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A series of fact sheets on Minnesota's natural resources

State mushroom

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# DNR Reports

Minnesota Department of Natural Resources

## Hunting Morel Mushrooms

*The morel is edible, delicious, and easily identified*

THE MOREL is among the most easily recognized common edible mushrooms. In appearance, it differs from most mushrooms. Somewhat cone-shaped, it resembles a tiny Christmas tree with a large trunk. The morel's most distinguishing feature is its cap, which is tan to brown and deeply pitted. The stalk is somewhat paler and relatively smooth. The centers of both cap and stalk are hollow.

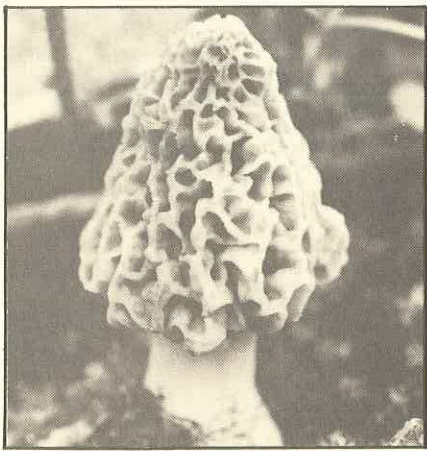
Morels are commonly about 4 to 8 inches high, though a friend of mine found one that measured 14 inches high with a stalk larger than his wrist.

In 1984, the Minnesota Legislature adopted one species of morel -- *Morchella esculenta* -- as the official state mushroom.

### Location

Morels are widespread and abundant, growing in a variety of places -- from lawns to deep woods. Morel hunters have found large numbers around recently dead elms. Perhaps nutrients stored in the roots become available to the morels when the tree dies. Morels are not likely to be found around elms that have been dead for several years.

Some people search in old apple orchards. Others prefer coniferous



*Morchella esculenta is the official state mushroom.*

woods. Still others look in stands of aspen. Recently burned areas have a higher level of plant nutrients and have produced large fruitings. But morels don't grow on wood; don't look for them there.

Bedstraw, a plant with small white flowers and whorled leaves, almost always grows where I find the most morels. Look for bedstraw and morels in damp places but not in swamps where water stands near the surface. A slope with a southern exposure is an ideal location for morels.

### Life History

Morels grow from early May to early June in the Twin Cities metro area. I have found them north of Bemidji around the same time they were appearing in the Twin Cities.

Some people wait until new oak leaves are the size of a mouse's ear. If you can't catch a mouse or find an oak, wait until lilac buds are about to break, bracken ferns are still curled up like a fiddlehead, and hepaticas are in bloom. Then go hunting for morels.

The morel "plant," like all mushrooms, consists of delicate cobweb-size threads called hypha. The hypha slowly push through soil that is not too compacted, excessively dry, or poisoned by chemicals. The hypha of other species of mushrooms may grow through wood in some stage of decay or, in some instances, the wood or bark of living trees.

When just the right conditions of moisture, temperature, and nutrients are present, the hypha send up fruiting bodies, the part of the plant that people pick as "mushrooms." These fruiting bodies produce tremendous numbers of microscopic spores for reproduction.

### CAUTION

Now that you are about to rush out and pick and eat any mushroom that is somewhat cone-shaped or pitted, some words of caution. A few species of mushrooms are deadly poisonous; several are gastrointestinal irritants and cause diarrhea; a few are hallucinogenic; some, including the morels, may produce allergic reactions or an upset stomach in a few people; several species are edible and choice.

The edibility of many species is unknown. The wise choice: to eat only those species that are easy to recognize and to avoid those species that have poisonous look-alikes.

To aid identification, use a field guide with good drawings or photographs. Beginning mushroomers should select recent mushroom guidebooks written by local authors and describing relatively few species. As your knowledge expands, select more complete books.

You may want to join the Minnesota



Mycological Society, active since the 1890s and the second oldest mushroom study group in the U.S. For information write: Minnesota Mycological Society, 4128 Seventh St. N.E., Minneapolis, MN 55421.

### True Morels

Here is a basic guide to identifying morels.

*Morchella* is the genus of the "true" morels and includes different species.

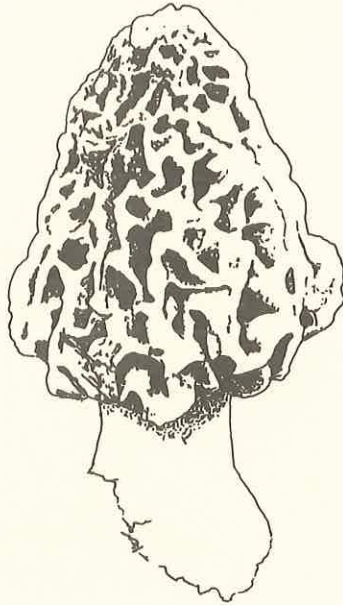
The first to appear in spring is *Morchella elata*, sometimes called the "black morel." It is slender and pointed, the pits long and narrow in vertical rows. The ridges blacken with age. One mycologist states that it may cause stomach upsets if eaten with alcoholic beverages, though I have not known anyone who was bothered by it.

Next, the *Morchella esculenta*, or "yellow morel," appears. Its cap is 2 to 4 inches long; its stalk also is 2 to 4 inches long. It is yellowish or tan. The ridges are lighter colored than the pits.

Then comes *Morchella crassipes*, the "big-foot," often 9 to 12 inches tall. Some authorities say it is the same species as *M. esculenta*. If you mark what you think is *M. esculenta* and return a day later, it may have grown into a big-foot.

*Morchella deliciosa*, or "white morel," is often the last morel to appear. Its cap is 1 to 2 inches long; its stalk also is 1 to 2 inches long. It has pale-white ridges and darker pits.

*Morchella semilibera*, or "half-free morel," is less common. The short cap may be less pitted and more wrinkled like *Verpa*, a "false" morel. Some authorities say it should be classified with the *Verpas*. However,



*Morchella esculenta*

unlike a false morel, its cap is attached midway down the stalk and it is edible.

You may wish to pick *M. esculenta*, *crassipes*, and *deliciosa* and disregard the others. The flavor of these three is truly superb. Morels are best sauteed with a bit of butter and perhaps a touch of seasoning. They may be used in soup or added to steak. Morels may be dried, or sauteed and frozen. Once dried or frozen, their flavor improves with age.

After growing for a few days or a week, morels begin to fall apart. Just as you are not likely to eat a half-decayed apple, you should leave old morels as seed for another spring. People who report finding a morel during the fall have likely found a stinkhorn. Its odor of rotten meat will tell you it is not a morel!

### False Morels

Mushrooms closely related to the *Morchella* are *Verpa*, *Gyromitra*, and *Helvella*. *Verpas* are regarded as edible by some authorities, and as

poisonous by others. I have eaten them a few times, though their flavor is inferior to true morels.

*Gyromitras* were once generally considered to be edible; now some species are known to be poisonous. Some people cook *Gyromitra*, being careful not to breath the delicious odors. The toxins (poisons) are very volatile and escape during cooking. Inhaling the fumes may be deadly, but eating cooked *Gyromitra* may have no effect. The cooker is in more danger than the eater. Further, the toxins are cumulative, so while one meal may cause no symptoms, an additional meal may prove fatal. If more than a certain amount is eaten, enough toxin is consumed to induce a negative reaction. Deaths have occurred from eating *Gyromitra*.

*Helvellas* are uncommon, not recommended, and considered poisonous.

How difficult is it to tell true morels from false morels? True morels have their cap attached to the stalk near the bottom of the cap; false morels have the cap attached at the top. True morels have deep pits in the cap. The caps of *Gyromitra* have wrinkled, brainlike folds. *Verpa* caps are short and wrinkled, resembling a tiny bell or skirt. *Gyromitras* are generally found in northern Minnesota in stands of jack pine; true morels are found throughout the state. *Verpas* are found very near the edges of swamps, usually before *Morchellas* are out.

*This report was adapted from an article written by Herb Harper in The Minnesota Volunteer. Harper is the author of Mushroom Reference Guide, a reference to 1,765 species, to be used with a field guide. Available from: Herb Harper, 8975 North Shore Trail, Forest Lake, MN 55025.*

