

Fire and Fungus: an Etymological Journey, by Tamara Spillis

This author is not an etymologist, but works as a taxidermist and teaches ancient living skills such as brain tanning of leather; bone and stone tool making; and identification of edible, medicinal and useful plants. I enjoy learning about life in all its wonderful forms. In truth, I am a philologist at heart, and taxidermist by trade. This article is a compilation of facts and not a few speculations. It attempts to weave a network of insight from personal experience, research, friends and mentors. A net (a classic instrument of ancient technology) is mostly open space, with any number of strands tenuously fastened to warp or woof. The objective is to contain a quarry with minimal outlay. Perhaps the reader will add, delete or rearrange some strands in keeping with their own experience and erudition. The content is old, merely rearranged. As Solomon opined truly, there is nothing new under the sun – it is we who are newly informed. Perhaps some meditations and musings are unique, though, for imagination is a personal light, limited by opportunity, education, experience, time and choice.

Generations lay down to molder. We survey their worlds posthumously by text and artifact. Were not endeavors written and artifacts recovered, the past would be inscrutable. To presume to peer into the ancient past without such tangibles is as presumptuous as forecasting the future.

Time and technology are rulers by which humankind has measured much of its existence. Time is an ally, a healer and thief. Technology is at once seducer, benefactor, and reducer. We are where we are now, but how did we arrive? As time and technologies advance, bridges are burned. We can't go back the way we came. One generation quits a complicated labor or time-intensive process for effective simpler methods, several generations pass, living links and memories die and a bridge is burned. And then there is attrition, both natural and manmade. Cataclysms or wars expunge entire bastions of culture. Memories, language, trades, arts, peculiarities based on resource and experience are rubbed out. Do children of today know why the might of an engine is measured in horsepower or the brightness of a light in candles? In our world, horses are for parades, and candles are for cakes: rel-

ics unrelated to daily life. Humanity rushed from candlelight to atomic power within one lifetime. Edison invented the incandescent light bulb in 1879. In 1945 Hiroshima and Nagasaki were blown infernally heavenward in a mushroom cloud. Ironically, it seems fire power and mushrooms have an ancient and historic marriage. Fungi are wed inextricably to weapons, technology and light.

This two-part article will attempt to uncover and reconstruct some of the lost technological uses of fungi in an armchair hike through history, artifact and language. In this winter issue our travel itinerary will lead us through Rome, Greece, Egypt and Italy. We'll travel through terms such as touchwood, moxibustion and nuptial bliss (a kind of fire), hit the dictionary to grasp the vernacular. So where to start on this journey? Let's begin with finite islands in time and language; as determined by artifact and text, then consider legends and myth and lastly speculate as to where and why the bridges burned.

Islands in Time – The “Ages”: Stone, Copper, Bronze and Iron

The “ages” were named for the resources that best characterized human endeavors and technological progress. Anciently known as touchwood or tachewood, the use of mushrooms for fire did not begin or end with any particular “age”, but gradually ebbed as other fuels and tools were developed and as natural reserves of fungi were depleted. There is evidence supporting the use of fungi for fire from the Iron Age back through the Copper Age. For the sake of argument let us regress.

Iron Age: 1000 BCE to Present

I have been using flint and steel to throw or strike spark on mushroom char for campfires for many years. It was taught to me by a fellow camper. To do this a piece of charred polypore¹ is held coupled in the hand with a flint pyrite.² As a precaution, protect your eyes. Flint is glass; if you are careless you may shatter the firestone and injure yourself. A “striker” of high carbon steel is brought forcefully, in a glancing blow, across the sharp edge of the flint. This in effect shaves splinters off the striker. The friction ignites the iron splinter and creates sparks ranging in temperature 450 to 500 degrees Fahrenheit (as shown by a tem-

¹ That is, a polypore (or conk) that has been incompletely burned, to make it into charcoal. – LS

² A pyrite, in the word's older, more general sense, is a stone that one can use to make fire. So flints started out being pyrites. The iron-bearing rock currently known as pyrite is so called because it can also be used to (like a steel blade) strike fire. – LS

Tammy replies: They were named because they originally did what the first ancient pyrites did: they were used to bore (pyr). But the striking of flint and steel put two pyrites (the old and the new) together in a way that was really new. The flints were the originals; everything that did the same thing was named for them.



Modern Technology (clockwise from upper left): charcloth, iron, a charred polypore, and flint

pering color chart for steel). These sparks fall and embed in the fungus-char. Another way is to lay the char on the ground and hold the flint very close to the char. At first it is imperceptible that a spark has taken hold of the touchwood. A tiny white fleck will appear. You need do nothing to inspire it. It will begin to draft (draw) oxygen through the myriad chimneys formed by the polypore and gradually crawl through the char. The black chimneys whiten, with a subtle fiery glow underlying the ash... What a thrill to see the coal begin to breathe! Draft is crucial. Imagine sucking air through a garden hose in contrast to a soda straw: the smaller the tube, the more restricted the flow or draft of oxygen. The smaller the diameter of the pores, the tighter the draft and the slower it burns. More growth layers also lengthen the life of the coal, by slowing draft as a damper does in a chimney flue. Pore size will differ in species.³ Annuals have usually one soft layer. Perennials have several rigid layers and are the better choice for char. Other tinder is nested around it to build the fire. Shredded cedar bark or teased hemp twine ignites easily, then add kindling. A fun-

gus charcoal the size of a quarter can live forty to sixty minutes, depending on the number of pore-layers and the tightness of the draft. The pictured charcoal is *Ganoderma applanatum*, artist conk.⁴ Also dependable are *Fomes* and *Phellinus*: the pores do not collapse when charred and draft slowly but freely. Note Storm's accompanying article detailing fire drilling and fire striking with various uncharred annual and perennial species. In the next issue we will describe making fungus-char and other forms of pyrotechnic fungi.

Today, this technology is hidden but not gone: flint and steel are found within the pocket lighter. The technology is refined and compact, and the fuel is gas or liquid. Char-cloth⁵ is also used modernly; but in ancient times, textiles were precious and not easily obtained nor wasted.

Bronze Age 1400 BCE— 0 BCE

Ancient Greece was a blend of Minoan (2800 BCE Crete) and Mycenaean civilizations. The Mycenaeans are thought to have come from Asia Minor in immigrant waves circa 2000-1100 BCE. Greece gave us such words as technology, textiles and texts. A valuable combination: artifacts and words. In 1400 BCE, Mycenae (the Mushroom City) was supposedly founded when the mythical hero Perseus picked a mushroom (myces), perhaps with a cap, and drank from a stream that appeared. They also gave us the word "fungus" (and many related words) as we will discuss in the etymology section of the article.

In his book *The Dictionary of Word Origins*, Joseph T. Shipley states "The

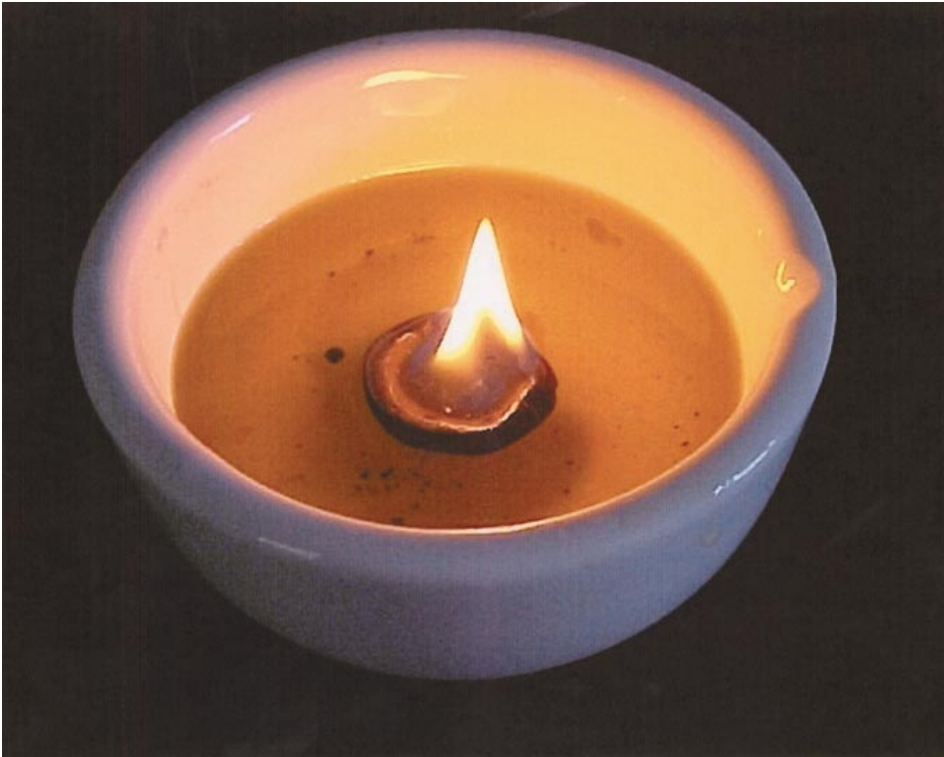
early lamp was a basin with a wick floating in oil; the Romans developed the type where the wick comes up within a horn (now glass) case for protection."

Here we have a description from which a hypothesis may be formed and tested. An unnamed floating wick in unnamed oil was used by the Greeks and Romans for illumination. It is known from ancient texts that pig fat, beef tallow and olive oil were used as fuels. So we tested all three. In our first experiment, two ounces of lard burned for fifteen hours through a *Fomes fomentarius* (tinder polypore) wick. It seemed incredible. In our second experiment, two ounces of olive oil burned for twelve hours through a *Ganoderma applanatum* (artist's conk) wick. That was still amazing, and the comparison was useful. Both were very clean burning. The difference in burn time may have had to do with the different pore size of the separate species or perhaps the viscosity of the fuel. Lard, a saturated animal fat, started out semi-solid and warmed to liquid, whereas olive oil is unsaturated and liquid. The flames were light yellow and gave a bright radiance much like a kerosene lamp that uses a flat cotton wick. I was able to read easily by the flame. The polypores rested on the bottom of a ceramic dish, pileus up, and the oil did not fully cover it. Only when the fuel was spent did a smudge waft as the pileus carbonized. The conk wicks were reusable. Similar experiments were performed with *Fomitopsis pinicola* (redbelton polypore) and *Piptoporus betulina* (birch polypore) with varied success. A fine time was had, and scores of pictures taken.

Were polypores commonly used this way? There is another country to hear from in this twilight zone. *Smith's Bible Dictionary*, quoting Wilkinson's *Ancient*

³ Note that the two fungi most associated with fire-making, *Fomes fomentarius* and *Phellinus ignarius*, both have pores that are so tiny that the lower surface of the conk appears solid unless you examine it very closely. – LS

⁴ Note: although today we don't associate it with this sort of activity, the artist's conk is also a hard perennial polypore with very tiny tubes. Probably all such polypores were used for fire-making back when. – LS



Fomes wick floating in pig fat. Photo by Tamara Spillis

Egypt, states “ Herodotus, speaking of Egyptian lamps used at a festival, describes them as vessels filled with salt and olive oil, with floating wicks, but does not mention the material of the vessels.”

Here we have a similar lamp description. The wick is unnamed and floating but the fuel is known; salt and olive oil. So in the next test, one tablespoon of salt (sodium chloride) and four ounces of olive oil were mixed and poured deep enough to float the Fomes. Twenty ignition attempts failed. The fungus would turn belly up and extinguish. Was I discouraged? Yes. Suddenly, or not so, it happened; the eureka phenomena, I lit the belly and.... see above!

These experiments do not prove fungus was the wick but the possibility ex-

ists. The salt mentioned in the oil may have been sodium chloride (table salt) or salt petre, that is: potassium or sodium nitrate, which looks like rock (Greek petra) salt. Leon suggests that sodium chloride may have been added to brighten the color of the flame, because sodium burns yellow. I don't know yet. I decided to think this through and try it later since I almost burned off my finger and thumb in a related experiment; *Leon* had suggested trying an experiment with a dried charred polypore that had previously been soaked in salt petre.⁶ Just let me tell you this....it took only one spark from the striker and it went off like a Roman candle IN MY HAND. So you should never do this when you have company⁷ and especially NOT IN THE KITCHEN.⁸ My friend Dave Tyson and his wife Pam visited,

to help me work on this article. We set off the smoke alarm with these wick experiments. By the way, the beef tallow failed to burn. It would sputter and die within minutes of ignition. It plugged the pores, it was too viscous, but well suited to candle wicking. Rushes, reeds and canes were used as torches to carry tallow. It was a prehistoric fuel. Why weren't candles used sooner?

Copper Age 4000-1500 BCE

3330-3100 BCE The now-famous Iceman of the Tyrolean Alps, Ötzi, was found September 1991 frozen in a glacier, evidently a slow hiker. After five thousand years, he spoke eloquently of his world through his possessions. Which goes to show: you *can* take it with you... just not very far. Seventeen various woody plants have been identified in his accoutrements. Dressed in bear and other leathers with a grass overcoat, he carried with him a copper axe, flaking tools made of antler, an unfinished bow, sinew, finished and unfinished arrow shafts, leather thongs, ancient pyrites also known as flints or firestones, charcoal, “touchwood” known to us as polypore mushrooms, specifically: *Piptoporus betulina* and *Fomes fomentarius*.

I really liked this guy right away. He was a walking taxidermy exhibit. While people speculated why he carried the mushrooms, I knew! Food, Medicine and *Fire*. In our present world, bow and arrow mean hunting and, sometimes, weapons. But we hardly think heat and light (fire) and, even less, technology. In the accompanying article, Storm will tell you of the fire drill and its use with polypores to kindle fire. The Iceman could have easily started a fire with his bow, using an unfinished arrow (without a flint point attached) as a fire drill.

⁵ That is, cloth that is incompletely burned, like charcoal. See the storm's article in this issue. – LS

⁶ I did *not*! I said that I had read in a book that the conks were used as tinder after being soaked in saltpetre. Tammy told me that saltpetre hadn't been discovered in the Bronze Age. So I thought that was the end of it, but evidently I lit a spark...

⁷ I don't know. Depends on the company, I think.

⁸ And especially not in your hand.

Even without the bow, he could have taken a green arrow shaft, bent it, and attached a thong of plant fiber or leather to make a bow. If he had no fiber for bowstring he could have kindled with just his hands, vigorously spinning the shaft and applying downward pressure. All this was possible but, alas, now we've learned that his arm was broken.

Ötzi's copper axe was extremely pure, ninety-nine percent plus. This puts Ötzi squarely in the midst of the Copper Age or Chalcolithic Age (Chalco=copper; lith=stone): 4000-1500 BCE. Early copper smelting used native copper available near the earth's surface, and stone tools were still in use. Sounds like our man on the trail, and he was using mushrooms for fire.

Bear in mind that 1000 BCE was the beginning of the Iron Age: smithing, forging of iron weapons and tools. After native (surface) copper resources were exhausted iron was found in meteors and metallic pyrites which were used in smelting copper ore (not to be confused with flints which were the ancient pyrites) so the Iceman may have had access to iron, but he carried a fine *copper* axe. Iron was not found on him. He probably kindled his shrooms but did not *strike* a fire but drilled it instead. Like most of us, he was probably ahead of the curve, but behind the times. Ötzi died from the pierce of a flint tipped arrow that shattered his shoulder blade and rendered his arm useless. Thereafter he bled to death. All that work and then you die.

Language, Time and Speculation

The Greek word sphongos,⁹ later Latinized to "fungus", may have referred to boletes because they resembled sea sponges in form, feel and capacity for fluids. Sphongos is the Attic form of the more generally Greek word spongia, which refers to a sea sponge. The derived word "spunk" is first known from 1536 as a Scottish word meaning "a spark". Its derivation is given as from the Gaelic "*spong*", meaning tinder, pith, or sponge. A similar sense evolution took place in the Irish cognate "*sponnc*", meaning sponge, tinder, spark, courage, spunk. *Spunky* is first recorded from 1786. Similarly, "funk":

\Funk\, n. [OE. funke a little fire; akin to Prov. E. funk touchwood, G. funke spark, and perh. to Goth. f?n fire.] An offensive smell; a stench. [Low]

Fungi may have also teamed up with fire to give us some of our words for romance. And for string. Flint pyrites predate metals as piercing weapons and piercing, boring tools; like the mythical arrows of love, they make holes that burn. To **thrill** is to pierce, to **drill** as in carpentry work is to roll or spin a shaft to pierce wood. **Twill** is to roll two threads or thongs as in making cord, which is twisted intestine or gut that would be used for the bowstring. These and the word **fire** are directly traced to **pyr**,¹⁰ but a fire created by torque, twisting or boring, not by *striking* against iron. The pyrite was fixed in a shaft and could be driven by hand or a bow. When a bow was used, a bearing made of stone or bone applied pressure as the shaft bored. The words bore, burn, bearing, torque and torch may all have their origin in the fire bowdrill.

Even the word "agaric" may derive from firemaking practices. The Latin word for bow is arcus. The Indo European roots **Ar-**, **Are-**, **Arg-** and **Ark-** all have to do with bows and arrows (weapons or drills) and weaving (spinning fibers and thread) building with wood (architecture, carpentry) or brilliance (white, shining). *Agarics* are now generally thought of as the gilled fungi, but in ancient times, the word referred to polypores.

The connection with architecture may seem like a stretch, but until metallurgy evolved, early architecture and carpentry were dependent on burning and the use of the fire bowdrill. Perhaps some readers know that as recently as the 1800s, North American peoples were still making dugout canoes with stones as scraping implements and charcoal to bore (burn) out the cavity. South American cultures currently use this method. What does all this have to do with fungi? Touchwood quite probably was the charcoal used to accomplish prehistoric carpentry and architectural projects with bows (arcs) and bearings. Remember how slow and steady it burns.

This modern misnomer has burned a bridge to the past. Even the newest *American Heritage Dictionary*, the 4th Edition, is confused. Note this entry:

agaric

1. Any of various mushrooms of the genera *Agaricus*, *Fomes*, or related genera, having large umbrellalike caps with numerous gills beneath. **2.** The dried fruiting body of certain fungal species in the genus *Fomes*, formerly used in medicine, especially to inhibit the production of sweat.

⁹ All the unattributed etymologies are from *The American Heritage Dictionary*, the 1973 edition. The more modern editions remove some of the older fungal roots. Some "Heritage"!

¹⁰ Dr. Ernest Klein, *A Comprehensive Etymological Dictionary of the English Language*

¹¹ For those of you interested in the ancient etymology of *agaric* and other similar words, there's a whole chapter on the topic in John Ramsbottom's wonderful book *Mushrooms and Toadstools*. Apparently the word comes from a neighboring tribe of the Greeks, the *Agarikoi*, who worshipped a polypore that they called the *agarikon* (and named their tribe after it). Ramsbottom blames Linnaeus for mistakenly applying the term *Agaricus* to gilled mushrooms, but I've seen it in polynomials that predate Linnaeus, so the error was already well established when he made it part of botanical taxonomy. It was probably one of those Renaissance guys, translating all sorts of classical texts, and usually doing so incorrectly. – LS



Top left: polypore charcoal, started burning with a spark from flint and steel.

Top right: Smoldering *Piptoporus betulinus*, shown with the flint pyrite and steel used to throw the spark onto it. *P. betulinus* is one of the fungi carried by "The Ice Man," Ötzi.

Right: Stone oil lamp with Red-belted Polypore (*Fomitopsis pinicola*) wick.

Below left: Artist's conk (*Ganoderma applanatum*) ember, drilled with clematis spindle. The flint at the lower left is just there to confuse you.

Below right: *Fomes fomentarius* smoldering from flint-and-steel spark.



The orange trails rising from the ember (above) are sparks.

Photo at top left by Tamara Spillis, the rest by storm.

Middle English *agarik*, a kind of fungus, from Latin *agaricum*, from Greek *agarikon*, from *Agaria*, a town in Sarmatia.¹¹

My point is this: a syllable in the noun *agaric* hints that it was flame-fuel for the fire bow. We know from Ötzi that ancient agarics (polypores) were used for fire. But we don't know by what name he knew them. Oh well, no use crying over burnt bridges. But why did the use of mushrooms for fire diminish? One reason was metallurgy. What do polypores need to grow? Forests. What did metallurgists need to smelt ore? Forests.

There is another possible connection between fungi and fire: long before the Iceman had portable hot fire mushrooms, mushrooms had cold fire: bioluminescence. The Myxomycetes (slime molds), Basidiomycetes, and Ascomycetes all have luminescent species. Nearly 50 species have been confirmed. Possibly this is why some polypores were chosen as fire boards: visual indication of potential. It also may be why dung and peat were determined to be fuel sources: luminescent coprophiles signaling a fire source. In Icelandic the word for dung is *myki*; Danish *mog*; Norwegian *mok-dunge*. Anglo Saxon is represented in *meox* for dung. Having been a dairy maid, it is plain to me that plops of dung resemble several species of polypore. I just don't think that dung was used first for fire. Otherwise what might the Iceman have had in tow?

Polypores also *look* like *wood*. Ancient peoples most likely thought they were kindling a fire on a kind of wood. But what was this touchwood, tachwood, tachewood? The term has gone out of fashion, so it may be help-

ful to review a definition:

From Webster's Revised Unabridged Dictionary (1913) :

Touchwood \Touch"wood\, n. [Probably for tachwood; OE. *tache* = tinder (of uncertain origin) + wood.]

1. Wood so decayed as to serve for tinder; spunk, or punk.
2. Dried fungi used as tinder; especially, the *Polyporus igniarius*.

Touchwood was a polypore that was penetrated by a shaft or spindle and it would attach, fasten, clasp, seize, and ultimately *take* the fire. It has to do with fire spindles and weaving; textiles and Greek technology; the spinning of flax, linen. This may also illuminate the connection between touchwood and torch. But to light a torch, the ancients used touchwood as the "match".

Bring to mind our earlier experiments with lamps and meditate on these definitions and etymologies for the English word 'match'. The ancient word for match comes ultimately from *myces*, and was in use long before the modern match:

match (1) - "stick for striking fire," c.1378, from the Old French *meiche* "wick of a candle," probably ultimately from L. *myxa*, from Gk. *myxa* "lamp wick," originally "mucus," based on notion of wick dangling from the spout of a lamp like snot from a nostril. First used 1831 for the modern type of match, and competed with *lucifer* for much of 19c. as the name for this invention.

match An easily ignited cord or wick, formerly used to detonate powder charges or to fire cannons and muzzle-loading firearms.¹² [Middle English

matche, *lamp wick*, from Old French *mesche*, from Vulgar Latin *micca*, from Latin *myxa*, a lamp's nozzle, from Greek *muxa*, *mucus*, *lamp wick*.]¹³

Because of the lamp experiments I'm inclined to differ with the "notion" that it looks like mucus hanging from a nostril and so was called lamp wick. I now have a "notion" that *it was lampwick*.¹⁴

Some Language, Facts and Legends

Back to those Myceneans again. The Greeks worshipped several fire/technology deities. Useful to this article are Artemis, Athena and Prometheus.

Have you ever been "burnt" in love or "strung" along? Artemis was goddess of hunting and wild things, fertility and fire, older sister of Athena. She was known as the Torchbearer, bringer of light, associated with spindle (for fire and fibers) and distaff. The essence of wildness and fecundity, her sacred plant was... *mucwort*?¹⁵

Yep...That's how it's come down to us in English, variously: *mucgwyr*, *mogwort*, *mugwort*. In ancient Greece, the name *apsinthos* referred to a group of plants that are now known by the names *mugwort*, *wormwood*,¹⁶ *tarragon*, and *sagebrush*. What does this have to do with fungi? I'm warming up to that. *Apsinthos* was so important to Artemis the fire/fertility goddess that she *adopted* it, which tells us it was in use before she "sanctified" it, and gave it *her name*, *Artemisia*, the name by which these plants are still known in botanical taxonomy. Note this information: "The wood ignites easily and burns well so that it has been valuable for starting fire

¹² Hence the matchlock rifle, lit with a slow-burning fungal fuse (resembling a lamp's wick), discussed in detail in next issue's installment of this article.

¹³ *The American Heritage® Dictionary of the English Language, Fourth Edition*

¹⁴ This is another word that has faded from our vocabulary; it refers to substances that were used to make wicks. Like fungi.

¹⁵ (*Artemisia*). D. A. MacKenzie, *Pre-Columbian America*, New Jersey, 1923

¹⁶ Hence the modern name for the wormwood-flavored liqueur, absinthe.

by friction. The pasture, or mountain, sagebrush (*A. frigida*) has also been used medicinally. It is native both to Siberia and to North America, from Alaska to Texas.... Other species of *Artemisia* include tarragon, wormwood.”¹⁷

It was used for fire spindles, but what was the hearthboard? The word wort or wyrt means plant or herb. Many common herbs have their function described in combination with this element: woundwort is a plant used on wounds to staunch bleeding; lungwort is a plant used on lungs as a chest poultice or taken as a tonic. By extension, mucwort is used on.....? In our summer issue we will explore muxa, moxa, moxie, moxi-bustion and the links to myces.

We know from the Iceman that *Fomes fomentarius* was used for fire, probably with the bowdrill. We’ve established a possibility that fungus were used for lamp wicks. Absinthe was used as a fire spindle to kindle (inflare=Latin incendere) lamps.

The Greek words for kindling a fire for warming are *hapto* and *anapto*. The terms are used both for *kindling a lamp* and for carnal intercourse.¹⁸ The Indo European Root **ap-** has the sense of attach, fasten, clasp, fit, join, tie to, to seize, to reach and attain; The words apt, inept, adept, synapse, aptitude, couple and copulate also have their origin here.¹⁹ If these words are indeed linked to *apsinthos*, Artemis’ sacred plant, it would explain the double entendre of the English word ‘kindle’ which means “to

bring forth young” and “to inflame.”²⁰ Basics, huh? Fungus stuff is like that, basic to life.

Athena was younger sister to Artemis. Worshippers of Athena held the olive as her sacred tree. Her temple lamps were fueled by sacred olive oil. Much as Artemis had sanctified *apsinthos*, Athena claimed the olive. Fable has it she sprang fully clothed in armor from the head of Zeus and was cast as a meteor to earth²¹. Like a great idea whose time had come. Her name may mean to strike²², perhaps as in smithing. She was the first iron maiden. Like the heart of a meteor made of metal. She carried bow and arrow and was a shipbuilder. With the fire bowdrill always available, doubling as weapons, here may be the overlapping of flint and steel in fire starting and in ship building and the shoving aside of an old technology in the person of the old technology/fire goddess Artemis.

A luminescent species, *Omphalotus olearius* (jack o’lantern), inhabit olive trees.²³ The Mycenaean people developed the commercial use of olive oil for lamps. How could they know it was a source of fuel? As with the luminescence of dung, perhaps the cold fire gave the clue that here was something especially flammable. Perhaps the goddess was giving a sign to enlighten.

On to the oldest mythological figure, and the oldest language. Prometheus was a robbing hood of sorts: he stole fire from the gods and brought it to mankind in a hollow reed. He is credited with the

fire drill, taming animals and teaching arts and metallurgy, farming and numbers.²⁴ Prometheus’ name, ‘fore-thought’, may be related to Sanskrit *pramantha*, ‘fire-drill’.²⁵

Meanwhile, on to the age of agriculture! No more chasing after the herds. No more running through the woods wild and wooly looking for mushroom wicks. Wearing of pelts gave way to woven textiles of hair and linen. People could now grow their own clothes and lamp wicks. How sensible. Goodbye touchwood, hello torch. Eventually candles came into fashion with twisted woven wicks. A gap was spanned, a bridge was built and it was done with mushrooms and fire spindles. The world will never be the same. By 200 BCE, the Chinese have developed gunpowder but no guns. That too was sensible. We’ll continue our journey in the next issue, which will take us to China for fireworks and rocketry, back to Europe to muster with troops armed with matchlock rifles, visit a sundry of ethnic apothecaries and a tobacconist shop, and relax with some fly fishing. If I live to tell it, it should be a blast... If you think reinventing the wheel is hard, try gunpowder.

Mushroom

¹⁷ Columbia Encyclopedia, Sixth Edition, Copyright (c) 2003

¹⁸ *Vine’s Expository Dictionary of N.T. Words*

¹⁹ Dr. Ernest Klein, *A Comprehensive Etymological Dictionary of the English Language*

²⁰ It also adds new richness to the etymology of touchwood. – LS

²¹ Zeus sent Athena as a meteorite from heaven to earth (Homer, *Iliad*).

²² Athena’s name may be related to Sanskrit *vadh-*, ‘to strike’. [A. Bailey, *The caves of the sun; the origin of mythology*, London, 1997: 181]

²³ In fact, *olearius* means “of the olive”. In Europe, the olive and the jack o’lantern are very closely associated, which is one good reason why our eastern North American jack o’lantern may be a different species.

²⁴ “Prometheus taught mankind the calendar, numbers, the arts of writing, farming and the harnessing of the horse, metallurgy, medicine, divination, and sacrifice.” Aeschylus, *Prometheus bound*. J. Campbell, *The masks of God I: primitive mythology*, New York, 1959: 279.

²⁵ D. Cardona, “The cosmic origin of the swastika”, *Aeon*, IV, 5, 1996, 17-28: 17.