

The Wolves of War: Evidence of an Ancient Cult of Warrior Lycanthropy

Carl Anton Paul Ruck

ABSTRACT

Archaeological evidence indicates that naturally occurring megalithic structures that resemble mushrooms throughout the region identified as Thrace in antiquity were the foci of religious observances, sometime with the fungal likeness of the stone structures intensified by human intervention. Thrace was considered the probable origin of Dionysian rites. Wine was recognized in antiquity as the product of fungal growth and the drink was a cultivated version of wild intoxicants, among which was the mushroom. The rituals in celebration of the deity commemorated his primordial identity as resident in these wild plants and mediated his evolution into the intoxicant grown upon the cultivated grapevine, and the wine itself was fortified beyond its alcoholic content by the addition of these wild antecedents of viticulture. The legendary wine of Thrace was particularly potent through the addition of a psychoactive mushroom. The rituals of the women known as bacchantes enacted the fantasies of root-cutters in commemoration of the deity in his persona that predated viticulture. This fungal persona represents the same intoxicant that was known to the Persians as *haoma* and represents the spread of an Indo-European sacrament into the Classical world, with its association of lycanthropy and the bonding of warriors into brotherhoods as packs of wolves, better known in its manifestation in late antiquity among the Nordic peoples as berserkers. In Greece, Apollo originally presided over such wolf packs, but as he evolved into Classical theology as a member of the Olympian family, Dionysus assimilated that association, inasmuch as he better represented the mediation with the past through his magical drink that combined both the wild and the cultivated intoxicants. This freed Apollo from the burden of the past, allowing him to become transmuted from wolf to light, the basis of pseudo-etymological derivations of his identity in antiquity.

Key Words: mushroom, ergot, Thracian megaliths, berserkers, Dionysus, Apollo

DOI Number: 10.14704/nq.2016.14.3.898

NeuroQuantology 2016; 3:544-566

Megalithic Open-air Sanctuaries

Throughout northeastern Greece, western Turkey, and Bulgaria, in the region known in antiquity as Macedonia, Anatolia, and Thrace, there are

numerous megalithic natural rock formations that resemble mushrooms. In some cases, these structures have been modified by human intervention to increase their fungal likeness. In addition to these external features of the landscape, certain caves that served as sanctuaries present a fungal likeness in the configuration of their entrances, two adjacent openings with an overhanging rock configuration giving the impression of a stipe supporting a mushroom cap. The external megaliths (like the menhirs scattered throughout Europe and the British Isles) suggest phallic symbolic metaphors whose complement is

Corresponding author: Carl Ruck, Professor

Address: Department of Classical Studies, School of Theology, 754 Commonwealth Ave, Boston, Massachusetts 02215, USA

Phone: 1-617-353-4435 (office), 1-781-925-0182 (home)

e-mail ✉ bacchus@bu.edu, blaise131@verizon.net

Relevant conflicts of interest/financial disclosures: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Received: 23 December 2015; **Accepted:** 29 January 2016

eISSN 1303-5150



the vulva lying beyond the cave's entrance, combining to indicate a sacred marriage. Sometimes two adjacent mushroom megaliths combine, with the passageway through the space intervening at their base interpreted in folkloric tradition as a rite of initiation and religious empowerment with solar implications. There are archaeological indications that these sites functioned as the foci of religious observances as early as the Neolithic period, and probably earlier, emerging primarily into prominence in the mid second millennium and continuing through the Roman occupation. Folkloric traditions suggest that the sacral function continued through the conversion of the Empire to Christianity, and even today, the sites are still held sacred and often betray evidence that the local inhabitants consult them to access their supposedly magical powers. Common to all these sites is their proximity to a water source, a river or a fountain spring, often haunted by a nymph, whose male mate is the river (Markov, 2008, 2014. Kiotsekoglou, 2014. Samorini, 2012).

The mushroom cap of the megalithic rock outcrops may be cut to excavate a kind of natural chalice to catch rainfall, sometimes channeled to an altar at the mushroom's base. The rock chalices are now documented also in the Alps and throughout Europe (Gosso *et al.*, 2013). The chalice in the rock imparted a fungal identity to the fallen rainwater. Sometimes the chalice appears to have also served a function as mortar for the preparation or compounding of a sacred potion, the manipulation of the pestle in the stone mortar imparting a sexual implication to the pharmaceutical procedure. The rain was seen as the ejaculation of a celestial penis, but also as divine milk from the manipulated udders of the celestial cow hidden in the clouds. The milking of the udder was interchangeable with the masturbatory manipulation of the penis, whose ejaculate was also referred to as milk (Aristophanes, *Birds*, 734: 'bird [penis] milk,' compare urban slang: 'cock milk, dick milk'). The joining of the milk and semen in the compounding of the potion similarly symbolized a sacred marriage with the celestial bull that was the cow's complement. Common folkloric belief identifies the milk as the metamorphosis of the menstrual discharge, which ceases upon pregnancy; and on the authority of Aristotle, the menses was seen as an inferior version of the semen (Ruck *et al.*, 2012, pp.209 *et seq.*). Semen and urine are interchangeable as penile effluents, and the

common folkloric identity of rain in Greek tradition was that it flowed from Zeus.

The mushroom monuments are sometimes ornamented with carvings or paintings, or are otherwise associated with folkloric motifs that indicate that the fungi were psychoactive or visionary. There can be little doubt that the prepared sacred drink was intoxicating and intended to access altered consciousness or mystical communion in a ritual context. In some instances, a grouping of mushroom megaliths is identified in folkloric tradition as the petrified guests at a marriage ceremony.

These open-air sanctuaries sometimes are linked with natural stone occurrences of trough-like horizontal stone basins that served as presses for the treading of grapes to extract the juice for the fermentation of wine, sometimes with a fungus carved as decoration into the trough, linking the wild fungi with the cultural transition to agrarian civilization, symbolized by the mastery over the wild uncultivable mushrooms in the controlled and humanly manipulated fermenting fungal growth of the yeasts, found naturally on the skins of the fruits of viticulture, in the production of ethanol, the intoxicant of wine. Modern vineries have expropriated the ancient archaeological troughs as an element today of their marketing strategies, and it is a tradition that can be traced back to Classical antiquity, in particular with the extraordinarily potent wine that was marketed in the Roman period and that claimed continuity with the legendary wine of Maron, the priest of Apollo and son of Dionysus, with which Odysseus intoxicated the Cyclops Polyphemus (Gow, 1950, pp.250-251). In Homeric times, it required dilution twentyfold with water (Homer, *Odyssey*, 9.208-211), and still in the second century BCE, on the testimony of the Roman governor of the Thracian province, it needed eight parts water to be drunk safely (Pliny, *Historia naturalis*, 14.6.53; Pollux, *Onomasticon*, 6.16.4).

Since the ethanol produced by natural fermentation cannot exceed the degree of concentration that would kill the yeast, normally around 15% or less, the dilution would reduce the ethanol to an insignificant amount as an intoxicant, and the potency of the wine must have been caused by other herbal additives to the liquid. This was true of other wines, as well, which were normally drunk diluted with three or four parts water, but fortified in the mixing ceremony with a variety of toxins derived from plant and animal

sources, sometimes even lethal substances in sub-lethal amounts, such as serpent venoms, salamander secretions, henbane, opium, *Datura* (jimsonweed), and deadly hemlock (*Conium maculatum*) (Ruck, 1978, pp.85-136; Ruck, 2014b; Hillman, 2008, pp.158-159; Nicander, *Alexipharmaca*, 186-194; Demosthenes, *De corona*, 18.260; Seneca, *Medea*, 731-732). For this reason, Greek wine was extremely intoxicating, with rowdiness and brawling not infrequently occurring after only several cups drunk over an extended period of time. This tradition survives in the modern Greek folk wine of *retsina* (fortified with psychoactive terpenes from pine resin) and in the demotic naming of the drink, not 'wine' (*oínos*), but the mix, *krasí*. A recent discovery of an intact wine cellar from the mid-second millennium BCE confirms the presence of psychoactive additives to the wine (Ritter, 2013).

Distillation of liquids was not discovered until the fourteenth century CE, when the distillate was named alcohol by analogy to the process for metallic distillates and equated to the *quinta essentia* that Aristotle had postulated as the element of the celestial bodies that permeated matter as the spiritual soul (Ruck *et al.*, 2012, pp.125-128). This clearly derives from the ancient tradition that the wine served a sacral function. A Greek fifth-century red-figure *hydria* found in a cemetery of ancient Ainos (modern Enez, Turkey) depicts what is obviously a cultic scene, probably relative to the funerary rites performed for the burial of the deceased. A mushroom is highlighted as a special ingredient to be added along with other plants to the mixing of a *pithos* of wine (Ruck, 2014b, pp.257-262). This is probably the strong Thracian wine known as 'Biblian' (*Bíblinos/Búblinos*) that was an export of Samothrace and that in the ritual initiation into the Mystery of the Great Gods as celebrated on the island and elsewhere in cave sanctuaries throughout ancient Thrace accessed the ecstatic visionary revel that summoned an apparition of the netherworld goddess. There was apparently a proverbial saying about this wine: 'Bibilian is my drink!' (*Búblion toumón méthu*, i.e., *méthu*, 'intoxicant,' not the word for 'wine' itself). This meant something like: 'Hell take the consequences! All precautions to the wind: I don't care what happens!' (*Paroemia Graeca*, 1.389: 'A saying for people bent on destroying something').

This antithesis between wild and cultivated fungal growths that yields the civilized drink of wine had its complement in the similar opposition between the grains that yielded the dry food symbolized by bread. The most primitive of the grains was spelt, producing only two red kernels (Watkins, 1973), evolving eventually through cultivated hybridization into the multiple-kernelled sheaf of barley, the grain most emblematic of civilization (Ruck *et al.*, 2013). The common weed in fields of grain is tares (darnel, *Lolium temulentum*), which as its Latin nomenclature indicates (*temetum*, 'intoxicating drink') has the popular assumption that it induces drunken dizziness and altered vision (Plautus, *Miles Gloriosus*, 315-323. Ovid, *Fasti*, 1.69), although in itself the plant is devoid of toxicity and was considered suitable only for making a cheap substitute for bread. It is always, however, infested by the fungal growth of ergot (*Claviceps purpurea*), a source of LSA (lysergic acid amide, a natural substance similar to LSD, extractable with appropriate procedures from the complex of multiple potentially lethal toxins) (Webster *et al.*, 2000; Ruck, 2006, pp.171-187), and identical with the main psychoactive chemical found naturally in Mexican morning glory seeds (*Turbina/Rivea corymbosa*), employed in indigenous Mesoamerican shamanism as the sacrament called *ololiuqui*. The enlarged ergot-infested kernels resemble the red kernels of spelt, and the tares weed not only was a wild growth that had to be weeded from the fields, but its infestation of toxicity also spread to the cultivated barley and seemed to pose a recidivist threat to reverse the hybridization and return the grain crop to its primitive antecedents.

The prototypic liquid and dry foods of humankind, the wine and the grain, were always linked in symbolism and ritual (Euripides, *Bacchae*, 275-280: the seer Tiresias links barley and wine as the dry and liquids foods of humankind, with their patron deities, Demeter and Dionysus) with their primitive antecedents in the wild mushroom for viticulture and the ergot for grain, the later recognizable as also fungal when the mycelium of the infested ergot kernels develops into its fruiting stage with the sprouting of little mushrooms, visible to the unaided eye, making the ergot appear to be the seed of the otherwise seedless mushroom. The mushroom was the most emblematic of wild plants, inasmuch as it produced no perceivable seeds and thus defied all attempts at cultivation. The mushroom is classified as neither an animal nor a plant, but is a special

Wild and Cultivated Fungi



category, and it functions in mythic and folkloric tradition as the ultimate mediator between oppositional pairs (Toporov, 1985).

The spongy nature of the mushroom (hence called *fungus* in Latin, the cognate of Greek *spongios*) linked it with the fungal yeast that provides the leavening for bread. Hence the mushrooms are metaphorically termed a bread (Klapp, 2013), and the leavening process was seen as a cosmic phenomenon, the origin of the universe heaved up to form a heaven (Ruck *et al.*, 2011, pp.151-176), yielding the metaphor of the visionary sacrament as a celestial bread, the food of angels. The domed cap of the mushroom was seen as the dome of heaven. Hence the mushroom was also linked to the cosmos in the metaphor of the vision it induced as illumination, transitioning from darkness to light and the solar disk. In its supposed insemination by the fall of the lightning bolt, the mushroom symbolized the incarnation of spiritual fire in matter, and the vision from the altered consciousness it induced was seen as spiritual transcendence, returning fire to the skies.

As something sacred, the mushroom had no name (Wasson *et al.*, 1957, pp.19-36), but was designated by a vast vocabulary of metaphors and anthropomorphized or zoomorphic manifestations. Its common name in English as a mushroom is such a metaphor. It is named onomatopoeically from the Latin *mussare* for 'moo.' It is onomatopoeic as a moo-shroom, from the Late Latin *mussarion*, introduced into English for 'mushroom' as early as the sixteenth century, ultimately derived from the ancient Greek *myá-ein*. The words for 'mystery' (*my-sterion*) and 'initiate' (*my-stes*) have the same *mu* syllable, which was written with the glyph for a bullhead in the Mycenaean syllabary. It represents the voiced nasal labial (voiced bilabial nasal (m), nasal occlusive, where air escapes through the nose, but not through the mouth, blocked by the lips, made with the lips pursed, emitting no sound, for a secret well kept, like the English 'mum's the word'). Thus it conforms to the sexual motif of the divine wedding enacted by the mingling of the celestial milk masturbated from the udders of the cloud cows with the ejaculated semen of the cosmic bull, in the preparation of the sacred drink. The word for the cow-fly (*Tabanus bovinus*, commonly called a horse-fly or the gadfly, but as its Latin nomenclature indicates, it is associated with bovines.) has the same moo-syllable, *múops* (cognate with English 'myopic,' literally 'squint-eyed,' like the pursed lips, but it also implies

toxicity in the fly's sting. The fly was also called *oístros* (cognate with English 'estrus'), and its sting induced the estrus of the cow, making it the object of the bull's sexual advance. This is reflected in the myth of Zeus and his amorous involvement with the cow-maiden Io. The Greek word *mykes* for mushroom (as in 'mycology') is unrelated to the mooing motif, but designates the fungus as something repulsively slimy and mucous. It, however, suggests the mucus of vaginal and seminal discharges, and hence similarly the motif of sexual abandon. It is common for sacred items to be involved in intricacies of verbal punning and an interactive overlay of symbolism. Thus also the blood of sacrifice is confounded with the menses and its metamorphosis as milk, the divine drink of the lactating goddess. Minoan pitchers in the likeness of a female dispense the sacred drink through spouts representing her breasts.

The Sons of Ares

Ancient testimony considered the Thracians barbarians (that is to say, not Greeks, with a language that sounded like 'babbling,' *ba-ba-ba*, which is what 'barbarian' means, without pejorative implications). They had a reputation as notorious drunkards, and were wild, war-like, rural, disorganized and ungovernable, not focused like Greeks into any urban concentrations.

The eponymous ancestor of the Thracians was Thrax, supposedly a son of Ares. All the Thracians were of the lineage of Ares. Ares was said to have sought refuge among these Thracian sons after Hephaestus uncovered his adulterous affair with Aphrodite on the nearby island of Lemnos. The seventh-century Greek mercenary Archilochus of Paros drank this Thracian wine while on duty as a soldier (Archilochus, *Elegies*, frag. 2D). This implies that the wine was something special for these sons of Ares and not that the mercenary soldier was derelict of his duty. He also claimed that he was an expert in the wild ecstatic dance of the dithyramb, which he could perform when the Lord Dionysus had blasted the wits out of his head, smitten with the wine like a thunderbolt (Archilochus, frag. 120). Wine is unlikely to be likened to a blast of lightning, and such severe alcoholic drunkenness would have made him probably incapable of dancing.

There is no doubt that the Thracian kings loved their wine. Xenophon reports that King Seuthes II used to pour what was left of it over his



body (Xenophon, *Anabasis*, 7.3.16). Alexander the Great's Macedonian father Philip was derided for his drunkenness, falling to the floor as he tried to attack his son (Plutarch, *Alexander*, 9.3). Alexander himself killed his friend Cleitus in a drunken quarrel, leading some historians to speculate that the cause of his own death was alcohol addiction (O'Brien, 1992). The wine of Thrace was a ritual sacrament. Nearly 200 shallow gold cups or *phiálai* for drinking or pouring libations survive from the Thracian lands (Marazov, 2000, pp.80 *et seq.*). Ordinary drinking cups were not made of gold. These are sacred vessels for the consuming of a holy sacrament. The Thracians, however, didn't pour out libations with these utensils; they splattered each other with what was left, like King Seuthes II drenching himself (as a Thracian custom, see Suidas, *s.v. kataskedázein*). The number of *phiálai* (Latin *paterae*) surviving from Thrace surpasses those from all other regions. The madness of King Cleomenes of Sparta (late sixth to early fifth century BCE) was attributed to his having picked up from the Scythian neighbors of the Thracians a taste for drinking his wine undiluted (Herodotus, 6.75-84).

Erasixenus, in perfect health, died after drinking just two cups of some kind of undiluted wine (Athenaeus, *Deipnosophistae*, 10.436 = *Anthologia Palatina*, 7.454). In a fifth-century BCE comedy, the drinker of just a single cup makes out his will before downing the drink (Hermippus, frag. 44). Several philosophers, moreover, were said to have drunk undiluted wine at the end of their lives to hasten death. An historian records a drinking contest in which all the participants died, some immediately, others within days; the victor, who also died, had drunk just four pitchers of undiluted wine (Chares of Mitylene, in Athenaeus, *Deipnosophistae*, 10.437). There can be little doubt that ancient wine was the medium for consuming a wide variety of variable intoxicating additives. The wine of Thrace and its neighbors was a particular version with implications of divine empowerment and warrior initiation. The additives symbolized the inclusion of the wild precedents of viticulture in the drink as an ultimate mediation with evolving civilization, and the inclusion of mushrooms in the potion would signify the ultimate mediation with the spirits of the wilderness.

Redheads

The Thracians probably emerged in the Early Bronze Age by an assimilation of migrating tribes

with indigenous peoples, and from the eighth century BCE, they were in contact with Greeks who colonized the Thracian shore. Their poorly attested language, although an Indo-European dialect, was not comprehensible to Greeks, and eventually many of them adopted the Greek of their colonial neighbors as *lingua franca*. Traditionally, the Thracians were characterized as redheads with blue eyes (Xenophanes, frag. B16). Rufus ('redhead') was a common name in the Roman period, attested on several tombstones, and vase paintings and frescoes depict them with red hair, although intermingling with the indigenous populaces no doubt made them often resemble other Aegean peoples. The 'Thracian' and 'Red' (Greek *Xanthías*) were common designations for a slave on the comic stage, either from the numerous males taken as prisoners of war or from the Thracian habit of selling their unwanted children abroad into slavery. As indicated by their red hair and blue eyes, the Thracians participated in the cultural heritage documented for the Norse and the Celts, with their folkloric tradition of the creatures that materialize from mushrooms.

Their great goddess of war and slaughter who led them in battle, the equivalent of Athena, was worshipped as Kotys (also called Kotytto, Cotyto in Latin) in ecstatic midnight drunken orgies on hilltops. The Cotyttia festivals spread into Greece, and were known even in fifth-century Athens, Corinth, and Southern Italy (Magna Graecia), and Horace mentions them in Rome in the first century BCE. Aeschylus described the rite in his lost *Edonians* tragedy (Aeschylus, frag. 27). The rite was obviously already known in Athens of the Classical Age. The chorus was costumed with the characteristic Thracian fox caps. They describe a mountain revel, with the women playing instruments, the buzzing deep-sounded bass wooden flute, the clanging of bronze-bound cymbals, the shrill twanging of strings, and a melody that induced mental frenzy, people unseen and unknown miming the fearful bellowing of bulls, and drums pounding like subterranean rolls of thunder, all inducing a wonderful and terrible sense of horror.

Kotys was a version of the great Phrygian Mother Goddess, and she combined in her persona aspects of Aphrodite, as goddess of sexual release, and the Thracian goddess Bendis, as associated with the moon and the hunt, who was equated with the Greek Artemis, and also versions of the netherworld goddesses Hecate and Persephone. Her male consort had a variety of names that



included Attis, Adistis, Adonis, Ba'al, Sabazios, Dionysus, and inevitably a primordial version of Apollo as twin of Artemis and master of the Cretan labyrinth. In all of these manifestations, she was not so much the Athena of the Olympian family than rather her predecessor imagined in the hybrid configurations that the Greeks knew as the mythical Gorgon Queen Medusa.

This Gorgon monster is a personification of the fungal psychoactive agent responsible for the ecstatic orgy (Ruck *et al.*, 2011, pp.87-95). A version of the Perseus myth explicitly claims that the hero harvested a mushroom at the site of Mycenae (Pausanias, 2.16.2-6), and a vase painting from Southern Italy depicts the episode as his harvesting the head in the form of a golden apple from the Tree of the Hesperides and glossed pictorially quite explicitly as a mushroom (Ruck, 1978, plate 7; Trendall, 1967, no. 335). Mushrooms are identified as the plant known as the 'narcotic' *nárkissos* (Homeric *Hymn to Demeter*, 8, 428) that precipitated the abduction of Persephone on a fourth century BCE broad platter from Apulia, Magna Graecia, probably surviving from a deposit in a tomb (Ruck, 2014b, pp.97-100). Since the heroic encounter with the Medusa is a mythologized narrative of the harvest of a sacred plant, Perseus always employs a pruning hook as his weapon and places the object in a special container, the *kíbis*, which is a harvester's sack, still employed today by people picking fruits like the apple (Ruck, 2015a). It is commonly depicted as such on ancient vases, a sack slung upon the extended arm, allowing the picker to drop the plucked fruit into its open mouth.

The Phrygian goddess was imported into Rome as the Magna Mater ('Great Mother') with the name of Cybele in the second century BCE as a divine ally against the Carthaginians in the Second Punic War. Her ecstatic rites, which included the self-castration of her frenzied male devotees, were, however, an affront to Roman senatorial decorum and her temple on the Palatine Hill was sequestered and Roman citizens were forbidden to participate in the religion until the first century CE. The Roman Catullus (first century BCE) described the ecstatic rite of castration in his long narrative poem (Catullus, 63). The goddess had arrived earlier in Greece by the sixth century BCE, where she was assimilated with the Cretan Rhea as the mother of Zeus.

The Delusion of King Kotys

The Thracian King Kotys (383-359 BCE), obviously named after the goddess, got so drunk on this so-called wine of Biblos that he went to bed delusional, to await the deity's arrival. In his impatience, he inquired of a guard if she had been spotted yet. When the guard replied in the negative, the enraged and drunken king slew him on the spot. The second guard had the wits to say that she was on her way, and this lie saved his life (Theopompus of Chios, *Philippica*, frag. 31). The bizarre account indicates the potency of the drink and also that it figured in a hallucinatory sexual orgasmic ecstasy interpreted as a sacred marriage with the empowering deity. Since the king bore her name, his relationship with the deity was obviously the authentication of his right to sovereignty as her mortal consort. The coinage of the Odrysian Thracian kings depicts the head of the monarch, with the cup of empowering drink on the obverse; and a gold plaque shows the goddess sitting sexually on the monarch's groin, with a vessel of the drink behind her. It was such a role that Athena played in Classical Greek tradition (Brown, 1952). In this anecdote, the king is made to appear a fool, but that reflects the cultural prejudice of the Greek historian who reported the event. This same king, on another occasion, allegedly cut up his wife with his own hands, starting with her genitals. This would seem to indicate a severe degree of drunkenness, and it is also probably a garbled slander against the king's sexual activities in his bed while under the influence. It is quite improbable that the royal lady was actually ripped apart by the king's overly aroused instrument, and as his queen, she was probably, in any case, the mortal incarnation of his divine female patron.

Both the Cotyttia revels and the fungal parasite on grain are involved in lupine metaphors. In Germanic herbalist folklore, the demonic grain mother passed like a wind rustling through the field with her pack of grain wolves (*Roggenwulf*, *Roggenhund*) infecting the sheaves with ergot or *Tolkorn* ('mad corn/kernels') (Hofmann, 1978). This wind is the origin of the wolf's prodigious lung power as reflected in the fairytale of *The Three Little Piggies* (Jacobs, 1890). Children seduced by the goblin wolfish creatures into the fields were said to nurse on the kernels like the iron teats of the *Roggenmutter* and are rendered maddened. The enlarged ergot infected kernels are called 'wolf teeth' (*Wulfzahn*). The tradition may underlie the figure of Beowulf and the cult of the Nordic berserkers (Gringsby, 2005). The Romans, like other ancient cultures, were well aware of the



toxicity of the ergots and removed the spikes by hand. They also propitiated the chthonic deities by the annual festival of the Robigalia (named for the 'redness' of the 'rust,' a common designation of the ergots (*erysibe* in Greek) by the animal sacrifice of a red dog, an animal that it was taboo to eat. It was offered to the netherworld Hecate, goddess of witchcraft and patroness of herbalists, the dog being the common victim for the goddess (Lycophron, *Alexandra*, 77, 1174). As canines (*Canidae*), the dog (*Canis lupus familiaris*, *Canis familiaris*) is interchangeable metaphorically with wolves (*Canis lupus*) and foxes (*Vulpes vulpes*, *Vulpes cana*, etc.).

The Thracian participants in the mountain revel wore the fox cap, taking their name from it as Bassarides, or the 'sisterhood of the fox pelt,' *bassára*, complete with ear flaps, sometimes consisting of the entire fox. They were so costumed in Aeschylus' *Bassarides* (*Edonians*) tragedy and in Euripides' *Bacchae*, indicating that its ritual symbolism was a matter of common knowledge in Athens of the fifth century BCE. The red color of the fox and its prominent snout were stylized into the pointed red Phrygian cap, which had a long continuance as a marker for initiates into the secrets of the ancient Mysteries and as an emblem of (spiritual) liberation (Ruck *et al.*, 2011, pp.101 *et seq.*). It is as ubiquitous as the little creatures that materialize from mushrooms in the lore of Europe, most notably in the tale of 'Little Red Cap' *Rotkäppchen*, known in English as 'Little Red Riding Hood' and the episode of lycanthropy with a similar ultimately botanical referent (Ruck *et al.*, 2007, pp.126-130). In folktales, a person eaten by a wolf has become a wolf, and the return to human form indicates the completion of a rite of passage. The English title predates the Grimm brothers' collection, and the 'riding hood' as a term for the Phrygian cap indicates that the heroine of the tale is on a journey that will culminate in sexual awakening with her aged grandmother as initiator and a lupine transmogrification, (alchemically) digested in the belly of the wolf.

The typical dress of Thracian warriors consisted of colorful baggy trousers, a shirt or knee-length tunic, an embroidered cloak, and either a cap made from the fox, or its imitation as a felt Phrygian cap (Webber, 2001). The cap indicates their initiation into a brotherhood of warriors as a pack of wolves, like the Nordic berserkers who materialized on the battlefield either as bears or wolves. Among the Thracian tribes were the Dacians, whose name is derived

from the Phrygian *daós* for 'wolf' (Hesychius). Many other Indo-European tribes are similarly named or associated with the wolf, probably because of the widespread occurrence of warrior brotherhoods that practiced initiatory rituals of lycanthropy (Eliade, 1986). The metamorphosis of a warrior into a wolf is well-documented in Greek tradition. In the Rhesus episode of the *Iliad*, Diomedes and Odysseus don a wolf disguise through the agency of Apollo and a magical plant, in order to turn the tables upon their adversary, attacking him and his troops as a delusional pack of wolves (Ruck *et al.*, 1907, pp.87-91. Homer, *Iliad*, book 10. Euripides, *Rhesus* tragedy).

The Dacians are explicitly documented with a sacred mushroom in the time of Trajan (Dio Cassius, *Roman History*, epitome of book 68.8.1), and the berserker rite of the mushroom was probably widespread throughout Europe in Classical times. The specific mushroom, which figures prominently in folklore is the red *Amanita muscaria*, which alone of the psychoactive fungi is noted for its ability to impart intensified physical strength (Wasson, 2001; Keewaydinoquay, 1984, tale 6; Ruck *et al.*, 2007, pp.287-294).

This is a strong indication that this species is the mushroom involved in these rituals of lycanthropy. It is the only mushroom depicted in the fairytale tradition of European lycanthropy. Additionally, its red color (which links it with *Claviceps purpurea* and the red fox) identifies this as the species involved. It also fits the expectable paradigm as being visionary and psychoactive, but easily confused with its edible variety as the *Amanita caesaria* and its deadly relative the *Amanita phalloides* and related species. Contrary to common belief, which is a reflection of the taboo placed upon a sacred item, few mushrooms are actually lethal. Another of these *Amanita* mushrooms is also psychoactive and bears the name of *regalis* ('royal'), and both *regalis* and *caesaria* ('caesar') is a nomenclature that reflects not the fondness of monarchs for these mushrooms, but the royal status of a sacred plant. One might compare the *Vulpes cana*, whose common names include the 'royal fox' and the 'king fox.' The *Amanita muscaria* is further characterized by its scabby white remnants of the universal veil adhering to the opened cap, which gives the impression of magical writing (Ruck *et al.*, 2013, pp.63-69). The red color often merges with golden yellow, suggesting a tablet of gold inscribed with a sacred text in an exotic language. These scabs, furthermore, can wash off in the rain, making the



psychoactive *muscaria* indistinguishable from the edible varieties.

In the context of the fantasized writing on the mushroom's 'golden' colored tablet, it may be appropriate to consider a possible etymology for the legendary Thracian wine of Biblos. The only Greek etymology for the word, which presumably is Thracian, would be the Greek *bíblion/búblion* or papyrus (*bíblōs*) 'book,' a meaningless coincidence, unless it implies something other than guesses of ancient grammarians: the non-existent town of the non-urban Thracians or the otherwise unknown Thracian hill. Perhaps the legendary wine of Biblos that so maddened the Cyclops was an intoxicant that looked like something metaphorically seen as a sheet of writing. Ancient books, moreover, were scrolls, which present a likeness of a mushroom. The biblical prophet Ezekiel saw such a scroll offered to him by the hand from the heavens in the midst of a thunderstorm. He was told to eat it, with no time to read it, and when he ate of it, he knew its contents (Ruck *et al.*, 2012, p.67; Heinrich, 1995).

The *muscaria* (Latin *musca*, 'fly') is designated the 'fly-agaric' because of its attractiveness to flies, which involves it in metaphors of spiritual regeneration and the flesh of sacrificed animals attracting swarms of flies (Ruck *et al.*, 2000, p.117: Apollo had the epithet of *Muíagros*, 'Fly-catcher,' supposedly because he drove the swarms of flies away from the flesh of the animals sacrificed at Olympia). The manner of the growth of the Amanitas further suggests sexual transformation or hermaphroditism as the phallic stipe extends to impregnate the spreading vulva of the inverting cap, which in its final metamorphosis resembles a chalice containing an exudation of fungal liquid as its contents. As a sacred plant, it is also appropriate that, like the ergot, special expertise would be requisite for accessing its potency. In the case of the *muscaria*, this is the procedure for converting its ibotenic acid into the more psychoactive muscimol. Where surrogates for the Amanita are indicated, the red color of the mushroom substituted is a defining feature (Markov, 2014: *Boletus edulis* and *Boletus Satanus* at the Bulgarian site of Beli Plast, in the region of Manatar Kaya, probably cognate with Greek *manitári* for 'mushroom'). All this evidence would seem to preclude the psychoactive psilocybin mushrooms, although in medieval lore they became involved in the metaphor of the Phrygian liberty cap and may well have been known as psychoactive in antiquity.

Moreover, the occurrence of similar rites among peoples for whom mutual physical contact seems implausible may be explained by the testimony of shamans that the plants themselves are the empathetic intuitive agency for teaching the rituals. These botanical programs seem to include modes of materializing and common metaphorical descriptions (Ruck *et al.*, 2013, pp.83 *et seq.*). Thus among the Huichol of the American Southwest, a similar association of the *Amanita* mushroom with wolf shamanism is preserved as a secret esoteric rite (Hoffman, 2002). In addition to parallels in pre-conquest New World shamanism, the mushroom cult is documented in rock art of Neolithic Spain, with mushrooms materialized as little dancers associated with a bull in a solar context as a solstice marker (Akers *et al.*, 2011), supposedly well before the earliest arrivals of the Indo-Europeans. Similarly, even earlier by perhaps two millennia, the rock art of the Tassili n'Ajjer plateau in northern Africa depicts mushroom-headed people and an antlered male figure with a bee mask or face and a body sprouting with mushrooms, as well as fingers in the shape of mushrooms.

The Spartan warriors had a cult of the wolf, which may have involved the *muscaria*, although the botanical agency that can be documented was wolfsbane (*Aconitum lycoctonum*) and cannabis, on the model of the Scythian fumigation tents (Ruck, 2014a; Ruck, 2014b). Similarly, the Homeric episode of lycanthropy seems to have involved cannabis or the DMT from tamarisk under the name of the 'fume-plant' *thymbros* associated with Apollo (Ruck *et al.*, 2007, pp.91-100).

The wolf sacrament of the Thracians and other ancient peoples is a version of the Zoroastrian Persian *Haoma*, which the Greeks knew as *[H]ómomi*, the original of the magical plant moly in Homeric tradition (Ruck, 2014b, pp.139-141). Plutarch describes how the plant was pounded in a mortar, with invocations to the deities of the netherworld, and then mixed with the blood of a sacrificed wolf to reinforce its zoomorphic manifestation and stored where the sun would never shine upon it (Plutarch, *De Iside et Osiride*, 369d-369e). One of the Scythian tribes took their name for the drinking of this sacrament, which apparently accessed lycanthropic shamanic powers, the *Saka hauma-varga* or *Haoma Wolves*, mentioned in an Achaemenid royal inscription (Gershenson, 1991). *Haoma* is the Iranian Persian (*Avesta*) version of the Vedic (*Rig Veda*) Soma. (Soma and *Haoma* are generally capitalized since it



is the name of a deity, not personified as either sex, but as the 'drink' it is generally not capitalized.) Although much debated, the original identity of this Soma sacrament was probably the psychoactive *Amanita muscaria* mushroom (Wasson, 1972), although various surrogates were often substituted, for which cannabis is a documented occurrence (Bennett, 2007; Sarianidi, 2007).

On the comic stage of Athens of the Classical period, this Persian sacrament was well known and associated with Thracians. It was visionary, inducing clairvoyance, and described metaphorically as a 'bull' and a lethal potion of blood and enacted by two Thracian slaves in an obscene routine of mutual fellatio, with the mushroom identified by its common metaphor as an erect penis (Ruck, 2012). In any case, the fungal identity of the Persian warriors' *haoma* sacrament was common knowledge in Athens of the Classical period, since the Greeks were in frequent contact with the Achaemenid Persians and had fought two wars against their invading forces at the beginning of the fifth century BCE. In addition, disgraced politicians from the democracy commonly sought asylum with Persian satraps and participated in their secret initiatory rituals. The Carthaginian general Hannibal in the second century BCE may have been initiated into the *haoma* cult when he sought asylum in the Persian lands under the protection of King Prusias of Thracian Bithynia (Ruck *et al.*, 2011, pp.80. Plutarch, *Flamininus*, 20).

The Name of Wine

Among the myths told about the spread of the Dionysian cult was the tale of the Thracian Lycurgus (Greek Lykourgos), king of the Edoni (*Edonians*), a people located at the mouth of the River Strymon, where the later Greek colony of Amphipolis would be founded in the fifth century BCE. His realm is sometimes extended as far to the east as the River Hebrus (Modern Greek Evros), bordered in the north by the Rhodope Mountains of southern Bulgaria. In these tales of the proselytizing wine cult, the common theme is the sterility and devastation visited upon the lands that initially rejected the god's blessings of civilized intoxication.

It would be extremely naïve to assume that the peoples before viticulture had no intoxicants, since cave paintings as early as the Paleolithic Era (37,000 BP, 'before the present time') document

ecstatic experience through rituals of shamanic ecstasy accessed with toxins. It is generally agreed that viticulture first developed, probably independently, in several places where wild grapes grow naturally. The earliest surviving evidence of winemaking comes from Persia around 7000 BCE, and from the easternmost shore of the Black Sea, the mythical kingdom known as ancient Colchis, the homeland of the notorious herbalist Medea and the magical 'Golden Fleece,' around 4500 BCE. The oldest winery discovered is in a cave in the mountainous region of Armenia, dated to 3000 BCE. Similarly, evidence of the domestication of the vine occurs around the third millennium in Mesopotamian Sumer and the Near East, whence it spread into Egypt, where winemaking is depicted in tomb frescoes of the mid-second millennium BCE. Egyptians, however, preferred beer, and as late as the sixth century BCE, they thought that wine caused mental derangement because it represented the blood of their ancestors (Plutarch, *De Iside et Osiride*, 6). Wine is documented as a probable independent development in China as well in the second to first millennium BCE.

In the Thracian/Phrygian lands, archaeological remains of winemaking in the northwestern region of the Black Sea occur as early as the fourth to third millennium BCE, including evidence of domesticated grape cultivation and the evolution of large ceramic *pithos* vessels and leathern bags and wineskins suitable for the fermentation, storage, and transport of the product, as well as drinking cups (Shephard, 2008). Viticulture had spread to the Aegean peoples by at least the second millennium or earlier. These containers for the fermented drink are reflected in Mycenaean Linear B words, including the Slavic Romanian word for 'wine,' which is represented by the Mycenaean *wo-i-no* (Greek [*w*]oīnos, as in 'oenology'), responsible for the many cognates for wine in the languages of ancient and modern Europe, including the Semitic *YYN*. The ferment of honey water or mead, which provides the common word for 'intoxication' (*méthū*) in Greek, was originally inseparable from wine until the cultivation of grapes with naturally higher sugar content yielded vinous ferments of stronger alcoholic content. The same verbal root yielded *manía* in Greek and English 'mad.'

Ancient wines were predominantly sweet in taste. Sugar itself (glucose) was still unknown in the ancient world except as imported from India as late as the first century CE, and then not as a food, but for medicinal usages (Galloway, 1989, p.24).



Glucose is named from the Greek *gleúkos*, meaning 'sweet wine,' which is called 'must' (the just-pressed grapes with the stems and skins), from the Latin *vinum mustum* for 'young wine or unfermented grape juice.' Honey was often added to wine after the fermentation to increase its sweetness. This wine was called *mulsum* in Latin, from *mel* (Greek *méli*) for 'honey.'

'Wine' as a word is perhaps assimilated from a non-Indo-European language of the Mediterranean substratum, as something novel to the experience of the immigrants, like the word *thálassa* for 'sea,' there being no sea in their central Asiatic homeland. However, the origins of viticulture suggest that the Indo-Europeans encountered wine well before their arrival to the Mediterranean. Wine was probably not invented or coined as a previously nonexistent word to name the new ferment. As with the mad mania of mead, a word descriptive of the intoxication or its source before its manifestation as a product of viticulture would have been redeployed for the newest avatar. If 'wine' does have an Indo-European etymology, it may be derived from a very ancient Indo-European word, ultimately related to the Latin word for 'grapevine' (*vitis*) and the Greek *[w]ítys*, which designates a 'circular rim,' as felloe of a wheel supported by its spokes (Chantraine, 1968-1980, s.v. *oinos*. Ruck, 1986b). Such a glyph, a circle with a central dot or axle, is a common designation for the underside of a mushroom cap, as in the depiction of the Aztec god Xochipilli, the 'Prince or Child of Flowers,' seated in a state of ecstasy upon his mushroom stool (Wasson, 1980). It is probably significant that the Judaic prophet Ezekiel received his call to prophecy in a fiery vision during a thunderstorm, in which he saw the chariot wheels of the Merkabah throne of the deity as living creatures, burning coals of fire like torches, speeding back and forth like flashes of lightning, and as they fell to the ground, he saw the wheels on the ground, like a wheel within a wheel, and the rims of the wheels were full of eyes, like the white scabs on the Amanita's cap (Ezekiel, 1.1—28. Ruck, Staples and Heinrich, 2001, pp.210-211).

The Fox and the Grapes

Sacred plants are too numinous to have names, and they are designated only with metaphors, like the obviously fungal 'parasol' that was given a living anthropomorphic manifestation as the tribe of single-footed Shade-foot creatures, who rested on their backs in the shade cast by their extremely

broad uplifted foot (Ruck, 1986a). The 'wheel' fits perfectly the identification of the mushroom as the wild botanical precedent whose name was transferred to designate the fungal intoxicant manufactured through the art of viticulture. Thus, wine commonly is still employed generically to name various ferments that contain no juice of the grape. The metaphor of the wheel, moreover, suggests the trip afforded by the sacred mushroom. The Merkabah is so named itself as the 'trip.' The mushroom in Greek was called a 'ferment' (*zúmoma*, common for all leavening, including bread and beer) (Nicander, *Alexipharmaca*, 521). The metaphor of the earth's ferment clearly indicates that the ancients recognized the commonality of mushrooms and the fermenting and leavening yeasts.

Itys, moreover, was personified as the son of the Thracian king Tereus, who was slaughtered and served as food to his father. This mythological event indicates that the sacrifice of Itys was a necessary precedent for the grapevine to supplant the primordial vines and the mushroom. It is the role assigned in mythological traditions to the many opponents of the new cult of the fermented grape. Perseus and his involvement with the mushroom, in other traditions, was the ultimate enemy of Dionysus as the proselytizer of the new cult of the grapevine (Ruck, 2014b, p.180; Nonnus, *Dionysiaca*, 47.665 *et seq.*). The Aesop fable of the Fox and the Grapes probably represents the same antagonism as the lycanthropic motif since foxes are not noted for their diet upon grapes, which may even be lethal to them as canines (*Aesopica*; Phaedrus, *Fabulae*, 4.3).

'Wine' and all its similar forms in ancient and modern languages are ultimately cognate with 'vine' (French *vin* and *vigne*) and in Dionysian cult a variety of wild vines figured as the precedent for the grapevine. These primitive vines imitate the appearance of the grapevine and produce similarly clustered berries and fruits that are naturally intoxicating, poisonous, or psychoactive. These include bryony (*Bryonia* species), a tendrill-climbing vine of the cucumber family, used in herbal medicine, but poisonous, some species highly so and potentially lethal if ingested. Smilax or bindweed, also called 'prickly ivy,' is a similarly trailing vine that is mildly toxic or even lethal to certain animals (Schultheiss, 1995). Bindweed was also called woodbine, and its folkloric names suggest its role in medieval herbalism, such as 'poison-flower,' 'poison bittersweet,' 'snake-berry,' 'devil's vine,' 'hell-weed,' 'possession vine,' 'fairy



hops,' and 'fairy trumpets' (Spencer, 1940, pp.194 *et seq.*). It figures in the Grimm fairytale of *Our Lady's Little Glass* (*Muttergottesgläschen*), which tells of a merchant's wagon heavily laden with wine and stuck in the mud, whereupon the Virgin chanced by and set the cart free and then drank some of his wine using the flower as her glass. The tale strongly suggests that bindweed was employed as an additive to wine and also that it figured as a Christian sacrament. Its folkloric name as fairy hops probably betrays that it was an ingredient in the making of beers, as well. This latter tradition lies behind its role in root beer as the bindweed extract sarsaparilla, an earlier brew that was replaced by the popularity of Coca Cola, whose secret formula in the nineteenth century contained cocaine.

The bindweed belongs to the family of the *Convolvulaceae* and is like the morning glory in closing with the rising of the daylight's sun, and hence had magical symbolism as a solar marker (Thiselton-Dyer, 1889, p.124). The folkloric tradition suggests that some varieties yield the same psychoactive lysergic acid amides known in the New World as *ololiuqui*. This would explain the many depictions of the funnel-shaped flowers on the funeral vases surviving from the tombs in Magna Graecia, where it often has a head with the Phrygian fox cap emerging from the floret, suggesting that the flower was analogous to the mushroom indicated by the red cap (Ruck, 2014b, pp.79-100). If the heads were intended to have a mythological identity, they should probably be recognized as indicating that the deceased was an adherent to the originally Thracian cult of Orphism, whose decapitated head was a fungal manifestation, bearing prophetic messages encoded in the supposed writing read off its surface (like a book or *bímblos*), and who significantly was a devotee of the solar Apollo and was harvested in a Dionysian revel (Ruck, 2014b, pp.115-133).

The most emblematic of these wild vines was the wild ivy (*Hedera helix*), which reputedly in antiquity caused mental derangement (Dioscorides, *Alexipharmaca*, 2.176. Pliny, *Historia naturalis*, 24.75), and in actual fact its leaves and diminutive berries contain toxic saponins capable of poisoning cattle and inducing severe dermatitis and coma in humans. Ivy was considered parasitic, like the symbiotic mushrooms (although mushrooms do not use chlorophyll to produce nourishment by photosynthesis, many, like the Amanitas, are not totally parasitic, but grow in

mycorrhizal symbiosis with the roots of their host trees), wildly sending out roots all along its stem and capable of sustaining itself even after it was detached from the ground, eventually killing the tree that had served as its host (Theophrastus, *Historia plantarum*, 3.18.9).

The 'vine' was called *ámpelos* in Greek, applied generically to all vines both cultivated and wild like bryony and smilax. They were personified as Ampelos, a Thracian satyr or goat-man, the beloved of Dionysus. This is always a dangerous relationship. Through his death as a sacrificial offering to primitivism, which is what a satyr personified, the vine of the grape and wine was discovered. The free-grazing goat was a threat to the vineyard's vines. He is named *ámpelos* for the 'grasping tendrils,' *amphi- hélix*, of the wild vines like ivy (*kissós*). Kissos, in this mythical account, also was personified. There was a race between Kissos, Ampelos, and Leneus, the third being the personification of the 'winepress trough' (*lenós*). Dionysus intervened to favor his beloved Ampelos and the poor Kissos came in last, stumbling and slipping on the wet ground and falling into the muck (Nonnus, *Dionysiaca*, 10.393 *et seq.*).

Ampelos, however, met his death as a personification of the grapevine's fungal antecedents, either riding on a bull (bellowing moo-shroom) stung by the estrus bite of numerous cow-flies, or else he went swinging through the woods foolishly hanging on the wild vines (bryony, smilax) dangling from the trees, until one of them failed to support him and he fell to his death, essentially the foolish agent of his own demise, the ruse that masks the offering of a human victim. Dionysus elevated him to the stars as the stellar cluster named Vindemiator or 'Vine-harvester' in the right hand of the constellation of the Virgin (Ovid, *Fasti*, 11.185 *et seq.*). In her left hand is Spica, the sheaf of grain. In the ritual harvesting of the grapes, the harvesters impersonated satyrs. The harvest represented the apparent murder of the cultivated deity and it was blamed upon the satyrs as the agents of recidivist primitivism, but the death of the grape was actually a miracle, leading to the resurrection of the god as the spirit resident in the product of the fermentation.

As personifications, the 'cluster of grapes' Staphylos and Botrys are from the generations after Dionysus, Staphylos as his son by Ariadne, and Botrys as his grandson, whose mother was 'Intoxication' personified as Methe (the generic term derived from *méli* or 'honey'). Both *stáphylos*



and *bótrys* were generic terms for clustered fruit. A fifth-century large wine-mixing bowl or *kráter* from Magna Graecia depicts the elder Dionysus with the emblems of the revel of the wild vines, seated and holding in his lap his son, holding the god's favorite wine cup (*kántharos*) and a shoot of the grapevine (Ruck, 2014b, pp.69-70. Altamura painter, Museo Archeologico Nazionale, Ferrara). As a mixing bowl, it obviously indicates that the liquid contents combined the wine with its additives of the wild vines and their metaphoric analogues that predated the art of viticulture, and as a tomb offering, it indicates the sacral nature of the potion it was supposed to have contained.

Lycanthropy

The enemies of Dionysus mythically represent not sobriety or abstemious inebriation, but the natural toxins of the primordial world, wild ecstasy, not mediated by the art of viticulture. A similar symbolism can be traced with mead as a marker for the passage from nature to culture (Lévi-Strauss, 1960).

It is clear that King Lycurgus opposed the advent of Dionysus, but the tale has various curious details. The king's name is transparently a title for shamanic lycanthropy, identical with the legendary eighth-century BCE Spartan lawgiver Lycurgus, who 'does the work of a wolf.' The Spartan Lycurgus is legendary since he appears to have lived more than a normal life span and the Delphic oracle, it was reported, thought he was more a god than a man (Plutarch, *Lycurgus*, 5), which implies that he was at least a shaman and probably one of a series of men who embodied the hereditary titled role as incarnations of Apollo as the Spartan wolf-god.

The Thracian Lycurgus was the son of Dryas ('oak') and the father of a son of the same name. It was customary not to name a child after a living relative, and hence we may assume the hereditary titles alternated between wolf and oak. Dryas has Druidic implications of oak worship (*dryas*), such as was still practiced in historical times at the divinatory sanctuary of Zeus at Dodona in northwest Greece, considered the oldest Greek sanctuary, going back to the second millennium BCE and originally sacred to the Mother Goddess. Druids are named as the 'sons of the oak' (Latin *Druides*, their name assimilated from Celtic *draoidh* for an 'oak shaman, magician, or sorcerer'). The wolf-man represents the world before the advent

of the wine. His association with the oak tree suggests that the primordial plants that he represents are the Druidic mistletoe and the *Amanita muscaria* that are always linked as magical parasites upon the sacred tree (Ruck *et al.*, 2001, pp.15-40). The fourth-century BCE Greek comedian Antiphanes makes specific mention of a mushroom associated with the oak that was reputed to induce clairvoyance (Antiphanes, frag. 227), which indicates that the mushroom is psychoactive and particularly involved with the oak. Because of the *Amanita muscaria* mushroom's mycorrhizal symbiosis with the tree, it is seen as its fruit (Wasson, 2001). The wild vines that are the precedent of the grapevine are analogous to the mushroom that was tamed through cultivation and human intervention. The grapevine and its grapes are not only edible and nontoxic in themselves, but the vine requires annual pruning to induce it to fruit, and hence is similar to the olive as emblematic of the triumph over primitivism. In depictions of Perseus' harvesting of the Gorgon head (mushroom), almost always the scene is marked by the growth of an olive tree at the exact axis of the spot occupied by the Medusa monster (Ruck, 2015a).

The Revel on the Holy Mount

The myth of Lycurgus was known to the Homeric tradition, but occurs only as a passing example of the futility of attempting to oppose the gods (Homer, *Iliad*, 6.129 *et seq.*). Dionysus, in general, appears to be a latecomer to the Greek pantheon, and although wine drinking is a common theme in the Homeric poems, the god plays no role in the events. Lycurgus drove the wet nurses of 'maddened' (*mainoménoio*) Dionysus down from holy Mount Nysa, and they 'all scattered their sacred thyrsus wands (*thústhla*) upon the ground, struck by the cow-prod (*boupléx*) of murderous Lycurgus.' The king had apparently interrupted whatever they were doing, forcing them to toss away their wands as he drove them into flight with his cow-prod, the latter implying that they were somehow perhaps (mooring) cows. The thyrsus and the cow-prod are important clues to the myth's meaning. The cow-prod is an aspect of the metaphorical bovine zoomorphic manifestation of the mooing mushrooms, and the cowherd's prod is the sting of the estrus, implying that the maddened women were afflicted with the ecstatic rapture induced by the deity's fungal analogue.



The Nysian Mount in the account of Lycurgus must be identified with the Thracian Pangaion Hills that rise above the plain of the Edoni tribe above the present city of Kavala, Greece, although other accounts locate Nysa in more distant realms, perhaps near the Egyptian Nile, or further west in Libya beside the Ocean stream (as the Greeks saw it) that encircles the inhabited landmass, or far to the east in Anatolia, where the Hittites called themselves *Nesi* (Nysa), or even Arabia, or still further beyond in India (modern Pakistan), the homeland of Soma. Nysa, however, was also identified in antiquity as various closer, more local sacred mountains, such as Delphic Parnassus, and Mount Helicon, adjacent to its southern slope, where the Muses danced in ecstasy. In actual practice, any nearby mountain outside the city could serve as Nysa for the enactment of the bacchanalian rituals. Nysa was a state of mind, induced by the wild precedents of the art of viticulture. The ivy (*kissós*) itself could be called *nysa* (*núsa*) (Dioscorides, *De materia medica*, 2.179). The god could have epithets such as *Kissophóros* (Pindar, *Olympian Odes*, 2.27; Aristophanes, *Thesmophoriazouae*, 988; etc.), ‘the one who carries the ivy,’ and *Kissochaítes* (Pratinas, 1.17; etc.), the ‘god with ivy for hair.’ Hence, Nysa could be located topographically in such a wide diversity of places, since it was merely a step into another dimension of reality. It could be conveniently located as any nearby mountain designated as sacred outside the civilized enclosure of the city’s walls. Nysa was traditionally the mythical land where the god was tended through his infancy and childhood, predating his discovery of the miracle of the grapevine and the magical intoxicant grown on the fermented juice of the grape. The connotations of altered consciousness persist into Modern Greek, where the verb *nystázo* means ‘to grow sleepy, to nod off.’

In modern terms, it is the realm of the fairies. The biblical Nod (*Genesis*, 1.16) is located east of Eden, the land where Cain was exiled after the murder of Abel, as a place of wandering. Its association as a pun with sleep occurs first in English in Jonathan Swift, elaborated in Robert Louis Stevenson’s “The Land of Nod”: verse 18, in *A Child’s Garden of Verses and Underwoods* (1885): *Every night I go abroad afar into the land of Nod... All alone beside the steams and up the mountainsides of dreams... Try as I like to find my way, I never can get back by day, nor can remember plain and clear the curious music that I hear.*

Medieval belief claimed that Nod was the moon, which thereby implied that Cain was the proverbial man on the moon, hence the land of sleep and dreams.

Lycurgus fell prey to a delusional intoxication not mediated by the new ferment of the grape. He attempted to violate his own mother, murdered his wife, and set out to destroy all the grapevines in his kingdom. In his madness, he mistook his own son, the ‘oak-man’ Dryas, for one of these vines, pruning off his arms and legs, and perhaps even turning upon himself to cut off a foot, mistaking it for the vine. We might suspect that this implies in some sense that he and his son have an identity as a botanical growth or plant associated with the oak or its fungal wild vine analogue. The grapevine seems to have overtaken him, entangling him in its tendrils. The grapevine is his enemy. He may even have turned against the nurses of the god, killing the one called Ambrosia, just as she was metamorphosing into the vine. Ambrosia is the personification of the divine drink of ambrosia, known to the Vedic tradition as *amrita*, the drink of the mushroom *haoma*/soma. It is probably significant that wine was never employed as a surrogate for the Avestan/Vedic sacrament, although other psychoactive agents were. The grapevine’s ferment and *haoma*/soma are thematically antithetical, as in Perseus’ encounter with Dionysus. The attack upon the metamorphosing Ambrosia seems to have been the most popular version in artistic depictions, and this was probably the way that the myth was presented in the painting that Pausanias saw in the second century CE in the Temple of Dionysus in the Athenian Theater, where it was displayed as a thematic analogue to the dismemberment of the Theban Pentheus (Pausanias, 1.20.2). These nurses had earlier been named as the sisterhood of Dodona (Pseudo-Hyginus, *Astronomica*, 2.11). Nysa, in fact, is listed as one among the infant deity’s nurses (Diodorus Siculus, *Library of History*, 3.70).

Thyrus

The thyrsus (*thúrsos*, *thústhlon*) was the emblem that characterized the ecstatic rite enacted in the dozing state of mind designated by the holy wild mount of Nysa. The thyrsus was synonymous and interchangeable with the narthex. The narthex is transparently named as the *narco-thex*, the repository for narcotic or psychoactive substances. Several compendia of medical drugs were titled



Narthex in antiquity (Galen, 12.398, 959; Aëtius 8.45). The thyrsus/narthex was emblematic of a state of mind accessed by the ambrosial drugs of the natural world before the coming of the grapevine. As the enemy of the cult, it is significant that Lycurgus slaughtered Ambrosia, one of the oak nymphs just as she was metamorphosing into the grapevine and that he turned his axe also upon his oak son and upon himself, offering himself as suicidal or willing sacrificial victim, in the delusion that he, too, was about to be overcome by the helical tendrils of the grape.

Theophrastus records that herb gatherers and root-cutters customarily stuffed their plucked specimens in fennel-like stalks (Theophrastus, *Historia plantarum*, 9.16.2). The thyrsus/narthex was such a stalk. Narthex is identified botanically as the giant fennel (*Ferula communis*), which can grow to eight feet tall. As a ritual emblem of the plant gatherers, it was stuffed with leaves of wild ivy, the vine most emblematic of the wild antithesis of the grapevine. The reveling females on the holy mount were enacting a ritual scenario of root-cutters or imitating the necessary protocol for gathering wild magical herbs. The god could also be given epithets for these 'flowers' that the maenads gathered, such as *Ánthios* (Pausanias, 1.32.4) and *Ántheus* (Pausanias, 7.21.6), *ánthos* being 'flower' in Greek. The completion of the fermentation process was celebrated annually in February by the three-day-long festival of the Anthesteria, in which children at the age of three or four were given their first taste of wine and intoxication. In Euripides' account of the death of Pentheus in the *Bacchae*, his head is carried down from the mountain, displayed upon the tip of the thyrsus as the item stuffed into the container (Ruck, 2014b, chp.3).

In common Latin culinary nomenclature, the stipe of a mushroom was called its thyrsus (Apicius, *De re culinaria*, third-fourth-century CE Latin cookbook, 7.15.6). Thus the mushroom itself was seen as the prototype of the herb gatherer's narthex, since the psychoactive toxins of the *Amanita* species are confined mostly to its cap, which now by this metaphor represents the ivy or other wild toxic plants gathered into the narcotic receptacle of the root-cutter's narthex. The survival of the thyrsus as the common name for the stipe of the mushroom until well into the Christian era indicates the astonishing longevity of the metaphor over at least a millennium, which must have been reinforced throughout this time span by the perpetuation of bacchanalian rites. In later

tradition the bouquet of ivy could be replaced by a pinecone, emblematic of the pineal gland as the gateway of the soul for mystical vision.

Magical plants must be gathered by procedures that honor their indwelling spiritual powers (Geniusz, 2009). Most ancient plants have common names with mythological or animal referents indicating that the gatherer was aware of such magical dimensions, which survive into the later languages of Europe, but were largely suppressed as mere pagan and hence diabolical and anti-Christian superstitions, except in the outlawed and persecuted traditions of witchcraft (Gómez Fernández, 1999). Where such procedures have survived at least until recently in the rural margins of civilized Europe, they indicate elaborate fantasies. The plant is hunted indirectly and by feigned misdirection, allowing it instead the opportunity to find the root-cutter, thereby signifying its willingness for the encounter. It is addressed with honorific and sacred names, as acknowledgement of its indwelling persona. It is given offerings of clothing and food as replacement for what is to be taken, sometimes replacing one psychoactive substance for another. Finally, it is approached with seductive gestures of sexual mimesis, with the root-cutter undressed and with genitals exposed (Eliade, 1986, pp.208 *et seq.*; Ruck *et al.*, 2007, pp.133 *et seq.*). Similar rituals are documented today for Amazonian shamanism, with the gatherer usually offering copious fumigations of tobacco to replace what is to be taken (Tindall, 2008).

Ancient herbals note that the root-cutter should observe the time of day and the direction of the wind and avoid the presence of particular animals that represent the zoomorphic animate spirit and might in anger attack the gatherer. A certain plant called the *glykysíde* ('sweet apple'), for example, was under the protection of the woodpecker (a bird sacred to Ares/Mars), and the bird was apt to peck out the root-cutter's eyes or even mount an anal attack. The significance of the threatened buggery is obvious, but the irreversible damage to the eyesight probably indicates dangerously altered vision. The plant is identified with the peony, named for the mythical physician Paeon (Greek *Paíon*, 'Striker, Pecker'), as a devotee of Apollo. Paeon was said to have metamorphosed into the plant, which grew on the slopes of Mount Olympus, in order to preserve the plant's efficacy in easing the pain of childbirth, suggesting its sexual associations. Sometimes an animal itself was enlisted as the agent for removing the plant. It



was tied to the plant so that it would be responsible for uprooting it (Ruck, 1978). In medieval Europe, it was still the procedure to tie a dog to the mandrake in order to yank it from the ground (Harley MS 1585, British Library). As with the 'pecker,' the choice of animal is part of the essential ritual, inasmuch as the mandrake was involved in canine metamorphosis into a werewolf.

The thyrsus/narthex functioned as an emblem of shamanic empowerment, essentially a wizard's wand, signifying the authority validated by the magical plants gathered into it. As such, it partakes of the same symbolism of all wands, divining rods, scepters, and staffs of office. These all are traceable back to botanical originals with either actual or metaphoric psychoactive properties. This is particularly obvious in the case of the thyrsus/narthex since it was supposedly stuffed with botanical specimens. The psychoactive or mind-altering symbolism is observable in the many mythological paradigms where the rod has metamorphosed from a serpent (Aaron's staff, *Exodus*, 1.10) or functions to open the passageway to another world (caduceus of Hermes) or miraculously sprouts back into a living plant as a sign of chosen divine status (almond branch of Joseph, *Protoevangelium of James*, the staff of Saint Christopher, who carried the Christ Child on his shoulders). Ultimately, the phallic symbolism of all these rods is inescapable, implying as well the bodily receptacles for which it might expectably be employed as phallus, especially if it is to sprout anew into life. The serpent commonly twined about it indicates toxicity.

Bákkhos

In Greek, a *bákkhos* (*bákkhos*) was a sprig of a plant wielded as such a magical wand, stylized as such in the form of the thyrsus/narthex. As Bacchus, the personification of the magical wand, the god's name occurs in Semitic languages as Bakuy, an epithet as the 'lamented one,' and his remote ancestry is as the dying and reborn consort of the Great Mother, known variously as Inanna, Ishtar, Astarte, Ananth, Cybele, and Kotyttu. Among these goddesses is the one called Pidray, this last documented from Canaanite Ekron just a few kilometers from Jerusalem, with the Hebrew name for mushroom, *PTRH* (vocalized a Pidray, with the final *H* as suffix indicating divinity, as in the tetragrammaton for Yahweh) (Berlant, 2009; Ruck, 2010), making her consort analogous to male deities also fungal like the goddess they served

(Ruck *et al.*, 2012, pp.14-16). Such a consort was Ba'al, given the epithet of *zebub*, Beelzebub, the 'Lord of the Flies.' Whereas the hero Perseus decapitated the Gorgon Medusa, his Corinthian analogue or doublet Belerophon bears the honorific title as the one who defeated Ba'al. Ba'al was commonly portrayed with a mushroom-shaped crown.

The shared fungal analogue of both the Great Goddess and her consort reflects the original hermaphroditic nature of the deity, whose male phallic member was born of the other and was fated to die and be lamented upon the self-insemination of its partner (Ruck *et al.*, 2011; Devereux, 2011). This dual role underlies the symbolism of the thyrsus and the other versions of the magical rod. Gender was not a rigid category in antiquity, and bisexual beings or persons of indeterminate, transitional or mutable sexuality had a special sanctity (Hillman, 2013). The fungal identity of this dual entity survived in Judaic occult lore and hermetic rabbinic oral teaching, surfacing finally in the thirteenth century CE Cabbalistic mystical revelation of Abraham Abulafia, who envisaged the fruit of the Tree in Eden as the goddess Lilith entwined as a serpent with her consort Samuel in the form of a mushroom, red as a rose, expanding (Ruck *et al.*, 2012, pp.3-32).

Mushroom Tombstones

The Phrygians of Anatolia assimilated the name of Bakuy from their Semitic neighbors. With his Greek name as Dionysus (Dionysos/Dionusos), the god is a translation of the lamented Semitic Bukuy into Indo-European as *Diounsis*, the perfect passive participle of the Sanskrit root *div-* for 'lament' (Wohlberg, 1990). By folk etymology, the name of Dionysus could be derived from the name of his father Zeus, combined with the Nysa of his infancy. (Indo-European **dhwes*, cognate with Greek *thymós*, spirit, English 'fume', deity as rapture of the mind, the origin of *deus* in Latin and *theós* in Greek for 'god,' cognate with *dies* in Latin for 'day' and responsible for English 'day' and 'divine.')

More than 1,000 clay tablets survive with his name written as *Di-wo-nu-so-jo* in the Linear B syllabary of the Mycenaean Age (latter half of the second millennium BCE). His name is found on gravestones of the third century CE written partly in Greek and partly in Phrygian as a guardian of tombs (Calder, 1947). Many Greek and Anatolian phallic tombstones from all periods survive in the shape more correctly recognized as a mushroom.



It would be easier to accept these as phalloi if any one of them bore the slightest resemblance to the organ with which the Greek artists were so well familiar. The only group of objects, which all these phalloi can be said to resemble, is fungi, mushrooms and toadstools. The asymmetry of the glans, the duct, and the testicles are never shown, and the knob is often flat or spherical (Kurtz *et al.*, 1971).

In fact, 'mushroom' appears to have been a metaphor for the burial coffin or for the tomb itself (Suidas, *s.v.*, *muke*). The megalithic Thracian monuments often served as markers for organized necropolises or cemeteries. In some instances, further carving depicts a doorway on the stipe, imparting the sexual metaphor of the vulva as the entrance to the world beyond and a bisexual or hermaphroditic symbolism of the mushroom.

A tombstone from Dascylion in ancient Bithynia on the south shore of the Black Sea presents a particularly fine example of these ancient mushroom tombstones. The deceased Lysandra is depicted seated between two butterfly (Psyche) fairy souls in a niche carved into the cap of the mushroom. The phallic herm-pillar of Hermes, as psychopomp or soul escort, is carved into the stipe, flanked by dogs/wolves. The role of Hermes as soul escort indicates the symbolism of the mushroom as a chthonic mediator and his depiction as the aniconic herm pillar indicates as well the symbolism of the mushroom as metaphoric for the male sexual organ, in particular the stipe as penis, and also imprinted with the image of the altar gateway as the vulva opening to the world beyond (Ruck, 2006, p.61). By the metaphor of the stipe (Latin *stipes*) for its 'trunk,' the mushroom is designated as a tree, and the nomenclature for its 'cap' as the *pileus* anthropomorphizes it as a creature wearing the red Phrygian fox cap.

From Wolf to Light

Students of ancient theology are well aware that the common understanding of Apollo as the apogee of rational perfection is a pious ruse to hide his darker aspects. The lycanthropic theme probably implies the traditional opposition between Apollonian and Dionysian modes of ecstatic divine communion and altered states of consciousness. This darker aspect of Apollo's pre-Olympian persona involved him in ecstatic rituals enacted in sacred caves, like the Corycian Cave on Mount

Parnassos above the later eighth-century sanctuary built on the site of the present ruins of the Delphic temple complex (Fontenrose, 1959, pp.403-466), and the several sacred Zerythian Caves in Thrace and on the island of Samothrace. Both locales are associated with lycanthropy. The Corycian Cave was originally discovered by a pack of wolves from Anatolian Lycia (named as the 'wolf land' and so-identified in the emblem of its coinage) (McInerney, 1997), and the revels in the Thracian caves involved the sacrifice of a dog (Lycophron, *Alexandra*, 77; cf. 1174 *et seq.*; Suidas, *s.v.* *Zerynthía*; Sophron of Syracus, quoted by *Scholia vertera* to Lycophron, *Alexandra*, 77). The wolf motif occurs also in the myth of Apollo's rebirth into his newer identity as a member of the Olympian hierarchy. Thus it was also a pack of Lycian wolves that led Leto to the sacred island of Delos in the Aegean as the site for the birthing of Apollo and Artemis into their new identities as the twin offspring of Zeus.

Apollo had the epithet of *Nómios* as herdsman and protector of the flocks, but that was an apotropaic euphemism, casting him as the optimistic inverse of his role as the wolf-god that attacks the herd supposedly entrusted under his guardianship, and it should be remembered that the herdsman is also their slaughterer as he culls his flock. Apollo's name is probably related to *apélla*, which could designate not the flock of beasts, but the assemblage of the people, as well, being the Dorian equivalent of the *ecclesia* in Athens, ('group summoned together,' French *église*, which developed into the Christian 'church,' paired and personified in Medieval Europe with the Jewish 'synagogue' for the 'bringing together' or assembly') (Plutarch, *Lycurgus*, 6; Hescyhius, *s.v.* *apelázein*; substantiated in inscriptions, first century BCE, from Spartan Glytheion). *Nomós* 'pasturage, common feeding ground' as homonymous with *nomós* meaning 'law, common usage' of civilized society provided the fundamental pun upon which Aristophanes constructed his *Birds* comedy (Arrowsmith, 1973). As such, Apollo in the persona of the wolf-god also played a beneficial role in overseeing puberty initiations into the tribal brotherhoods organized as 'packs' of males. Nevertheless, however, the more ancient manifestations of his persona were involved in lycanthropy as warrior initiations, as in the annual war that Sparta declared upon their resident slave populaces, and in the warrior cults attested among the Thracians. At Sparta, moreover, the puberty initiate was required to spend a year



as an outcast, living by thievery, during which time he was considered a wolf. After that ordeal, he was admitted into the wolf packs that comprised the army, thus enacting the two aspects of their patron, the wolf-god.

Apollo's lycanthropic persona as a wolf-god (*lykos*) was given a false etymology, not derived from the 'wolf,' but from the 'light' of the sun and its solar illumination. *Lykios* was fancifully associated with Latin *lux* for 'light' and Greek *leukós* for 'white,' and Apollo's epithet was explained as derived from the 'sun shining and making everything white' (Antipater of Tarsus, 3.249). The god's tenuous claim to the light of day, however, is reflected in the word for the dangerous marginal time of the dawn and the twilight as the 'wolf-light' (*lykóphos*). This motif has entered contemporary popular culture as the werewolf/vampire film series titled *The Twilight Saga—Breaking Dawn*. Similarly, the liminal threatening time when werewolves are abroad, the 'wolf-walk' (*lykábas*), is forced to mean the 'path of the sun' and glossed as a period of time, perhaps a year. The wolf-walk and its berserker ritual are responsible for the Germanic name of Wolfgang.

The completion of such a temporal passage implies termination and a new beginning, and hence has sinister connotations about what occurs upon the fulfillment of the term. Thus, despite the obvious similarity of his name to the *apélla*, its probable corrected derivation, Apollo was seen etymologically as the 'Destroyer' (*ap-olú-esthai*) (Aeschylus, *Agamemnon*, 1080-1081), indicating his role as the recipient of human sacrificial victims, well documented in mythical tradition, but masked by theological obfuscation, and often enacted with symbolic animal surrogates, except in moments of gravest necessity, even in Classical times, when it might still be practiced with human offerings (Fraenkel, 1950, note on verse 1081).

Classical culture has been idealized and scholarship recoils from certain aspects that seem repugnant to what Europe claims as its ancient cultural heritage, but even in the most iconic symbol of the Periclean Age, the great fifth-century Parthenon Temple in Athens, we find depicted in its frieze, when correctly interpreted, not the Panathenaic Parade, but the presentation of the king's daughter as a sacrificial victim in a marriage with death (Connelly, 2014). The temple itself was not named as the Temple of the Virgin Goddess (*parthénos*), but the Temple of the Virgins (*parthenón*), and a 'virgin' was not a non-sexual

maiden, but one who was menstruating, but not yet married, and a suitable candidate for the erotic rapture of death.

The traditional mode of sacrifice for Apollo was a plunge off a precipice, as was enacted from the twin Phaedriades Cliffs above Delphi and as the lover's leap off the White Rock on the isle of Lefkas (Nagy, 1990). It was such a role that Daphis and Daphne both played, both named for the psychoactive sacred plant associated with their divine lover Apollo (Ruck, 1914b, p.94). When Daphis died, the wolves howled (Theocritus, *Idyls*, 1). Similarly, Apollo's boy-loves Hyacinthus and Cyparissus are associated with botanical manifestations with either psychoactive or funereal connotations. Significantly, the death of Daphnis was caused by a blindness induced by intense intoxication, in which state he stumbled 'accidentally' off a cliff. Accidental death was often the ruse that masked the offering and either exonerated the executioner or blamed the victim like Ampelos for the outcome. Other optimistic etymologies associated Apollo with the 'Redeemer' (*apo-lú-ein*) and 'Purifier' (*apo-loú-ein*), both 'redemption' and 'purification' being the cleansing benefit sought through the offering of the victim as an *alexiphármakon*. The *phármakon* is a 'drug' or pharmaceutical, and the *pharmakós* is the victim offered as cure, representing the necessary demise of recidivist forces to liberate the optimistic potential for cultural evolutionary progress. The culling or selective slaughter of the chosen few is seen as beneficial, strengthening the purity of the herd and ridding it of its defective members. The verb cull applies also to the selective plucking of the chosen flower. In all cases, the victims were particularly beloved to the god and seen as the etiology for the homoerotic bonding in the wolf packs of warrior fraternities. The victim died in the persona of the god's darker identity, allowing the deity to evolve toward its Classical Olympian manifestation. When an animal was substituted, as was generally the case, the particular animal selected was emblematic of the deity's past avatar. The Greeks had a proverb that stated whom the gods love dies young (Menander, *Epigrammatic Sentences*, 424; *The Double Deceiver*, frag. 4). It was first applied to Trophonios, who built the primordial temple for Apollo at Delphi, the beehive that was metaphoric for the Coyrcean Cave.

Brotherly Love



The wine of Maron that Odysseus employed to confound the wits of the Cyclops was the gift of the priest of Apollo, but he was also the son of Dionysus. This indicates the traditional linkage or partnership that characterizes these two sons of Zeus, Apollo destined to be included in the family of the twelve Olympian deities, and his half-brother Dionysus, who by most accountings would be only a supernumerary visitor, more at home in the netherworld with Zeus's daughter Persephone, who was also only a frequent visitor on Olympus.

Like all the heroic encounters, the episode with the Cyclops and the virulent Apollonian-Dionysian drink encodes the transition from primitive toxicity to its transmutation into civilized control over nature. Thus Odysseus' whole absence away from home was like a dream or experience of altered consciousness. The 'homecoming' or *nostós* was a traditional motif encoding the return to the 'conscious perception' or *noós* (Frame, 1978). Thus the final proof of his identity upon his return home is the secret of the bed in Ithaca that he constructed with one of its legs anchored to the ground as the trunk of an olive tree, cut at the level of the second floor. It is a pruned olive tree, supplanting the motif of the thicket of wild olive that sheltered him through the first night after his arrival on the isle of Nausicaä, which was the final temptation to remain forever in the paradisiacal realm of dreams. This is the motif of the olive as the prototypic transmutation from the primordial wilderness, the same motif of the wild vines of Dionysus transmuted into the grapevine and its manufactured intoxicant, and of the barley hybridized from spelt and the ergot-infested darnel. Significantly, the olive not only requires annual pruning to fruit, like the grapevine, but its fruits are not edible until further human intervention. It was a piece cut from the olive-wood club that the Cyclops had fashioned into a staff that Odysseus and his men used to put out the single eye of Polyphemus (Homer, *Odyssey*, 9.318 *et seq.*). The transmutation of the olive inevitably suggests the goddess Athena as the replacement for her primordial persona as the Medusa, and the olive is cited as one of the trees that hosts the *Amanita muscaria* (Angelis, 1962, "On the pine trees and on the sacred olive there grow some big red mushrooms with a terrible poison.... The shepherds wonder: How does it come about that the olive tree produces bad mushrooms?" Ruck *et al.*, 2011, p.90).

The association of the olive with the mushroom is also indicated by the myth of

Heracles and the Ceryneian hind, whose golden horn plucked among the fantasy people of the northern Hyperborean homeland of the Indo-Europeans, metamorphosed into the first sacred grove of olives planted at the rededicated sanctuary of Olympia as the hero crossed the frontier back to ordinary consciousness (Ruck *et al.*, 2001, pp.46-49). The hind (female deer, sacred to Artemis) is a reindeer (the only species with antlered females), noted for its fondness of the intoxication accessed by the mushroom. No doubt all deer exhibit a similar predilection, responsible for the motif of the deer hunt in Zoroastrian and medieval traditions and the Christian hagiographic theme of the deer-hunter's miraculous vision of the Christ crucified between the antlers of the stag (Saints Eustace and Hubertus, Ruck, 2014b, p.47).

Apollo, who was the divine patron of Troy, represents the toxicity of the old religion and of the primordial toxins, of which the *Amanita muscaria* is emblematic, although they are often cited in particular mythological scenarios as *daphne* or 'laurel' (*Rhododendron ponticum*), crocus, hyacinth, tamarisk, *Satureja thymbra* or 'thyme,' wolfsbane (*Aconitum lycoctonum*), cannabis, etc. They all probably functioned in preparing the human victim to acquiesce in the performance of the ritual offering. In Dionysian rites, mythical precedents are the Thracian Lycurgus and Pentheus of Thebes, Ampelos, and Apollo's devotee, the Orpheus of Thrace or his brother Linus, who lent his name to the song of lamentation (Homer, *Iliad*, 18.596, with scholiast: the ritual cry of lamentation, *aiai, ailinon, ailinon*, Ruck, 2014b, p.105), and hence Lionos is an analogue of Pentheus, who is named as the 'Sufferer.'

In Dionysian revels, the root-cutters enacted a symbolic rite that symbolized the victim's offering under a variety of metaphors, sometimes a human, sometimes various animals. This may in former times have been once enacted with actual victims torn limb from limb, with the women tasting of the raw flesh, but by Classical times it was various anthropomorphic or zoomorphic manifestations of the wild plants that were the victims imagined in the revel scenario. It is highly implausible that women could in actuality hunt animals without trapping equipment and training, and it is quite unlikely that they could have the requisite strength to wrench a man apart with their bare hands, nor is a bull, as it was imagined in the scenario, likely to be docile enough to acquiesce in the ritual rendering. The 'bull' is the metaphor for the mushroom, which bellows,



supposedly, as it bursts into fruit from the ground (Aristias, frag.: *mukaísi d' oréchtthei tó léinon pédon; rhóchttheí*).

In transitioning to the light of the sun, the wolf-god traditionally displaces the burden of his former persona upon either a son, like Ion of Athens (Ion, although the son of Apollo, will be recognized as the son of his adoptive father Xouthos, in the transition from matrilineal to supposed patrilineal descent) or Asclepius (Asclepius, although the son of Apollo, will be destroyed by the thunderbolt of Zeus for the crime of bringing a dead human back to life), or an ally like the Oedipus of Thebes (Oedipus restored the validity of the Delphic oracle by displaying that the prophecy of his murder of his father and incest with his mother was actually his identity as foretold, despite his effort to avoid it), or a willing brother, either Hermes, or prototypically Dionysus, who best personifies the ritual mediation of the toxins of the world before viticulture with the potion mixed together in the ferment that is the product of the grapevine and its fruit.

At Delphi, Apollo periodically relinquished the sanctuary, and in particular the ancient Corycian Cave, transferring its ritual revel to his Olympian half-brothers, either Dionysus or on occasion Hermes (Homeric *Hymn to Hermes*, 550-567), who preside in his stead over the enactment of the secret bacchant rites of root-cutters. These rites were enacted on wild mountainsides (not the cultivated fields) and were not centered upon the theme of viticulture, but upon the wolf-madness (called *lyk-ia* or *lyssa* in Greek, etymologically derived from 'wolf,' English rabies (Lyssa wearing a wolf-head, Boston Museum of Fine Arts, inv. no. 00.346), that Apollo supposedly relinquished in being assimilated to the Olympian hierarchy of deities. His loving brothers and his sons and his chosen favorites were called upon to bear the burden of his darker pre-Olympian persona with his involvement in the toxins of lycanthropy and the primordial [*h*]ómomi mushroom. Hermes and Dionysus, with their close association with the netherworld and the realm of death, were the best mediators with these past traditions, and particularly Bacchus/Dionysus whose gift of viticulture enacted the dangerous incorporation of the primordial toxins in the sophisticated mixed potion of the wine. It is Dionysus who transmuted the ecstasy of divine possession into the theatrical performance of comedy, tragedy, and the satyr plays (Ruck, 2015c).

Eagle Fare

The cave on Parnassos was associated with the plant that first materialized from the divine fluid or *ichor* that spilled from the liver of Prometheus gnawed by the eagle that daily fed upon the creator of man (Seneca, *Medea*, 817 *et seq.*), who had stolen the spiritual fire of divinity stored in the herb-cutter's narthex container (Aeschylus, *Prometheus*, 109). *Ichor* (of unknown etymological origin) was the ethereal fluid that flowed in the veins of the gods, retaining the essence of the ambrosia and nectar, which were their special food of immortality. It was considered golden in color and lethally toxic to mortals. Its supposed toxicity reflects the taboo placed upon a sacred substance. In medical terminology, *ichor* is the foul smelling discharge from a wound or ulcer.

As Prometheus explains, before this burning flower stuffed into the narthex, men saw without seeing, heard without hearing, but lived like phantoms huddled in dreams, confounded, knowing nothing, digging holes like ants for dwellings, burrowing into sunless caves, utterly without knowledge, until he showed the rising of the stars and taught them number, the most excellent of inventions, and how to rise above the wild beasts (Aeschylus, *Prometheus*, 436-471, summarized).

Prometheus is the mythical prototype of the clairvoyant seer, named for his 'Fore-thought' or prognostication. Since the liver is essential for life, the largest and weightiest of the entrails and containing the greatest amount of the life force in the form of blood, it was considered the center of personal existence. It was identified as the primordial organ of the body, the part that developed first in the fetus, around which the rest of the person grew in the womb.

The liver is the organ that functions in hemolysis, the cleansing of the blood from toxins, and thus it is a motif in botanical agencies for shamanic rapture. Although it is unlikely that the ancients knew of the filtering function of the liver, it was thought to be the organ through which the digested food from the stomach and intestines entered the bloodstream (Galen, *De usu partium*, 4.15; Pioreschi, 1998, p.521), hence the identification of the *ichor* as the essence of ambrosia and nectar for deities. When that food is psychoactive, the whole animal's flesh becomes a source of the toxin (Piper, 2013), and the liver



would have the highest concentration, reabsorbing what the kidneys did not eliminate into the urine (Julien, 1975, 15 *et seq.*). Eating your enemy's liver was equivalent to mastering his soul. Hecuba wishes to eat Achilles' liver raw (Homer, *Iliad*, 24.212). In the initiation of an Eskimo shaman or *angakok*, the initiator in fantasy eats the liver of the novice, which gives them both the power to travel in the spirit (Smith, 1894). The bitter brownish or greenish-yellow secretion of the liver called bile or gall (Latin *bilis*, Greek *cholé*, both derived from the Indo-European root *ghel-* for 'shine,' yellow like 'gold,' with which it is cognate) is another element in this motif.

As the primordial organ of the human body it was thought to have its analogue in the cosmos. Manipulating the liver could influence the universe (Virgil, *Aeneid*, 10.175-177), and conversely the state of the cosmos could be read by inspecting the liver. It is a microcosm of the vitality of the universe, bearing messages inscribed upon its surface. Thus it functioned in the divinatory technique of hepatoscopy or haruspicy. A Babylonian sheep's liver molded from clay (*ca.* 1900—1600 BCE) is marked as a map (probably from modern southern Iraq, British Museum, London, Western Asia Collection, cat. no. ME 92668). An Etruscan version from Piacenza in bronze from the Hellenistic Period (*ca.* 100 BCE) is labeled with the names of the gods controlling each area (Piacenza Museo Civico, Piacenza, Italy).

This magical plant that embodies the divine fluid dripping from the gnawed liver that served as food for the daily visit of the eagle that tormented Prometheus grew with a double stem (Apollonius Rhodius, *Argonautica*, 3.856), a bizarre riddle (Fraenkel, 1961: *non intellego*) that encodes the botanical identity of this food for eagles. The double stem is characteristic of the growth of the *Amanita muscaria*, expanding with its 'stem' or trunk (*stipes*) thrusting in two directions separating the cap from the base into the configuration of a dumbbell. No other plant grows like this, nor is it characteristic of any other of the mushrooms than the Amanitas. The divine liver that is a prognosticative analogue of the cosmos and that is food for the eagle is another metaphor of the mushroom, commonly as raven's bread (Klapp, 2013. Ruck, Staples, González Celdrán and Hoffman, 2007, pp. 32-44. *I Kings*, 17.6), but other carrion birds would serve as well for the motif, and the thunderbird or eagle fulfills this motif among the indigenous people of North America (Keewaydinoquay, 1984). In medieval lore, the

muscaria was known as the 'devil's bread' (Wasson *et al.*, 1957, pp.80-91). In Zoroastrian Mithraism, the raven deliver's the command for Mithras to perform the sacrifice of the bull (the sacred tauroctony), and the Raven (*Corax/Cornus*) was the first grade of the sevenfold steps of initiation (representing the sinful incarnation of spirit in matter) that will culminate in the liberating sacrament of the feast upon the loaf of leavened bread that is the flesh of the cosmic bull (Ruck *et al.*, 2011, 151 *et seq.*). This is particularly significant in identifying the Promethean herb since the Zoroastrian sacrament is the Persian *haoma* or [*h*]ómomi, which we have traced to the traditions of the sacred mushroom and the Greek moly. The fanciful identity of Prometheus as a zoomorphism of the mushroom was common knowledge in Classical Athens. Aristophanes portrayed the great Titan on the comic stage in the *Birds* (414 BCE) (Aristophanes, *Birds*, 1494 *et seq.*). Prometheus arrived onstage all 'covered up,' and the obscene routine involved uncovering his comic phallus and unfurling it as a sunshade (Ruck, 1986c). The 'parasol' is a metaphor for the *Amanita muscaria*, and it was anthropomorphized in the Shade-foot creatures and in the fanciful tribe of mushroom warriors known as the Cover-Mushrooms (*Kaulomykètes*) (Lucian, *True History*, 1.16. Ruck *et al.*, 2001, pp.278-282), who used their mushroom caps as a shield held above their heads. The eagle that torments Prometheus for his theft of the divine *ichor* of fire sometimes sits upon his penis in ancient vase depictions, and modern artists have not been loath to focus attention upon the Titan's genitals.

It was Prometheus who first also established the ritual of the sacrificial meal (Hesiod, *Theogony*, 535 *et seq.*), which allowed humans to eat as a mediation with the evolving realm of the Olympian deities. In the myth of Prometheus' liberation from the chains binding him to his imprisonment to the rock on the volcanic mountain in the Caucasus, Zeus fulfilled his vow to keep Prometheus bound for all eternity by a ruse. Hephaestus forged a ring of iron from the metal of the enchainment and set it with a stone from the rock (Pseudo-Hyginus, *Astronomica*, 2.15) and thus the creator of mankind joined the company of the Olympians. As wearer of the ring of iron, Prometheus experienced transcendence to the empyrean, released to move as freely as his thought, but never moving from the rock of the volcanic mountain that had imprisoned him (Ruck, 2015b, chap. 3). It was such a freedom of



irrepressible mind that characterized his presentation in Aeschylus' tragedy.

In the Samothracian Mystery, the initiates were awarded an iron ring symbolic of the linkage in a chain from whose imprisonment they, too, had been liberated. Numerous exemplars of these rings have been retrieved from the burial necropolis on the island (Cardew, 2012). Such rings were seen as the rungs on a chain, from whose imprisonment they had been liberated. Plato used this metaphor of the liberation of prisoners chained in the delusionary reality of false appearances in the allegory of the cave (Plato, *Republic*, 7.514 *et seq.*). The prisoner reluctantly liberated into the light of the day must then be induced to realize that this ordinary appearance of things that surround humankind is just as delusory until one sees beyond it to the perfected forms, of which this world is but an imperfect and partial copy.

Although the excavators of the Samothracian sanctuary recognize that drinking to the point of intoxication was practiced at the Mystery (Lehmann, 1998, p.40: "Drinking of wine to the degree of intoxication seems to have been a very early custom of the Samothracian rites"),

naively this is not seen as an element in the initiation scenario (Ruck, 2015b). In addition, numerous *amphorae* from the ancient village of Keramidaria ('Ceramics') are the product of workshops devoted to the manufacture of vessels, officially stamped as genuine provenance of Samothrace. The vessels were used for export of the wine apparently distinctive of the Mystery initiation (Lehman, 1998, pp.176-177). This was probably the potent wine marketed with the Maron label as the mythical drink that Odysseus employed to intoxicate the Cyclops. In all probability it was fortified with the Promethean herb that served as food for eagles. The tradition that links this to the gnawed liver of the great creator of man, who first devised the ritual of the sacrificial meal, as the [*h*]ómomi mushroom was essential to the accord that allowed the ancient Greeks to mediate the terms of their coexistence with the realm of the deities. Its sanctity is traceable back to the Indo-European cult of the wolf and the initiation of the brotherhoods of warriors and it provides the context for the archaeological megalithic mushroom monuments of ancient Thrace.

References

- Akers BP, Ruiz JF, Piper A and Ruck CAP. A prehistoric mural in Spain depicting neurotropic Psilocybe mushrooms. *Economic Botany* 2011; 20(10): 1-8.
- Angelis N. Eleftheria 1962: translated by Georgacas, from an article on mushrooms in the Greek newspaper. *Wasson Archives*, Harvard Botanical Library.
- Arrowsmith W. Aristophanes' Birds: the fantasy politics of Eros. *Arion* 1973; new series, 1(1): 19-167.
- Bennett C. Cannabis and the soma solution. Waterville: Trine Day, 2007.
- Berlant SR. The Mysterious Ekron goddess revisited. *Journal of ancient and Near Eastern studies* 2009.
http://www.jtsa.edu/Documents/pagedocs/JANES/2009/Berlant_JANES31.pdf
Accessed date: September 27, 2015.
- Brown NO. The birth of Athena. *Transactions and Proceedings of the American Philological Association* 1952; (83): 130-143.
- Calder WM. Phrygian funerary inscriptions. *Classical review* 1947; (6): 161-167.
- Cardew A. The archaic and the sublimity of origins. Paul Bishop, ed. *The archaic: the past in the present*. New York: Routledge, 2012: 93-146.
- Chantraine P. *Dictionnaire étymologique de la langue grecque*. Paris: Les Éditions Klincksieck, 1968-1980.
- Connelly JB. *The Parthenon enigma: a new understanding of the west's most iconic building and the people who made it*. New York: Vintage Books/ Random House, 2014.
- Devereux G. *Baubo, la vulve mythique*. Paris: Éditions Payot & Rivages, 2011.
- Eliade M. *Zalmoxis, the vanishing god: comparative studies in the religions and folklore of Dacia and Eastern Europe*. Chicago: University of Chicago Press, 1986. English translation of *De Zalmoxis à Genghis Khan*. Paris: Édition Payot, 1970.
- Fontenrose JE. *Python: a study of Delphic myth and its origins*. New York: Biblo and Tannen, 1959.
- Fraenkel H. *Aeschylus Agamemnon, text, translation, and commentary*, 3 vols. Oxford: Clarendon Press, 1950.
- Fraenkel H. *Apollonii Rhodii Argonautica*. Oxford: Oxford University Press, 1961.
- Frame D. *The myth of return in early Greek epic*. New Haven: Yale University Press, 1978.
- Galloway JH. *The sugar cane industry: an historical geography from its origins to 1914*. Cambridge: Cambridge University Press, 1989.
- Geniusz WM. *Our knowledge is not primitive: decolonizing botanical Anishinaabe teachings (Iroquois and their neighbors)*. Syracuse: Syracuse University Press, 2009.
- Gershenson DE. *Apollo the wolf god*. *Journal of Indo-European monograph series*, no. 8. Ann Arbor: University of Michigan, Institute for the Study of Man, 1991.
- Gómez FR. *Las plantas en la brujería medieval*. Madrid: Celeste Ediciones, 1999.
- Gosso F and Webster P. *The dream on the rock: visions of prehistory*. Albany: State University of New York, SUNY Press, 2013.
- Gow ASF. *Theocritus: edited with a translation and commentary, vol. 2, commentary, etc.* Cambridge: Cambridge University Press, 1950.
- Grigsby J. *Beowulf and Grendel: the truth behind England's oldest legend*. London: Watkins Publishing, 2005.
- Heinrich C. *Strange fruit: alchemy, religion and magical foods, a speculative history*. London: Bloomsbury, 1995.
- Reprint, *Magic mushrooms in religion and alchemy*. Rochester: Inner Traditions, 2002.
- Hillman DCA. *Hermaphrodites, gynomorphs and Jesus: she-male gods and the roots of Christianity*. Berkeley: Ronin Publishing, 2013.
- Hillman DCA. *The chemical muse: drug use and the roots of western civilization*. New York: Thomas Dunne Books/St. Martin's Press, 2008.
- Hoffman M. *Huichol wolf shamanism and A. muscaria*. *Entheos: journal of psychedelic spirituality* 2002; 1(2): 43-48.
- Hofmann A. *A challenging question and my answer*. Wasson, R.G., Hofmann, A. and Ruck, C.A.P. *The road to Eleusis: unveiling the secret of the mysteries*. New York: Harcourt Brace Jovanovich, 1978. Reprint, Los Angeles: Hermes Press, 1998. Reprint, Berkeley: Atlantic Books, 2008:35-44.
- Julien RM. *A primer of drug action: a concise, nontechnical guide to the actions, uses, and side effects of psychoactive drugs*. New York: Worth Publishers, 2001. Revised reprint, New York: Henry Holt and Co., 1975.
- Keewaydinoquay (Peschal). *With an introduction by Wasson, R.G. The miswedo in Anishinaabeg Life*. Verona: Stamperia Valdona, 1984, from the hand-corrected master proof of the unpublished printing, of which only five copies exist, sequestered from access in the Wasson Archives, Harvard Library.
- Kiotsekoglou S. *Stone mushrooms of Thracian megalithic sanctuaries*. Ruck, C.A.P., ed. *Dionysus in Thrace: ancient entheogenic themes in the mythology and archaeology of Northern Greece, Bulgaria, and Turkey*. Berkeley: Regent Press, 2014: 241-256.
- Klapp E. *Raven's bread and other manifestations of fly agaric in classical and biblical literature*. Rush, J.A., ed. *Entheogens and the development of culture: the anthropology and neurobiology of ecstatic experience*. Berkeley: Atlantic Books, 2013: 333-342.
- Kurtz D., and Boardman, J. *Greek burial customs*. London: Thames and Hudson, 1971.
- Lévi-Strauss C. *Du Miel aux cendres*. Paris: Plon, 1960.
- Marazov I. *The Thracians and wine*. Translated from the Bulgarian. Ruse: Dunav Press, 2000.
- Markov V. *The ancient Thracian megalithic sanctuary 'Markov Kamak' at Tsarev Peak in Rila Mountain: semantic and functional analysis*. *Geoarchaeology and archaeomineralogy*. Sofia: Publishing House 'St. Ivan Rilski,' 2008: 177-179.
- Markov V. *Archaic mushroom monuments and Bulgarian folkloric motifs*. Ruck, C.A.P., ed. *Dionysus in Thrace: ancient entheogenic themes in the mythology and archaeology of Northern Greece, Bulgaria, and Turkey*. Berkeley: Regent Press, 2014: 183-198.
- McInerney J. *Parnassus, Delphi, and the Thyiades*. *Greek, Roman, and Byzantine studies*. 1997; 38(3): 263-283.
- Nagy G. *Phaethon, Sappho's Phaon, and the white rock of Leukas*. *Greek mythology and poetics*. Ithaca: Cornell University Press, 1990.
- O'Brien JM. *Alexander the great: the invisible enemy, a biography*. New York: Routledge, 1992.
- Piper A. *The milk of the goat Heidrun: an investigation into the sacramental use of psychoactive milk and meat*. Rush, J. A., ed. *Entheogens and the development of culture: the anthropology and neurobiology of ecstatic experience*. Berkeley: Atlantic Books, 2013: 211-277.
- Prioreschi P. *A history of medicine: Roman medicine*. Omaha: Horatius Press, 1998.



- Ritter M. Ancient wine cellar unearthed in Israel shows Canaanites enjoyed a sophisticated drink. New York: AP, 2013.
http://www.huffingtonpost.com/2013/11/22/ancient-wine-cellar-israel_n_4323848.html Accessed date: December 3, 2015.
- Ruck CAP. The cave of Euripides. *Time and mind: the journal of archaeology, consciousness, and culture* 2015c; 8(3): 279-302.
- Ruck CAP. Aristophanes' parody of Socrates as a pothead and the Spartan warrior cult of the wolf. Ellens, J.H., ed. *Seeking the sacred with psychoactive sacraments: chemical paths to spirituality and God*, vol. 1, History and Practices. Santa Barbara: ABC-CLIO, 2014a: 75-91.
- Ruck CAP and Hoffman MA. *The effluents of deity: alchemy and psychoactive sacraments in medieval and renaissance art*. Durham: Carolina Academic Press, 2012.
- Ruck CAP. Documentation. Wasson, R.G., Hofmann A., and Ruck, C.A.P. *The road to Eleusis: unveiling the secret of the mysteries*. New York: Harcourt Brace Jovanovich, 1978. Reprint, Los Angeles: Hermes Press, 1998. Reprint, Berkeley: Atlantic Books, 2008: 85-136.
- Ruck CAP. Mushrooms and philosophers. Wasson, R.G., Kramrisch, S., Ott, J., and Ruck, C.A.P. *Persephone's quest: entheogens and the origins of religion*. New Haven: Yale University Press, 1986a: 151-177.
- Ruck CAP. *The wild and the cultivated: wine in Euripides' Bacchae*. Wasson, R. G., Kramrisch, S., Ott, J., and Ruck, C.A.P. *Persephone's quest: entheogens and the origins of religion*. New Haven: Yale University Press, 1986b: 179-223.
- Ruck CAP. Prometheus as a Shadefoot and the Theft of Fire. Wasson, R.G., Kramrisch, S., Ott, J., and Ruck, C.A.P. *Persephone's quest: entheogens and the origins of religion*. New Haven: Yale University Press, 1986c: 169-176.
- Ruck CAP. *Sacred mushrooms of the goddess: secrets of Eleusis*. Berkeley: Ronin Publishing, 2006.
- Ruck CAP. *Fungus redivivus: new light on the mushroom controversy*. Allegro, J., *Sacred mushroom and the cross: a study of the nature and origins of Christianity within the fertility cults of the ancient Near East*. London: Hodder and Stoughton, 1970. Reprint, Los Angeles: Gnostic Media Research and Publishing, 2010: 351-381.
- Ruck CAP. *The great god Sabazios and the crab dance in Athens. The stone mushrooms of Thrace*. Alexandroupoli: EKATAIOS, 2012: 193-220.
- Ruck CAP. *The son conceived in drunkenness: magical plants in the world of the Greek hero*. Boston: Nemi/Pen and Anvil Press, 2015a.
- Ruck CAP. *The great gods of Samothrace and the cult of the little people*. Berkeley: Regent Press, 2015b.
- Ruck CAP and Hoffman MA. *Entheogens, myth, and human consciousness*. Berkeley: Ronin Publishing, 2013.
- Ruck CAP and Hoffman MA and González CJA. *Mushrooms, myth, and Mithras: the drug cult that civilized Europe*. San Francisco: City Lights Books, 2011.
- Ruck CAP, Staples BD and Heinrich C. *The apples of Apollo: pagan and Christian mysteries of the Eucharist*. Durham: Carolina Academic Press, 2000.
- Ruck CAP, Staples BD, González CJA and Hoffman MA. *The hidden world: survival of pagan shamanic themes in European fairytales*. Durham: Carolina Academic Press, 2007.
- Ruck CAP., ed. *Dionysus in Thrace: ancient entheogenic themes in the mythology and archaeology of Northern Greece, Bulgaria, and Turkey*. Berkeley: Regent Press, 2014b.
- Ruck CAP and Larner R. *Virgil's edible tables*. Rush, J.A., ed. *Entheogens and the development of culture: the anthropology and neurobiology of ecstatic experience*. Berkeley: Atlantic Books, 2013: 387-449.
- Samorini G. *Mushroom effigies in world archaeology: from rock art to mushroom-stones. The stone mushrooms of Thrace*. Alexandroupoli: EKATAIOS, 2012: 16-44.
- Sarianidi V. *Necropolis of Gonur*. Athens: Kapon Editions, 2007.
- Schultheiss, PC., et al. *Toxicity of field bindweed (Convolvulus arvensis)*. *Veterinary and human toxicology* 1995: 37(5): 452-454.
- Shepherd H. *To the origin of the cult of Dionysus*. Translated from the Russian. Philadelphia, 2008. Accessed date: September 28, 2015.
http://www.academia.edu/1098123/To_the_origin_of_the_cult_of_Dionysus
- Smith HJ. *Notes on Eskimo tradition*. *Journal of American Folklore* 1894; (8): 209-216.
- Spencer ER. *All about weeds*. New York: Charles Scriber's Sons, 1940. Reprint, New York: Dover, 1974: 194 et seq.
- Thiselton-Dyer TF. *Folk-lore of plants*. New York: D. Appleton and Co., 1889. Reprint, London: Forgotten Books, 2013.
- Tindall R. *The jaguar that roams the mind: an Amazonian plant spirit Odyssey*. Rochester: Park Street Press, 2008.
- Toporov VN. *On the semiotics of mythological conceptions about mushrooms*. *Semiotica*, translated from the Russian by Stephen Rudy 1985; 53(4): 295-357.
- Trendall AD. *The red-figured vases of Lucania, Campania, and Sicily*. Oxford: Oxford University Press, 1967.
- Wasson RG. *Soma: divine mushroom of immortality*. New York: Harcourt Brace Jovanovich, 1968.
- Wasson RG. *The wondrous mushroom: mycolatry in Mesoamerica*. New York: McGraw-Hill, 1980. Reprint, San Francisco: City Lights Books, 2015.
- Wasson RG. *The miskwedo of the Ahnishinaubeg*. *Entheos: The journal of psychedelic spirituality* 2001; 1(2): 3-12.
- Wasson VP and Wasson RG. *Mushrooms, Russia, and history*. New York: Pantheon Books, 1957.
- Watkins C. An Indo-European agricultural term: Latin ador, Hittite hat-. Clausen W., et al., eds. *Harvard studies in classical philology*. Cambridge: Harvard University Press, 1973: 187-194.
- Webber C. *The Thracians, 700 BC—AD 46*. Oxford: Osprey Publishing, 2001.
- Webster P and Ruck CAP. *Mixing the kykeon anew*. Ruck, C.A.P. *Sacred mushrooms of the goddess: secrets of Eleusis*. Berkeley: Ronin Publishing, 2006: 171-187.
- Webster P, Perrine DM and Ruck CAP. *Mixing the kykeon*. *Eleusis: journal of psychoactive plants and compounds* 2000; new series (4): 55-86.
- Wohlberg J. *Haoma-soma in the world of ancient Greece*. *Journal of psychoactive drugs* 1990: 22(3): 333-342.

