

## The Ecologic Niche of Psychedelic Plants



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*Plants of the Gods*, written by Richard Evans Schultes and the late Albert Hofmann is probably the best illustration of the ecological relationship between psychedelic plants and human civilizations. Of the ninety-one hallucinogenic plants beautifully illustrated and characterized in the book, the authors detail fourteen that have had profound significance for human beings. As they state, “Plants that alter the normal functions of the mind and body have always been considered by peoples in nonindustrial societies as sacred, and the hallucinogens have been ‘plants of the gods’ par excellence” (preface, p.7).

In his *Entheogen Chrestomathy*, Thomas Roberts notes in his review of *Plants of the Gods* that the early cannabis plant was viewed as a gift from the gods. In Indian and Tibetan history, there were deep mythological and spiritual beliefs about the plant. Bhang was thought to deter evil, bring luck, and cleanse sins. Indra, god of the firmament, had a favourite drink that was made of Cannabis, and the Hindu god Shiva commanded that the word Bhangī must be chanted during sowing and harvesting of the holy plant.

In light of the theme of this *MAPS Bulletin* on ecology and psychedelics, the central hypothesis I want to propose is that, like DNA connects all life on Earth to a common biochemical code, the psychedelic plants are a class of living beings which have a relationship with human consciousness through the common root of psychoactive chemicals they share with the human brain. These psychedelic and/or entheogenic biochemicals have an ecological niche that is to bring the person’s attention to the significance of the person’s intrinsic connection with the natural world or cosmos in its largest sense.

The plant chemicals which evoke these

experiences of connection are so similar in their root to neurotransmitters found in the human brain that the relationship is no mere coincidence. Instead, it is reflective of an adaptive synergy between specific plants and those humans who are open to the message and compelled to pass it along.

While this is only one of many such root similitudes, the indoleamine neurohormones, such as serotonin and melatonin, are best known for their role in regulating states of consciousness. They are, in addition, prime examples of the overlapping chemistry of psychedelic plants and the human brain.

The basic structure of the indoleamine neurotransmitters are the same two-rings that are found in the alkaloid d-lysergic acid amide naturally found in morning glory seeds. These seeds are thought to have been used by Aztec priests during sacrifices and by present-day Mayatec curanderas (healers) to discern information about their patients’ illness or as an aid in divination of the location of missing objects. R. Gordon Wasson has presented evidence linking the indoleamine psilocybin found in “magic mushrooms” to rites dating to 300 A.D. and these

mushrooms are called “flesh of the gods” by the Chichimecas of Central America (Miller, 1983).

There are clearly many such parallels that can be drawn between the psychedelic plant world and the neuronal pathways in the human brain, such as muscarine in the mushroom *Amanita Muscaria* and the muscarinic neuronal pathways in the human brain. Or, the endogenous DMT in the brain and the N,N-DMT found in *Psychotria viridis*, a shrub with small red fruit and long, narrow leaves that are mixed with *Banisteriopsis caapi* to make the ceremonial Ayahuasca tea.

What is the role of these substances in the human brain? What is their role in plants? Why is there overlapping biochemistry between certain plants and human brains? One proposal is that there is an evolving ecological niche, one that is necessitated by an ecosystem whose survival is threatened. At its most basic adaptive level, if the plant helps the human to recognize the fundamental biochemical connection of all life, and the place of the human in the global ecosystem, the human is more likely to foster an environment that is more conducive to both plant and human survival.

From Darwin's *Origin of Species*, when two populations are isolated from each other, for example, by a mountain or body of water, they have specific niches and corresponding adaptations to their own environments. Occasionally, some individuals travel across the natural boundaries, encounter new environments, and develop new adaptations in order to survive. If these new adaptations are passed on to the next generation, a new species can evolve.

I want to propose that psychedelics are very much like a boat crossing an ocean dividing neighboring and quite radically different environments. In the old world, the plant and human environments look

very different. Once the boat has crossed the ocean, a whole new world opens up in which plant and human environments merge into a unified cosmos of life in which compassion for the ecosystem shared by both old and new worlds is greatly magnified.

The psychoactive plant substance acts like a synergetic key which circumvents thinking based on separateness and returns consciousness to biochemical unity that was familiar before the doors of the mind were closed by the limiting, linear social norms of the old world. Once across the ocean, a whole new world of adaptations is needed, where compassion for all life (though overwhelming) is a sign of both helpfulness and necessity.

One of these adaptations is an appreciation for the ultimate source of the psychedelic that is the sacred plant. When this adaptation is brought back to the “old world,” one result can be a greater appreciation for our impact on the natural world in which we live along with a renewed vigor for life. In this way, through the relationship of psychedelic plant and psychedelic brain, the old world can transform into the new.

The relationship between psychedelic plants and human brains is no mere coincidence but is reflective of an adaptive communication by specific plants with humans who are open to recognizing humanity's intrinsic connection with our common and sacred home. •

References for this essay are available on the MAPS Web site: [www.maps.org](http://www.maps.org)

Kim Alan Dawson was originally trained as a biopsychologist and is now in private practice as a clinical psychologist in British Columbia, Canada.

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