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Foraging for Wild Plants
and Mushrooms

Today's Dietician
Vol. 8 No. 8, August, 2006
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Take a virtual foraging tour with nature guide Steve Brill and discover the edible world of wild plants and mushrooms.

Many health-conscious Americans who try to keep up with the latest in fitness, nutrition, and herbs don't realize that some of the healthiest plant and mushroom species grow in their gardens, backyards, and local parks and are overlooked or disguised as "weeds." Get to know some of these renewable resources and learn how to use them to enhance your meals and improve your health.

First, some wild plants and mushrooms are poisonous, so you must identify anything you're going to eat with 100% certainty. This is easy if you begin with a small number of very distinctive plants that don't have toxic look-alikes and follow them through the seasons. You may slowly add to your repertoire later. To learn more quickly, attend tours with a local expert.

Avoid contaminated plants in areas that have been sprayed and anywhere within 50 feet of heavy traffic or railroad rights-of-way. Collect only a small portion of common species where they are common to minimize your environmental footprint and forage more efficiently.

Japanese Knotweed
(Polygonum cuspidatum)

Japanese Knotweed Shoots

Japanese knotweed *(Polygonum cuspidatum)* is a safe, easy plant for beginners to recognize. Dense stands of hollow, bamboo like, red-tinged, green stalks up to 13 feet tall make this Asian member of the buckwheat family easy to spot. The smooth-edged, alternate, singly configured, nearly triangular leaves, with pointed tips and straight bases, grow up to 2-1/2 inches long and 4-1/2 inches wide. In the summer, long, lacy clusters of tiny white flowers emerge from the stem along with the leafstalks to be replaced with small round seeds embedded in tear-shaped membranes. This invasive species has taken over disturbed habitats, edges of fields, and thickets throughout the east coast, and it's

spreading to other parts of the country.

In early spring, you can eat the shoot, which looks like a fat, reddish, jointed asparagus stalk. Sour like its relative rhubarb, you can cook it in compotes and pies with 10 times the quantity of sweet fruit. The contrasting flavors are wonderful. Or, steam it for five minutes or until tender; add salt, pepper, and a dash of olive oil; and serve it as lemon-flavored side dish. It's also great in soups and stews.

The fattest shoots that are 6 to 8 inches tall are the best, but you can peel the tough rind off shoots up to 1 foot tall, too. After that, the plant becomes woody.

A nutritional powerhouse, Japanese knotweed is an excellent source of vitamins A, C, and rutin, along with the minerals potassium, phosphorus, zinc, and manganese. It's also a great source of resveratrol, the same chemical found in the skin of grapes and red wine that lowers high-density lipoprotein cholesterol and reduces the risk of cardiovascular disease.

And that may not be all. New research indicates that resveratrol may protect neurons from apoptosis (programmed cell death) induced by glial cells that have gone awry due to the amyloid plaques of Alzheimer's disease. Resveratrol is also being investigated in longevity research because it activates the same newly discovered sirtuin genes that increase the life span of animals on calorie-restricted diets.

Epazote
(Teloxys ambrosioides)

Epazote

Note the alternate (configured singly), long, narrow, wavy margined leaves and the lacy strands of tiny, green flowers.

This herb, virtually unknown in the United States, is as familiar as parsley in Mexico. The branching, herbaceous (non-woody) annual (living only one year) plant grows 3 to 5 feet tall, with alternate (unpaired), coarsely toothed (serrated), oval leaves 2 to 4 inches long and tapering leaf bases. Slender clusters of inconspicuous, tiny green globular flowers arise from the leaf axils (where the leaf stalk branches off from the stem). The plant is in season from mid-spring through late fall, flowering most of that time. It grows in disturbed areas (places where humans have removed the previous vegetation or overturned the soil) in full sunlight or partial shade. Crushing any part of the plant creates a fragrance that people who like it compare to pine. (Those who don't like it compare it to turpentine.)

It makes a great seasoning, fresh or dried, in Mexican dishes such as guacamole, chili, tomato sauce, and salsa, as well as in bean dishes—in which it also helps prevent gas—and rice. The flavor is somewhere between pine and thyme.

Caution: Use the plant in small quantities, the way you use parsley. People in Mexico have been using it safely that way for hundreds of years. Don't eat it as a vegetable dish because large quantities are toxic.

The resin kills parasites and it probably helps people in the American tropics reduce their parasite load. One hundred years ago, a concentrate, oil of chenopodium (epazote used to belong to the genus *Chenopodium)*, was a standard treatment for worms in the United States. However, the high doses sometimes caused fatalities. While it's still used as a vermifuge in Honduras and other Latin American countries, safer drugs are now used in the United States.

Wild Mushrooms

Europeans and Asians have been collecting wild mushrooms for centuries for their superb flavor, and herbalists have noticed health benefits. In Chinese traditional medicine, for example, mushrooms are believed to cleanse the arteries. It's remarkable how this was discovered, since dissection was forbidden by religion, but western science has upheld mushrooms' cardiovascular benefits. Mushrooms contain the insoluble protein chitin, the same substance that constitutes the exoskeletons of shellfish and insects. As chitin passes through the large intestine, it precipitates bile that otherwise gets resorbed and recycled. Bile is made from cholesterol, and to synthesize more bile, the body must mobilize cholesterol that might otherwise wind up clogging the arteries.

Mushrooms may also stimulate the immune system. Some species have glycoproteins similar to those on the outer surface of bacteria that may activate an immune response. Research in Japan shows that this may extend to slowing the spread of cancer.

Cook all mushrooms thoroughly. Some choice wild species (i.e., morels) will make you sick if eaten raw. Other edibles are of unknown edibility when raw because members of traditional cultures that eat mushrooms knew better than to take such risks. Although eating some species raw won't make you sick, all mushrooms contain hydrazines. These carcinogenic chemicals, used as rocket fuel, are usually dissipated by cooking.

As with plants, you must identify any mushroom you're going to eat with 100% certainty. Cultural phobias of fungi not withstanding, some easy-to-identify groups of mushrooms with delicious edible members include no poisonous species. These include the morels, chanterelles, puffballs, and polypores.

All polypores have the following three characteristics:

1. They grow on wood: live and dead trees, logs, stumps, and buried roots.

2. They all reproduce by dropping their spores (mushrooms are the reproductive organs of fungi) from pores, tiny holes on the undersurface.

3. They're roughly shelf shaped, not umbrella shaped.

Any mushroom with all three of these characteristics is a polypore.

Some polypores are delicious, others taste awful, and many are as tough as wood (you can cook these, but they come out tasting like cooked wood). But none are poisonous, so the worst you could do if you misidentify one is ruin a meal or break a tooth.

Chicken Mushroom, Sulfur Shelf
(Laetiporus sulphureus)

Chicken Mushroom from above

Note the overlapping orange caps with some of the white undersides showing.

This mushroom (now considered a species complex by mycologists) is one of the largest, easiest to recognize, most widespread, tastiest mushrooms in North America. The overlapping bright orange, flat, fan-shaped shelves, 2 to 12 inches across, are easy to spot from a distance. The underside may be bright sulfur-yellow or white, depending on the variety. The pores are so tiny you may need magnification to see them, especially when the mushroom is very young. The flesh is white, light yellow, or salmon, with the texture and odor of chicken meat. The only similar-looking polypore is the mediocre-tasting Berkeley's polypore *(Bondarzewia berkeleyi)*, but it's dull orange-brown on top, not bright orange, and it has large pores.

Look for chicken mushrooms at the base of living and dead trees and on logs and stumps in the spring, summer, and especially in the fall, when it's the most abundant. The fungus is most common on oak but will infest a wide range of trees. Finding 10 to 20 pounds or more is not unusual.

Avoid older specimens, which taste like sawdust. Cook fresh, young, moist chicken mushrooms with the same seasonings people use for chicken. You'll have the world's best chicken substitute. Include rice, noodles, or bread crumbs in the recipe if you want it to be filling.

As a vegan cook, I was so proud of creating such a good chicken sandwich facsimile with this fungus that I served it to a vegetarian journalist, certain that he'd appreciate my accomplishment. Instead, he refused to eat it. It reminded him too much of real chicken!

No one has researched the medicinal potential of this mushroom.

Hen-of-the-Woods, Maitake Mushroom
(Grifola frondosa)

Hen-of-the-Woods from above

Note the overlapping, gray, spoon-shaped caps.

This grayish-brown mushroom is well-known in Japan and Italy, where it was sold at the forum in ancient Rome. The lateral spoon-shaped or fan-shaped caps grow 3/4 to 23/4 inches wide, spreading from short white stalks branching from the mushroom's base. The caps overlap and cluster so the mushroom resembles a hen's tail feathers. The white undersurface is covered with tiny pores, easily visible under magnification. This mushroom grows at the bases of oak trees or on oak stumps or logs in the fall. Four-pound mushrooms are usual, and I once found one that weighed 50 pounds. It was much easier to identify it than to carry it out of the woods and mount it on my bicycle.

The black-staining polypore, also edible, looks similar, but it has larger caps that stain black upon handling.

Hen-of-the-woods has a rich, meaty flavor and a chewy texture. It's great in soups, stews, or rice, where the long simmering tenderizes it. And with the same seasonings that are used for seafood, it comes out tasting like crab meat.

This mushroom provides high concentrations of polysaccharides that stimulate the immune system, especially T-cells and natural killer cells. Studies have also shown it to support liver efficacy. Research in Japan has shown anticancer activity, and extracts are sold in health food stores and used by complementary physicians to help the body fight cancer.

Black-staining Polypore
(Meripilus sumstinei)

Black-Staining Polypore, side view:

Note the black stain along the left, leading edge.

This choice polypore is distinct because it turns black a few minutes after being handled or when the mushroom ages. It has clusters of fan- to spoon-shaped caps 2 to 8 inches across (larger than the similar hen-of-the-woods), colored whitish, grayish, or dull yellow. Unlike the similar, mediocre-flavored Berkeley's polypore, the pores are too small to see without magnification. Clusters can weigh from a few to 30 pounds. Its preferred tree is oak, living or dead, and it's common from early summer to late fall in eastern North America.

Use this mushroom when it's very young and tender before it becomes leathery. You should be able to pinch through the flesh with your fingernail. Its texture and flavor are like steak, especially with the same seasonings used on steak. You can sauté it in oil, but simmer it in a sauce or soup for 20 minutes afterward to completely tenderize it.

Research on its medicinal potential has yet to be done.

Beefsteak Mushroom
(Fistulina hepatica)

Beefsteak Mushroom

This juicy mushroom resembles beefsteak.

This polypore not only tastes like beefsteak, it looks like it. The flat, spoon- to fan-shaped, reddish (it turns brownish with age), slimy caps grow from 3 to 10 inches across and 3/4 to 11/2 inches thick. It's pink, gelatinous, and marbled inside, and when cut, it bleeds a reddish juice. Sometimes there's a red stalk 2 to 4 inches long and 3/8 to 11/4 inches wide.

You can find it on living and dead hardwood trees, logs, and stumps, especially oak, across most of the United States in the summer and fall.

While it's young, tender, and juicy, you can saute or simmer it in soups, stews, and casseroles.

No research on its medicinal uses has been conducted.

Dryad's Saddle
(Polyporus squamosus)

Young Dryad's Saddle Mushrooms

These mushrooms are best when the cap isn't much wider than the stem.

Dryads were mythological spirits of woodlands or water, and these saddle-shaped polypores would have made convenient seats for them. The flattened caps, 23/8 to 12 inches across, sink toward the stalk. The caps are dull yellow to brown on top and covered with dark brown, overlapping scales. The flesh is white. The cap's underside is dull white to yellowish and covered with pores large enough to see without magnification. Large, shallow pores run down the short, stout, stubby, lateral stalk, which is 3/8 to 2 inches long and colored like the pore surface on top but black near the base. Unlike any other fungus, this mushroom smells like watermelon rind.

You can eat this mushroom only when it's very young and tender, and you can pinch through the flesh with your fingernail. Marinate it overnight in oil, vinegar, and spices, drain, and bake 25 minutes on a rack over a cookie sheet. Pat dry with paper towels and you'll have one of the best mushroom side dishes you've ever tasted.

Research on its medicinal properties has yet to be conducted.

Wild Recipes

I've found that you can avoid dishes high in saturated fats and refined carbohydrates by using ingredients available in health food stores with similar culinary properties to those you want to replace. The results are highly unconventional and very tasty, and the addition of wild ingredients makes them even better.

Knot Ice Cream

Wild Guacamole

Lemon Mustard

Mustard Chicken Supreme

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