



Tom and two-wheeler at the Golden Gate Bridge



# Morel Booster™

Morel Mushroom News From Morel Mania, Inc.

Editor: Tom Nauman

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## Morel Season - 2010

### Not Much To Write About

For most of us, the 2010 morel season was one of the worst (if not **the** worst) we can remember. The problem, as mentioned in the last issue, was mostly due to the heat wave that occurred the second week of April. The entire Midwest experienced more than five days of temperatures in the upper 80's. Additionally, most of us did not get any measureable rainfall until April 23rd. For morel hunters, this was "The Perfect Storm".

There were a few, but far between, pockets of prosperity. And, they certainly weren't anywhere near any locations I visited. That's probably why you haven't seen new issues of the *Morel Booster*™ since April - I've had a bad case of "Morel Depression".

I was supposed to spend a week or two with my friend, Alex, foraging wherever there were morels. Alex and I are "Morel Vagabonds" in that we will travel hundreds of miles, sleep whenever and wherever possible (which usually isn't real comfortable or often enough), and subsist only on meals purchased through drive-up windows because there just isn't time to dawdle. Our only purpose is to locate the Motherlode. But, Mother Nature and Father Time did not cooperate.

I have to remind myself of the Chicago Cub fans' mantra, "Wait 'til next year". Let's hope (like Cub fans) that we don't have to repeat it for the next hundred years!

Instead of joining Alex, I accompanied my brother, Dave, on a motorcycle trip to the West Coast (see picture above) to visit another brother, his wonderful wife, and two of their sons and families in CA, OR, and WA. The trip included twelve days, 5,500+ miles, fourteen states, and a terribly sore rump.

I returned home and found reports in emails of bumper crops of morels being found in the Pacific Northwest! I probably rode within a few hundred feet of some, but didn't stop to look. My usually great Karma must have been on vacation.

For those readers that need a morel "fix", we've got an ample supply of dehydrated on hand.



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## Readers Write

Tom, I'm attaching some pictures of a late growing mushroom we found a few days ago (05/16/10). We found "zero" during what should have been the season here (Oklahoma), but found these and a few more like them after a lot of rain. It is divided about 50/50 between the "experts" around here as to whether this is a good one or not. It has a very strong odor the stem is hollow, and the cap is loose around the bottom like a skirt. I'm interested in your opinion of it. Thanks, *Jack A.*



Hi Jack, The "experts" that are saying "no good" are correct. What you have are stinkhorns - *Phallus impudicus*. They are often mistaken for morels. They emerge from an egg-shaped "volva" in the ground and are usually considered a Summer or Autumn mushroom, but can obviously be found in the Spring also.

When fresh, there is an oily slime covering the cap that smells like rotting meat. The aroma attracts flies and other insects which devour the slime and it sticks to their feet. The slime contains the spores, so the insects are helping in the reproductive cycle of this particular mushroom the same as

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flowers - bees - and pollen. After the insects have cleaned the slime away or a rain has washed it away, what's left resembles a morel - except for the cap attachment and the traces of the aroma. I've read that they are a delicacy in China when still



underground in "egg" form. I doubt you could get past the aroma once it reaches maturity.

Here's a picture of a different stinkhorn that we find every year in our rose garden. These seem to attract bees rather than flies.

I believe this one is a *Mutinus caninus*. Thanks for asking. *Tom N.*

For more info, google "Phallus impudicus" or visit Michael Kuo's page at: [http://www.mushroomexpert.com/phallus\\_impudicus.html](http://www.mushroomexpert.com/phallus_impudicus.html)

Taylor Lockwood also has some amazing pictures of many different stinkhorns. See the section titled "Wild & Weird at: <http://www.fungiphoto.com>

### Ash Trees and Morels

In issue No. 7 under "Readers Write" Melinda W. asked about the effect the Ash trees dying from EAB (Emerald Ash Borer) would have on the morel crop. EAB is killing millions of Ash trees in 14 states and two Canadian Provinces. More info at: <http://www.emeraldashborer.info/>

Melinda wanted to know if EAB would produce large amounts of morels near Ash trees similar to what happened when Dutch Elm Disease (DED) first appeared in the 60's and early 70's and killed many of our ancient elms. We had an unbelievable amount of morels. It was the stuff legends are made of and those of us that witnessed it will pass stories of it on to several generations. In fact, it's hard for us old-timers to discuss without getting all choked up.

Many morel hunters don't even look around Ash trees. And, some only look near them without even considering Elm trees as a morel hot spot. Most successful morel hunters search for both.

The big difference is that an Elm will produce large quantities of morels **when it dies**. An Ash tree produces morels (usually smaller quantities) **while it is living**.

I had the good fortune to spend several days mushroom hunting at a private club in the Northeast portion of Michigan's Lower Peninsula in April. There were virtually no Elm trees but thousands of Ash on the property. Every Ash tree I saw looked to be "stressed".

In my opinion, nutritional stress can cause large flushes of morel fruitings. The mycelium of the morel is underground and has a symbiotic or mutually beneficial relationship with the tree. The mycelium feeds on the root system of the tree and breaks down nutrients so the tree can absorb them easier. When the tree starts to die, the mycelium experiences "nutritional stress". It's

-Continued , see *Ash Trees* on page 3

## Mushroom Events

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<http://www.shroomfest.com>  
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Our friends, Elinoar Shavit and Britt Bunyard will give presentations.

### • 25th Annual Mushroom Festival • Kennett Square, Pennsylvania

<http://www.mushroomfestival.org/>  
September 10 - 12, 2010

Not much to do with morels, but still very interesting. 65% of the mushrooms consumed in the USA are grown in Southern Chester County.

## Where We'll Be

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~ Laura Benedict

## Ash Trees - continued from page 2

probably a physical response, but could be chemical as well. The mycelium “senses” that it is losing its source of nutrition and could possibly die itself. So it activates its survival mechanism - the morel mushroom. The morel will produce spores which will produce more mycelium.

This explains the relationship between Elms and morels, as well as the morels that occur after a flood or forest fire. But, as I mentioned earlier, an Ash tree produces morels **while it is living**. I'm not sure why. It could possibly be nutritional stress or maybe it's just the normal life-cycle of the mycelium. I have never seen a dead or dying Ash tree produce morels.

Moreldom is unsure at this point as to what effect EAB will have on future morel crops. Here are some additional thoughts from Darrell Cox:

Tom, With regard to the question of whether to expect morel flushes after ash trees are killed by the Emerald Ash Borer (EAB), my opinion/guess is no, it ain't gonna happen.

As you have pointed out, the situation with ash is morels fruit around living ash trees, whereas with elms, as most know, the big fruiting is the first spring after the death of the tree, when the bark is still tight. I have experienced situations where a large ash tree, around which I have collected many morels for several years, is suddenly killed..... lightning, chain saw, ... whatever. Each time there are/were no morels produced ever again by that ash.

I'm betting that's what will happen with ash trees killed by EAB. BTW: My observation is that, in IL the association changes from largely black morels around living ash in southern IL, to black or esculentas in central IL, to all esculenta in northern IL and WI.

My experience in MI is limited, but I've only found esculenta around ash in central and northern MI. I've had people in IL, MO, WI, and MI ask this ash/morel question, so it is clearly something that is on people's minds. Why? Evidence has been accumulating for some time, from the experiments of different researchers, that morels can be mycorrhizal, that is their mycelium can form an association with the roots of some trees, which benefits both the tree and the morel.

We know that mycorrhizal fungi are sometimes stimulated to produce mushrooms when things are not going well for them and their host..... like the poor health or death of the tree.

The function of a mushroom, of course, ain't to make something nice for you and me to eat, it's a reproductive structure containing DNA of the species and other goodies in spores, which function as a mechanism of transporting the fungus to another place, hopefully to a better place, for perpetuation of the species.

So why doesn't the association of morels with ash mirror that of morels and elm? I don't know, but, if I'm right, that's the way it is and people leaning heavily on ash trees pointing the way to successful morelling had better get ready to switch to plan B.

Who knows, we could have people in the future walking through the woods and actually looking at the ground instead of up at the tree tops. Might even have fewer people falling into old wells. ~Darrell

## Cultivated Morels

It never fails, I'm at an expo with my morel wares displayed and an observer states, “The person that figures out how to grow these commercially will sure be rich”. My standard answer is, “Actually, the process has been figured out. But, no one has gotten rich from it.” I then produce a picture or pictures from any number of books on hand that show morels growing in a laboratory. I also then mention that no one has yet become wealthy in the process.

Scientific papers documenting attempts at growing morels date back to the late 18th century. But it wasn't until the early 1980's that things really started to happen. Dr. Ron Ower, of San Francisco, published a paper claiming that he had successfully grown morels. From what I understand, he had a hard time convincing anyone of the veracity of his claim, until a group from Michigan State University and Neogen Corp., both of Lansing, Michigan, invited Ower to prove his claim.

Ower was successful and a patent for the process was granted in 1986. However, Ower was murdered in a street crime in San Francisco just prior to the patent being granted.

The rights to the patent were purchased by Dominos Pizza. I don't think the intent by Dominos was to put morels on pizza, it was an investment. In the early 1990's Dominos built a farm (Morel Mountain) in Mason, MI and at one point grew 500 pounds per week - year round! Larry Lonik and Dr. Gary Mills were both involved in the venture.

The process was demonstrated by Dr. Mills on the PBS show *Scientific American Frontiers*. It's a 26 step process and details may be seen at:

<http://www.thefarm.org/mushroom/morel.html>

I stated above that no one has become wealthy in the process. Understand that I've never tasted cultivated morels, so I can't speak first-hand. But, apparently there has been a problem with the flavor of cultivated morels in that they are not the same as the ones found in the wild.

For this and possibly other reasons unknown to me, the rights were sold to Terry Farms in 1994. Terry Farms produced other mushrooms at several different locations and constructed the morel operation in Auburn, Alabama. Before even the first morel could be grown, the facility burned to the ground and had to be re-built. Dr. Mills accompanied Terry Farms to Alabama while Lonik began his own operation in Hardeeville, SC.

While both operations were successful in growing morels, both failed financially. Rumor has it that Terry Farms spent so much on a lawsuit for patent infringement against Lonik that it bankrupted the company.



More recently, Dr. Mills has been involved with Diversified Natural Resources of Scottville, MI growing morels and several other varieties of exotic mushrooms. Larry Lonik passed away in April of 2003.

I'm also getting reports of a successful operation in Israel named Gavish-Galilee Bio Applications. I understand that the process is entirely different than that for which the original patent was granted and that the flavor of their cultivated morels is closer to those found in the wild.