

**They indicate something about matsutake. It's too early, late, or matsutake likely fruiting nearby.**

**Many other fall mushrooms are certainly formed and triggered (begin to grow fruit) by temperature. There is little or no information of individual mushrooms needs.**

**Yellow and White Chanterelle are almost always before matsutake. Occasionally they may start together. The reason being, trigger temperature. Just as a low temperature can trigger a large area of matsutake, the trigger temperature of one or many varieties of mushrooms may be reached.**

**A variety of Red Russula marks the end of the season. Only a minimum of fresh fruiting will occur in that area. A much lower elevation, sunnier situation or aspect may be well before peak.**

**Yellow corral is most commonly found near matsutake. The trigger for yellow corral is just a little above matsutake.**

**Formation requirements are likely different. There can be corral and no matsutake, matsutake and no corral.**

**Commercial harvesters use yellow corral more than any other fungi to guide them to mushrooms.**

**It's not only the type of mushrooms you see, age is also an indicator. Note the age and type of any mushroom you see. Matsutake may be found with an observed variety and age mushroom.**

**It is impossible to say what type of indicator you will find.**

**Every area has its own fungi system. Each year could be different. Examine the clues nature provides you that year.**

#### **ANIMAL**

**A variety of animals harvest and eat matsutake. During the process, there is a varying degree of disturbance to the forest floor.**

#### **WOOD RATS**

**Wood rats eat them in place or harvest them. Their nests, mounds of sticks, are easily seen from a distance. Watch for signs of digging. You may see bits of mushroom nearby.**

#### **DEER**

**Deer are the superior hunters of matsutake in the forest. Usually the first to find fresh fruit, which they prefer. They paw the ground and kick them out. Watch for their trails and disturbance nearby. Trails that are well traveled usually lead to fruiting areas.**

**These maps indicate general cooling patterns. Areas that are shaded by geological features receive less sun, and cooling begins. The size of the area effected depends on the depth and length of cooling.**

**Fruiting may be limited to a small portion of one of these areas**

#### **MUSHROOM FORMATION**

**No mushroom may be harvested, if it is not first formed.**

**Biological needs are elusive. They are certainly important, but seem to be sufficient every year. Water has little or no effect during this stage.**

**Daily temperature average is the most critical.**

**Formation begins in the fall when soil temperatures fall below 58-60 degrees F. Mushroom formation begins as temperatures rise 5 -12 degrees. This type of warming is known as a heat bubble. Not enough or too much rise severely limits or stops formation. It is typical in hardwoods to have too little rise.**

**Continuous cooling with only slight warming, forms no mushrooms. Eventually soils cool beyond formation limits and will produce no mushrooms that year. As little as three days of proper temperatures is enough to form commercial amounts.**

**Formation patterns have been recorded up to 30 days.**

**There are 3 patterns for formation cooling. The short 3 to 5 day cycle, 3 to 5 day repeats, each cycle cooling further. The third pattern produces the bumper and banner year crops. Extended warming 5 -12 degrees, 2 - 3 weeks. On site temperatures are not necessary. Temperatures from a town nearby or local USFS will do. Many harvesters develop a feel for good formation period.**

#### **TRIGGER TO FRUIT**

**This is the stage the mycelia begins to develop formed fruit. The term commonly used by commercial harvesters is flush.**

**A temperature lower than the previous formation low, triggers a flush. Flushes can vary in intensity depending on how much lower a trigger low is, and the amount of fruit formed. 1 degree drops may trigger only a few. Where as a 3 degree drop triggers all that are formed. Continuous drops or insufficient warming, interrupts the process, formed mushrooms deteriorate. All information available indicates 46 degree, soil temperature at mycelia depth, as trigger.**