

Faith, Mushrooms Linked

By Patricia McBroom

► ANCIENT HINDUS, like the Aztecs of Central America, may have found their religion in a mushroom with hallucinogenic properties.

R. Gordon Wasson, an ethnomyologist, believes the redcapped fly mushroom, *Amanita Muscaria*, is the holy plant celebrated in the Rig Veda—a book of hymns the Hindus claim as their earliest religious heritage.

Aryan tribes which swept down into India some 3,000 years ago brought with them a plant worship called Soma. The Sanskrit term bears no relation to the Greek "soma", meaning body, Mr. Wasson said. By drinking the juice of the squeezed stalks, Aryan priests, as described in the Rig Veda, experienced divine ecstasy, he said.

Though Soma was never identified as a mushroom, Mr. Wasson noted that descriptions of this plant given by Vedic poets clearly point to the fly mushroom.

Later Hindus abandoned the worship of Soma, but Mr. Wasson thinks it is possible they remembered the hallucinogenic experience and were able to develop other purely physical means of reaching religious ecstasy, such as through great austerity and self-discipline.

But there is nothing in the Rig Veda to indicate the early Indo-Aryan Hindus knew those methods, he noted.

The fly mushroom or fly agaric is a poisonous plant that grows widely throughout Europe, from Portugal to

Siberia. It is also found in the United States, though Mr. Wasson said the European and American mushrooms differ so much as to be almost a different species. Usually the U.S. mushroom is yellow, not red.

Taken in very careful quantities the plant will produce hallucinations much like the psilocybe species of Mexico, eaten by ancient Aztecs. Today, particular tribes in Siberia still use the fly mushroom, but for orgiastic purposes. Superhuman feats of strength and violence have been attributed to tribesmen under its influence, though some accounts refer to religious-type visions.

Mr. Wasson believes the mushroom worship extended much past the Aryan domain in the Indus Valley and northern India.

He said strong circumstantial evidence indicates the mushroom was used throughout Northern Europe and by the Hungarians and Slovaks.

He cannot, however, endorse the common view that Viking gangs called "Berserks" (from which comes the English word, berserk) carried out their violent deeds after using the mushroom. Though it may well have been the case, no plant was ever mentioned in these Viking accounts, he said.

Mr. Wasson presented his theory during a Yale University symposium marking the centennial of the Peabody Museum of Natural History.

Italians Announce New Antibiotic Useful in TB

► TWO ITALIAN scientists announced they had produced a versatile antibiotic drug which has shown exceptional activity against both Gram-positive and Gram-negative bacteria, including the tuberculosis organism, with no undesirable side effects.

The drug, rifaldazine, was derived from the rifamycin family of natural antibiotics discovered in the fermentation broth of a *Streptomyces* mold in 1957.

The first of the rifamycins, Rifocin, has been used in Europe since 1962 to control infections caused by Gram-positive organisms. These include gallbladder and bile duct infections, as well as tuberculosis. Rifocin is now being tested against leprosy.

Prof. P. Sensi and S. Furesz, of the Lepetit Research Laboratories in Milan, Italy, said that after Rifocin was developed, Lepetit investigators wanted to find a rifamycin which worked better than Rifocin when taken orally, and was even more effective against tuberculosis.

Rifaldazine, they said, seems to have these qualities. It also maintains protective levels in the blood for at least eight hours and is satisfactorily distributed to the various organs, they reported.

The drug has been found effective against urinary infections, pneumonia, bronchopneumonia, osteomyelitis (bone infection) and localized infections of soft tissue.

The scientists enthusiastically endorsed the new drug's potential at a conference on antimicrobial agents in Philadelphia.

Rifaldazine has not been tested in the United States and is not available here.

Lepetit is an affiliate of Dow Chemical Co.

TECHNOLOGY

Life-Saving Igloo For Safety at Sea

► THE FLOATING IGLOO, a foam plastic raft, has been certified for all types of ships by the Norwegian Bureau of Shipping.

This "igloo" is a quadrangular raft manufactured from pore-tight foam plastic material with an over-all nylon fabric cover. Designed in different sizes to carry from six to 20 men, it is equipped with a tent on both sides—so shelter is provided no matter which side is up. It is designed to float at all times, and will not go down even if flung against the ship's side in a storm, or if crashed against wreckage, rocks and coral reefs, according to its specifications.

SPACE

Zero-Gravity Makes Fires Put Themselves Out

► FEARS about fires in pure-oxygen spacecraft atmospheres have been partly calmed by the discovery that without gravity many fires will put themselves out.

A fire on earth, in normal gravity, keeps burning because the burned-up fuel rises, causing convection currents that circulate more oxygen down to the flame.

Without gravity, however, nothing is "lighter than air" or anything else; there are no such currents, and the combustion products simply blanket the flame, suffocating it to death.

This discovery was made by a team of scientists from the National Aeronautics and Space Administration's Manned Spacecraft Center, Houston, who loaded 15 "flammability test chambers" into two cargo airplanes and flew them "over the top" of a series

of parabolic arcs, each time creating about 10 seconds of zero-gravity.

The chambers contained different fuels, ignited by electric current; atmospheres at various pressures, and high-speed cameras.

In every case the flames began to shrink after one and a half seconds or less, darkening and diminishing until either the flame went out completely or gravity was restored.

Fear of oxygen fires was widespread early in the U.S. space program, until experience with Project Mercury indicated that worries were unfounded. The Apollo flights leading to the moon will be of longer duration, however, and there will be more equipment aboard to present possible spark hazards. In addition, both Gemini and Apollo spacecraft have lower oxygen leakage rates than Mercury.

The NASA team recommended further, more elaborate study, including an investigation of other possible sources of convection currents in spacecraft cabins, such as air movement by the astronauts themselves.