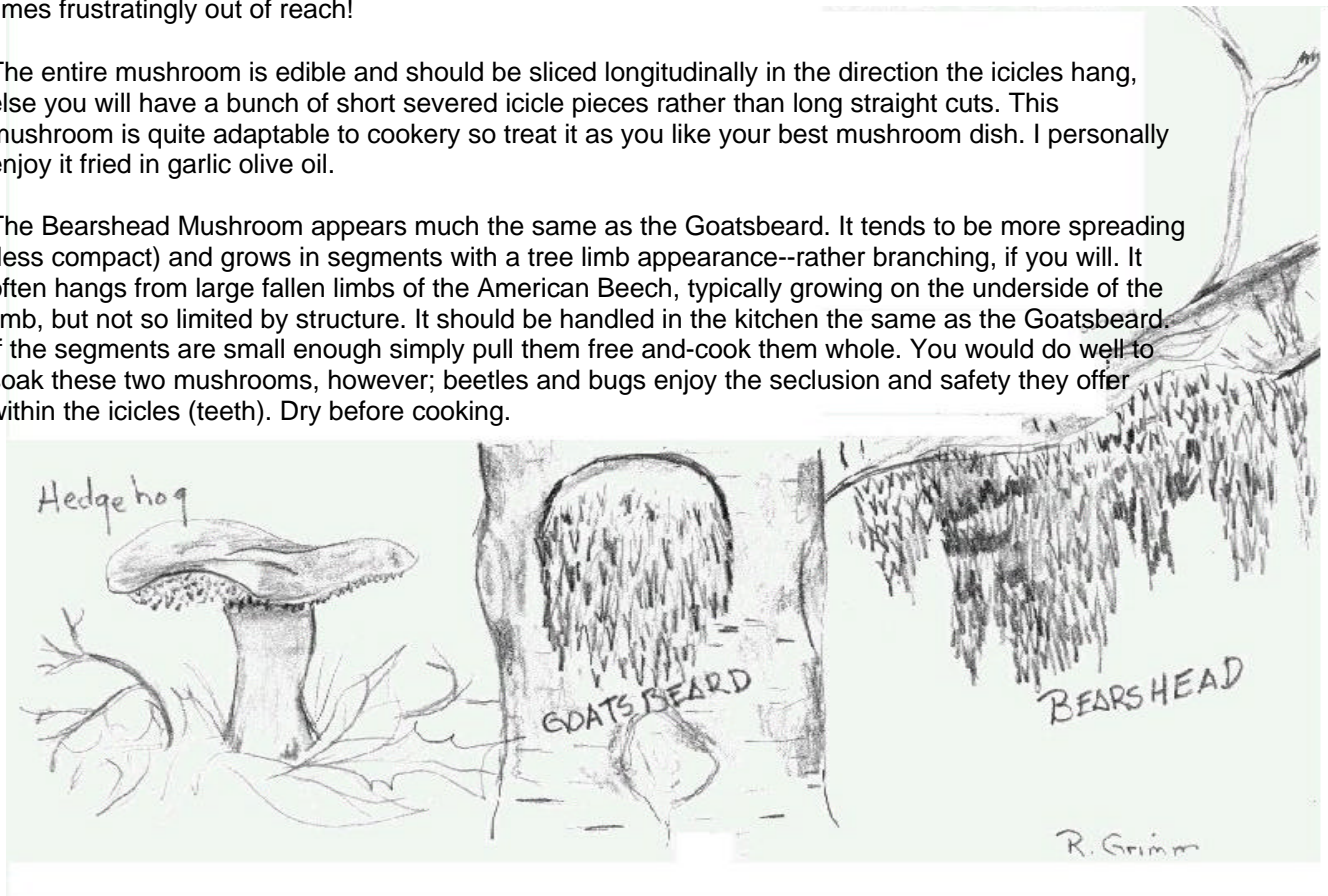
Hedgehogs are treated like most mushrooms regarding cooking. They adapt to most any recipe. They are quite solid and cook easily; they seldom become mushy in the skillet.

The other two tooth fungi of good edible qualities are the Goatsbeard and Bearshead mushrooms.

Both of these mushrooms grow on trees. The Goatsbeard could be described as an exploded softball. At maturity they appear as if someone threw a softball against a tree and it stuck fast exploding its insides out in long drooping icicles. Now that's probably far fetched as hell, but I have a vivid imagination and that's how it appears to me. It may be larger than that and it may be smaller. The icicles, as such, may appear as short spiny projections in the immature fruitings. The Goatsbeard Mushroom usually grows on the sides of trees and may appear at higher locations on the tree--at times frustratingly out of reach!

The entire mushroom is edible and should be sliced longitudinally in the direction the icicles hang, else you will have a bunch of short severed icicle pieces rather than long straight cuts. This mushroom is quite adaptable to cookery so treat it as you like your best mushroom dish. I personally enjoy it fried in garlic olive oil.

The Bearshead Mushroom appears much the same as the Goatsbeard. It tends to be more spreading (less compact) and grows in segments with a tree limb appearance--rather branching, if you will. It often hangs from large fallen limbs of the American Beech, typically growing on the underside of the limb, but not so limited by structure. It should be handled in the kitchen the same as the Goatsbeard. If the segments are small enough simply pull them free and-cook them whole. You would do well to soak these two mushrooms, however; beetles and bugs enjoy the seclusion and safety they offer within the icicles (teeth). Dry before cooking.



There is a soft polypore mushroom called either Hen of the Woods or Sheepshead, depending on where you are and whom you're talking with. It is very popular among mushroom hunters and is also very easy to locate. The main criteria for finding this mushroom is that you must know what an oak tree looks like. This may sound a bit curious, but Sheepshead always grows at the base of large, old, oak trees. I am not positive just which oak tree it favors--I guess I never paid a whole lot of attention, but I remember the ones I frequent each fall season are of the Black Oak complex. (Red Oak, Black Oak, Pin Oak, Burr Oak, Scarlet Oak etc.) The Black Oak complex has leaves that come to a point with a little extending bur at the termination of each lobe. The oaks of this group have large lobes which typically graduate into very small lobes at the end--this is where you will find the little pointed burs.

The White Oak group, by comparison, have their lobes rounded on the end. There are other differences of course but this leaf lobe clue seems good enough for mushroomers to find Hen of the Woods.

Seek out big, old, oaks. They needn't be in a woods necessarily; I had one of these big red giants targeted in a cemetery that offered me 3 to 5 fruitings at a time. This gift went on for five or six years before I left the city. It probably extended that time for several years--I never got back to the town to see. I haven't hunted it much where I live now but I noticed a tree on a city street (actually in a private yard) on my way to the mall one day about three years back. I noticed two lovely fruitings at the base of the tree. On my return from the mall, which put me on the correct side of the street, I stopped and asked permission to pick the double presentation. The resident, who obviously thought me some sort of nut, shrugged her consent. "You mean you eat those things?" she said, as do most non-mushroomers. I confessed that I did, feeling like a street person willing to partake of anything that wouldn't kill me. I have picked them now going on my fourth year. Last year the old Red Oak offered me three outstanding fruitings. I gave two of them to a couple of converts (that's converts, not convicts) who sang my praises and carried them away like a hound dog with a road kill. The other one I carried home and began to eat from it. I figured I should have it gone by mid-winter!

Sheepshead are very generous with their presentation. The mushroom grows in a large rosette as one would find a cauliflower. After it matures it forms a huge grouping of flat spoon-like fruitings at the terminal of each branch. Again, much like a cauliflower plant but not that compact. These flared out endings are blackish brown. They are more gray black when they are young and actually are better cooked at the young stage of growth. The total fruiting may range from 8 or 10 inches across, to a giant on the beach! It often exceeds a foot or more. Thus, you may feed your family or the whole neighborhood (if you can coax them to eat it).

Remember, Sheepshead is one of those habitat things (remember the fish tale?) where if you're not in the right place, oak in this case, you will not catch anything!

Sheepshead sautés well, and is excellent to pickle due to the tough consistency. Even though it is a polypore, it still cooks up quite tender. The shelf quality is probably the best of any mushroom you might pick. Refrigerated, a week to a week and a half is not unrealistic.

It is very cooperative; fruitings may be collected for several years. Even a few years after the tree falls or is cut, it will still produce.

Hen of the Woods

Cap:	A large cauliflower-like rosette.
Gills:	The fruiting has pores, not gills.
Stem:	Practically nil, branched at the base.
Spores:	Not applicable.
Season:	Early to late fall, always under oak.

This booklet has offered you two main things regarding the hunting of mushrooms. First, it has given you insight into some of the edible mushrooms in language you can understand without a degree in Latin 202. All the terminology is in English except where it was impossible to do so. This is mostly reflected in genus names of the mushrooms mentioned.

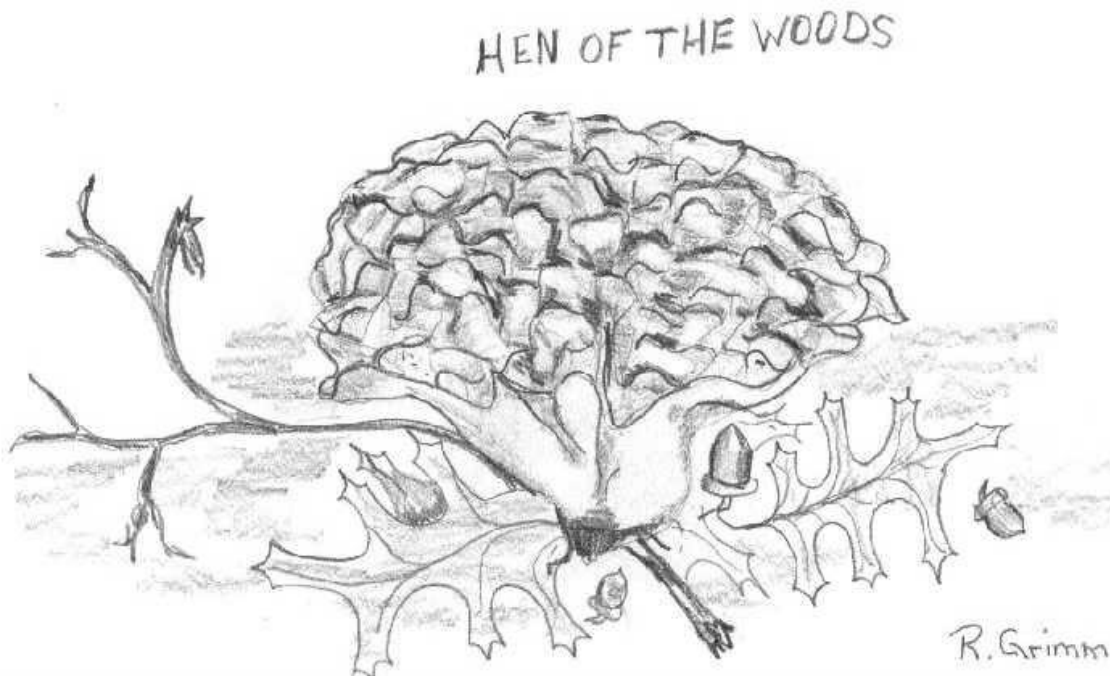
Secondly, It contains only those mushrooms deemed edible, and good to excellent, by my own standards, plus the consensus of mushroom gourmets everywhere. The book is not full of worthless mushrooms regarding edibility. Whether or not a mushroom is edible seems inconsequential if it isn't any good to eat. Ice cream is considered edible--so is the box it comes in. I needn't ask you which you prefer to eat. Most mushroom books are packed full of edible mushrooms that aren't fit to carry back to the kitchen!

The line drawings may or may not fit high quality standards but will suffice to get the point across--at least, I hope so.

Several very good edibles have been ignored in this booklet because of the possibility of confusing them with poisonous, twin like species. The mushrooms listed are safe as edibles if the I.D. criteria is strictly adhered to. Pages 1 and 2 in the book should be read and reread until they are fully understood. Beyond this, one must understand that food allergy is a personal problem and mushrooms may react differently on different people. When trying mushrooms for the first time, only a small bit should be tried (half a cap perhaps).

The last page in the book is a glossary of mushrooms in this book converted to the correct Latin names. This is provided so that the reader may apply the mushrooms herewith for further reading in modern manuals. The names are up to date and accurate, at least at the writing of this text. Mushroom names change so rapidly that one must not procrastinate for even a year lest the mushroom under scrutiny acquire an alias.

Please read the page on the poisonous Amanita group of mushrooms. If you learn nothing else about mushrooms, etch this page in your brain. The Amanita genus contains the most deadly mushrooms of all. They are not uncommon. You will encounter them as a mushroom hunter. Knowing this group will be a fail-safe defense against **serious** mushroom poisoning! There is a saying among mushroom hunters that you should remember and practice ardently: **when in doubt--throw it out!**



The Genus Amanita

No mushroom book would be complete without a discussion on the most dangerous genus regarding mushroom poisoning. Every mushroom hunter who hunts for the purpose of eating the mushrooms he or she finds should understand the Amanita genus. Further, one should be able to identify species of the genus before another species is ever put into the skillet!

The point of the subject here is to impress on mushroom hunters that some species in the genus Amanita are deadly. Not sickening--deadly! A single cap of a few of the species of this genus would be enough to be fatal to one who would eat them. With this in mind, let me try to make them recognizable. If you learned nothing else in this booklet ***learn the amanitas and be wary of them!***

There is a chart with a few line drawings following this discussion that will perhaps help you understand what to look for in identifying this group. Let's take a look at them. But first, let's take the genus as a whole, recognizing the fine points.

All of the line drawings begin with an unopened (button) form of the fruiting body. Typically this button is about half submerged in the soil with only about a fourth of it in view. The button is completely covered with what we call a universal veil. We discussed this earlier in the book but not as completely as we will here.

The universal veil takes on various forms in so far as consistency is concerned. It is rather tough and membranous in some species and graduates to more fragile and finally some that are very fragile in texture. I have coined a term for each of these so that they will be better understood as we move through the three groups. They are the (a) *elastica*; (b) *sub-elastica*; and (c) *non-elastica*. These names are not scientific but are simply vehicles for understanding without getting things too complicated.

The section *elastica* reflects those species that are at first covered with a rather tough membranous veil which is quite elastic and pliable as compared with the other universal veils. (See A. *Elastica* section, on chart.) This pliable universal veil stretches as the mushroom grows as described in the chart; because it is tough it forces the cap to remain encased until the very last moment when it can only push through the very tip of the veil.

By forcing the cap to do this, the cap is usually bald (without scales) because the universal veil only parts to allow the cap to pass through carrying with it no part of the veil on the surface of the cap. Occasionally, this type of veil may split in such a manner as to allow a few large patches on the cap surface, but not an abundance of scales.

Scales are brought about by the universal veil being caught on the cap surface and then drying with the outward forces of the elements (sun and wind). They then shrivel and become small particles of the veil scattered about the cap surface.

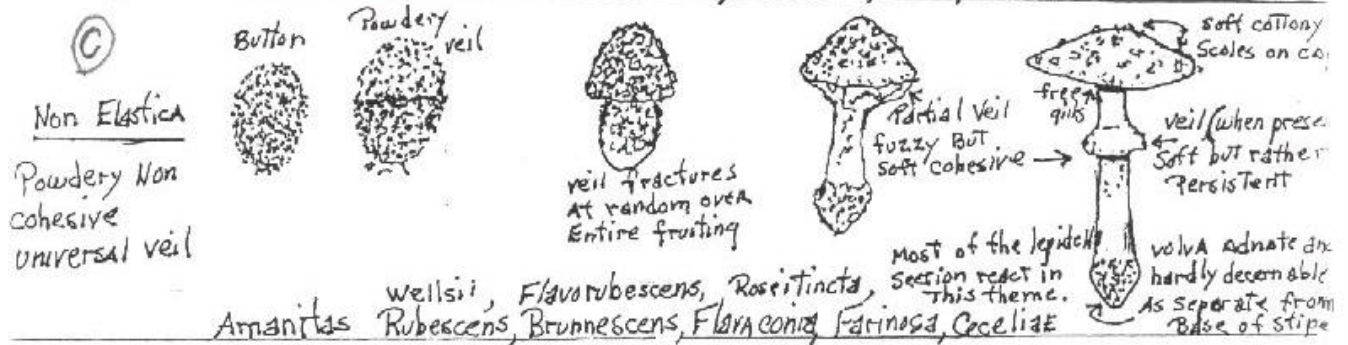
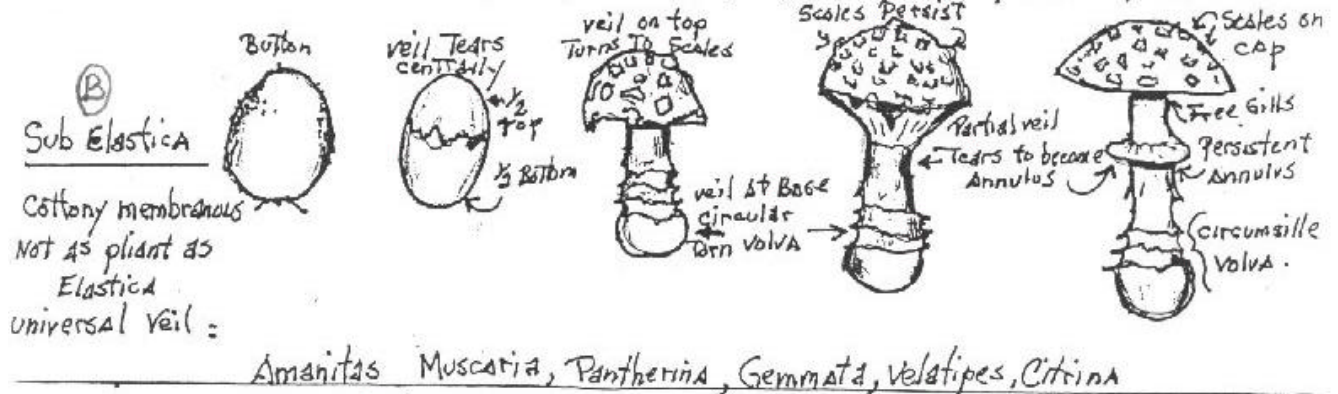
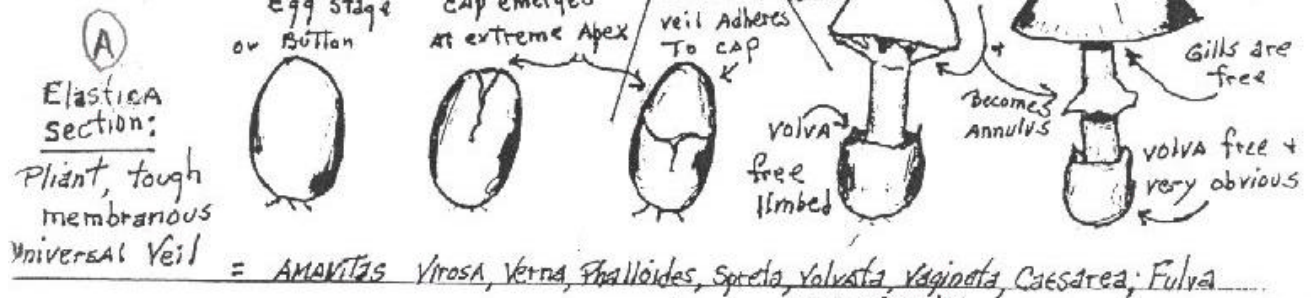
Since nearly all of the veil remains at the bottom of the stem, it remains as a much heavier and larger "sack" (volva) than on the sub-elastica or the non-elastica. This sack is usually not touching (free) the stem at the top margin. This is often referred to as "free limbed".

The partial veil is the only other veil on the mushroom and it covers the gills before the cap opens out like an umbrella. When the cap does open, this partial veil tears away from the margin of the cap and drops down onto the stem. This is referred to as a "ring" or more technically, the annulus. Some of the species in the genus Amanita do not have this partial veil; therefore they have no ring at maturity either. However, ***all amanitas have a sack of one sort or another***. It may be hard to determine in some of the sub-elastica group and even harder to determine in the non-elastica group. One thing is steadfast however: if there are scales on the cap, there is a volva at the base, of one sort or another!

AMANITA

Hats

N' Shoes



AMANITAS: Have white Spores, Always have a volva formed as described above (elastica, sub elastica, Nonelastica) Normally have free gills. Usually some sort of Annulus but this may be absent in some cases. Seldom grows without trees Present in near vicinity.

R. Grimm

In the B. Sub-elastica section the universal veil ruptures centrally, or nearly so. Because of this manner of splitting, nearly half the universal veil goes aloft on the top of the cap as the mushroom grows. This manner of rupture allows many scales to form over the surface of the cap. These typically remain with the fruiting unless washed off by the rain or blown away by the wind. Whatever the original color of the universal veil; that will be the color of the scales. This may be creamy, gray, white, or yellow, depending on the species. The ring in the sub elastica group forms in the same manner by the tearing and dropping of the partial veil. Volvas in the sub elastica section are seldom free limbed. However, most are very recognizable as volvas. Some adhere rather tightly to the base and are more difficult to discern.

In the C. Non elastica group, the universal veil is quite fragile and powdery in consistency. When it ruptures with the growth of the mushroom it simply explodes over the entire fruiting body. It may remain as a soft cottony patch adhering to the base, or, it may just form soft fragile particles over the base and stem alike. Such sacks (volvas) are difficult to determine as such and close inspection (often with the aid of a 10x field lens) becomes necessary.

Amanitas always grow with trees; they are therefore found predominantly in the woods. Nonetheless, a single tree growing in a lawn area could very easily support the growth of Amanitas--and often does! It is especially important that you police such areas if you have such habitat at your own home site if you or your neighbors have grazing age children who, as you know, eat everything they can get into their mouths. Be cautious in this case.

When you come across an Amanita, or what you suspect is an Amanita, dig it so you are sure to retrieve the volva along with the fruiting, and inspect it, paying attention to the characteristics here mentioned. You can never learn them if you don't look at them. If you bring them home to inspect them, don't leave them lay around where the family dog, cat, or--what would be worst of all--a child could get hold of it. You may as well offer them D-con!

I won't go into great detail about the ugly conquest of the poison on your body; trust me, it's horrendous. Don't mess with the Amanitas other than to know them better than any mushroom you pick. You lessen fatal poisonings to probably less than 5 to 10% by recognizing this genus. It is estimated that 93% of fatal mushroom poisonings in this country are related to the genus Amanita!



Glossary of Latin Names

(Mushroom names are not in alphabetical order but rather as they appear in this booklet.)

Oyster Mushroom	<i>Pleurotus ostreatus</i>
Winter Mushroom	<i>Flammulina velutipes</i>
Bell Morel	<i>Verpa bohemica</i>
Dog Pecker	<i>Morchella hybrida</i>
Black Morel	<i>Morchella elata</i>
White Morel	<i>Morchella esculenta</i>
Gray Morel (Immature)	<i>Morchella esculenta</i>
Yellow Morel (Mature)	<i>Morchella esculenta</i>
False Morel	<i>Helvella</i> or <i>Gyromitra</i> (depending on species)
Deer Mushroom	<i>Pluteus cervinus</i>
Chanterelle	<i>Cantharellus cibarius</i>
Horn O' Plenty	<i>Cantharellus cornucopoides</i>
Boletes	<i>Boletus</i> , <i>Suillus</i> , <i>Tylopilus</i> , <i>Boletinus</i> , <i>Gyrodon</i> ,
Sulphur Shelf	<i>Laetiporus sulphureus</i>
Pink Bottoms	<i>Agaricus campestris</i>
Shaggy Manes	<i>Coprinus comatus</i>
Sheepshead	<i>Grifola frondosus</i>
Hedgehog	<i>Dentinum repandum</i>
Goatsbeard	<i>Hericium erinaceus</i>
Bearshead	<i>Hericium corraloides</i>
Giant Puffball	<i>Calvatia gigantia</i>
Skull Puffball	<i>Lycoperdon craniformes</i>
Vase Puffball	<i>Lycoperdon cyathiformes</i>