Mushrooms and Religion: 
*Amanita muscaria*

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**Amanita muscaria (Fly Agaric)**
- In discussion of mushroom toxins, eight classes were recognized, and two are known to be hallucinogens:
  - Class V: Muscimol and Ibotenic Acid.
  - Class VII: Psilocybin and Psilocin

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**Amanita muscaria (Fly Agaric)**
- Western Society was not aware of their existence until late 1950s.

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**Amanita muscaria (Fly Agaric)**
- Name is not familiar but mushroom probably is.

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**Amanita muscaria (Fly Agaric)**
- The development of *A. muscaria*:
  - Young mushroom entirely enclosed, like an egg, in the universal veil.
  - "Egg hatches": Stalk of mushroom elongates and cap expands, leaving remnants of universal veil behind, giving it the characteristic white speckled cap.

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**Amanita muscaria (Fly Agaric)**
- The development of *A. muscaria*:
  - The mature mushroom.
  - Taste and odor not distinct when fresh. After drying, acrid nauseating taste.
  - Forms *mycorrhizae* (sing. = *mycorrhiza*), usually with roots of pine and birch trees, less commonly with fir and larch.
Amanita muscaria (Fly Agaric)

● Prototype mushroom

Gourd with Amanita muscaria art.

Amanita muscaria (Fly Agaric)

● Prototype mushroom

Paras, a Pokemon character has A. muscaria growing on it.

Amanita muscaria (Fly Agaric)

● Prototype mushroom

Often associated with Christmas. Girl carrying basket of A. muscaria

Amanita muscaria (Fly Agaric)

● Prototype mushroom

Elf sitting on A.muscaria.

Amanita muscaria (Fly Agaric)

● Prototype mushroom

Another elf on Amanita muscaria.

Amanita muscaria (Fly Agaric)

● Prototype mushroom

Christmas display of Amanita muscaria.
**Amanita muscaria (Fly Agaric)**

- Too much as been made of its association with Christmas.
  - Santa Claus’ red and white suit represents *A. muscaria*
  - Actually from Coca Cola, 1931, advertising campaign. Red and white is color of Coca Cola.

**Amanita muscaria (Fly Agaric)**

- Too much as been made of its association with Christmas.
  - Christmas is actually based on a number of pagan religions.
  - Christmas as it is celebrated, today, is actually a conglomeration of things that retailers from New York put together for their convenience, i.e. Rudolph’s red nose, flying reindeers.

**Amanita muscaria (Fly Agaric)**

- Too much as been made of its association with Christmas.
  - St. Nicholas, the model for Santa Claus, was from Siberia, where local tribes used *A. muscaria*
  - Actually, the Catholic Church does not recognize “Saint Nicholas” and does attribute the character to a pagan source. Also, did not have red and white suit.

**Amanita muscaria (Fly Agaric)**

- Evolution of Santa Claus

**Amanita muscaria (Fly Agaric)**

- Why is it associated with Christmas?
  - Not just Christmas. Also found in Dishes and even in Smurf cartoons.

**Amanita muscaria (Fly Agaric)**

- Why is it associated with Christmas?
  - Not just Christmas. Art work by Beatrix Potter.
**Amanita muscaria (Fly Agaric)**

- Why is it associated with Christmas?
  - Probably used because it is such a picturesque mushroom. Has become a caricature of mushrooms
  - However, *Amanita muscaria* is believed to have had impact on religion.

**Amanita muscaria (Fly Agaric)**

- *Amanita muscaria* is believed, by many, to be *Soma*, the narcotic god of ancient India.
  - Soma brought to India, by the Aryans, 3500 years ago, when they invaded India from what is now Afghanistan.

**Amanita muscaria (Fly Agaric)**

- *Amanita muscaria* is believed, by many, to be *Soma*, the narcotic god of ancient India.
  - Concept was first put forth by R. Gordon Wasson, in his 1968 book: *Soma, Divine Mushroom of Immortality*.

- Through modern interpretations of the *Rig Veda*, the holy book of the Hindu, Wasson deduced that *A. muscaria* was the Soma described.

**A Word About the Aryans**

- Warrior people, with knowledge in agriculture and the growing of grains
- Place of origin was somewhere in Central Asia.
- Aryans split into two groups: Indics and Iranians.
- Indics settled in what is now Afghanistan and the Valley of the Indus.
- Iranians settled in Iran.

**A Word About the Aryans**

- Both groups had religious traditions that were passed on orally and later written down.
- Religious work were *Rig Veda* and *Avesta*, of the Indian Hindu and Iranian Zorasters, respectively.
- Both utilized a plant with hallucinogenic properties in religious ceremonies.
- Referred to as *Soma* in *Rig Veda* and *Haoma* in the *Avesta*. Generally agreed both are the same.
**Wasson's Reasoning**

- Identity of plant was lost, several millennia ago, but ceremonies continued.
- Before Wasson, scholars had proposed many plants as the identity of this sacred plant.
- Ephedra, rhubarb, opium, hashish and many others proposed and rejected.
- Wasson based most of his evidence on interpretation from Rig Veda.

**Wasson's Reasoning**

- Wasson's proposal was unique and based on sound evidence.
- Rig Veda described Soma as a small, leafless plant with fleshy stalk.
- No mention was ever made of roots, flowers or seeds.
- No mention was ever made of how it was propagated.
- Aryans well known for their expertise in agriculture.

**Wasson's Reasoning**

- If Soma was a plant, why was it not brought with them and cultivated?
- Rig Veda also mentions Soma could only be found in mountains.
- Only place where A. muscaria could be found in the latitude of Indus Valley.
- Although they conquered valley, they did not conquer mountains and had no access to A. muscaria.

**Wasson's Reasoning**

- This necessitated the need for a substitute Soma.
- Soma could be consumed in two forms:
  - Eating raw (?) mushroom or drinking its juice.
  - Taken in the urine by a person who has ingested A. muscaria.
- Only mushroom hallucinogen known that can be taken in this form.

**Wasson's Reasoning**

- In 1730, in Siberia, Johann von Strahlenberg, first observed this practice.
- Also an apparent function to practice.
- Modern users complain of nausea, probably due to other toxin(s). Passing through digestive tract eliminates other toxin(s), but retains ibotenic acid.

**Wasson's Reasoning**

- Matter of economics. Only the wealthy could afford mushrooms. The poor waited outside ceremonial area for someone to relieve themselves so that they could fill their containers with urine.
- Tribesmen had close association with reindeers for this reason.
- Mushroom was replaced by alcohol as intoxicant.
Not everyone supports Wasson's theory:
- *Peganum harmala* (Harmel or Syrian Rue) is Haoma or Soma.

*Peganum harmala*

In 1998 archeological findings in this country dating from 2000 B.C., of shrines of public worship and inner sanctum for priest
- Analysis of samples found in ceramic bowls, revealed the traces of both Cannabis and Ephedra.
- Other samples yielded Ephedra and Opium.
- Thus, most recent theory indicates Soma is a composite drug.

People experimenting with *A. muscaria* did not get reactions described:
- Has been explained by differences in biochemical populations.
- Wasson has tried on several occasions and admits to not having any reaction.
- However, current users suggest that mushroom must be dried and/or cooked before psychotrophic muscimol is active.

Practical reason why *A. muscaria* was dried in sun prior to consumption:
- Ibotenic Acid is unstable and is converted into the stable and more potent Muscimol, during drying or cooking process of mushroom.
- It is the Muscimol that passes through digestive system unaltered that makes possible the "urine drinking".
Wasson believed that the origin of the Ling Chih was based on Soma:
- Today Ling Chih is known to be Ganoderma lucidum.

**Further Impact of Soma**

- Known for thousands of years in China as a sign of good fortune, health and longevity:
  - Emperor Shih-Huang (Chin Dynasty 221-208 BC) was first report of Ling Chih.
  - Suddenly word came about a supernatural mushroom in the mountains and its supernatural powers.
  - People searched for it, but nobody could find it.

**Ganoderma lucidum**

- Known for thousands of years in China as a sign of good fortune, health and longevity (continued):
  - Emperor order his magicians to find it.
  - Emperor sent ships to nearby islands to find mushroom.
  - Wasson believe rumors of this mushroom reached China by sea route via India. Thus, idea of searching for mushroom in mountains.
  - During Han Dynasty (206 BC – 220 AD) fungus was identified as the Ling Chih.
  - Found during reign of Emperor Wu-Ti, fungus found in palace was designated as the Ling Chih.
  - Wu-Ti was not a popular emperor and used this as a means of to gain favor from people.

**John Allegro**

  - Described another religious cult associated with *A. muscaria*, Christianity.

Allegro alleges that Judaism and Christianity were based on a secret cult whose god was *Amanita muscaria* (represented symbolically as the Christ). When the cult died out, Judaism and Christianity remained as religions.
Allegro alleges fresco represents Adam and Eve, with the *Amanita muscaria* as the "forbidden fruit". Wasson disagrees with this interpretation and he has his followers.