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The Enduring Myth and Folklore of *Ganoderma lucidum*: Mushroom of Immortality

Denis R. Benjamin

No discussion about the health benefits of mushrooms is complete without asserting: “the Chinese have used *Ganoderma lucidum* for at least 2,000 years (2,000 to 10,000 years—take your pick). This attestation alone about ling-zhi (also reishi, mannetake in Japanese)—the Mushroom of Immortality—is often the justification used to promote its medicinal use. Such a belief is part of a romantic philosophy known as the “wisdom of the ancients,” suggesting that our forebears, especially if from a different tribe, were imbued with special knowledge from which we could benefit. It is also felt that because something has been around or believed for millennia it must be valuable and true. This is patently false, like the deeply held belief that the earth was flat or was at the center of the universe. The only thing it may prove if it involves a substance such as a herb or fungus, is that it probably won’t kill you.

Almost everyone accepts this folklore and narrative about *Ganoderma lucidum* and its cousins at face value, as if established fact. It is an essential part of the mantra supporting its health benefits. But like every unexamined “fact,” the truth appears to be very different. Myth creation is a complex process, but once something enters the everyday zeitgeist, it becomes almost impossible to eradicate. The most common way of perpetuating the myth is to repeat the mantra whenever and wherever possible. This is what makes “fake news” enduring. One would not want to use the “big lie” description in this case because it is more trivial than many of the current “big lies” pervading our political and economic systems. Perhaps “little lie” is more appropriate. Letting go of a belief is difficult and painful because it means admitting that you have been duped. So I have no illusion that this brief communication will change anyone’s mind. As Francis Bacon noted in the 16th century: “people

believe what they want to believe.”

The issues surrounding this myth were brilliantly examined by Dianna Smith, a Chinese scholar with special expertise in early Chinese medical systems and published in *McIlvainea* (Smith, 2019). This can be found online on the NAMA website under the Publications tab. She goes into exquisite detail about the lack of any convincing evidence for the use of this species in China. I highly recommend this treatise in order to fully appreciate the nuances, the misinterpretations and how sketchy observations were twisted to create the narrative. Here only the salient points are summarized.

1. *Ganoderma lucidum* is not specifically mentioned in any Chinese medical source until recent times. There are vague allusions to fungi, none of which are identifiable. The descriptions can be interpreted in many ways, but claims that they represent *Ganoderma lucidum* are fanciful at best.
2. It has never been recommended as a cure for cancer or heart disease. As Smith points out, there was not even a word for cancer in the Chinese medical system until recently, even though these disorders existed in the population long before then. The word for tumor is ancient, but there is little evidence that the underlying biological concepts were understood. Chinese lifespans were quite short, while most cancers arise later in life. Traditional Chinese Medicine is predicated on a completely different paradigm of the human body and health and can’t be transplanted or translated into the western understanding of physiology and pathology.
3. Because of its rarity and expense, the only people who had access to *Ganoderma* sp. were the nobility. Indeed, commoners were prohibited from possessing this fungus.
4. Immortality did not, and does not, mean longevity. Various nostrums were produced to prepare the nobility to ascend to an immortal plane after they died. There is no evidence that lifespans were enhanced in any way, most emperors dying at a young age, often from poisoning. Although I despise evoking the dark craft of epidemiology, one cannot help noting that lifespans even today in the USA are 10% longer than in China, despite our diet and lifestyle. Of course there are many reasons to account for these differences, but little to suggest that diet, supplements or any nutraceuticals play any significant role at all. Any and all assumptions based on raw epidemiological data are fraught.
5. Many point to images in Chinese art and architecture as presumptive evidence of the importance of ling-zhi in Chinese life and health. However much of this is problematic and these symbolic representations can be interpreted in a variety of ways. To some they appear to be fruiting bodies of Ganodermas, to others they are nothing more than stylized clouds. This is similar to the swastika symbol which was widely used by ancient Greeks, Romans, Anglo-Saxons and others, before being adopted by a murderous regime in the 20th century. The first really convincing image appears during the Ming dynasty. The painting by Chen Hongshou (1598–1652) depicts a Taoist master sitting on a cloud holding a *Ganoderma*.
6. Most of the longevity/immortality preparations were based on minerals and metals and were very toxic. There is little convincing evidence that *Ganoderma* was even included in the preparations eaten or imbibed by emperors or the noble elite in



those days. Indeed, their life spans were generally shortened by the use of these potions, permitting entry into the immortal realm far sooner than expected. Some traditional pharmaceutical preparations have included rhinoceros horn, elephant tusk, bear bile, pangolin scales and other exotics which has proved to be tragic for the wildlife involved.

7. Widespread use of ling-zhi did not begin until the 20th century when commercial artificial production was developed. This is now a multi-million dollar enterprise (Saifei et al., 2016) so the marketing mavens and Chinese businesses work hard to

ensure that this account of historical and cultural use remains alive.

While the story is endearing and engaging it is clearly a myth. That being said myths play an important role in our cultural and social lives. In the past these stories were spread through the oral tradition of storytelling; today they are sprayed across the electronic networks in nanoseconds to be adopted by anyone willing to believe them. I fully expect that every-time I open a news-feed or social network that mentions reishi, there will be the statement that this mushroom has been used in China for at least 2,000 years. The fantasy may be harmless. It is just not true. As Christopher

Hitchins once said, “Anything which can be asserted without evidence, can be dismissed without evidence.”

References Cited

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