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# Richard E. Schultes, 86, Dies; Trailblazing Authority on Hallucinogenic Plants

By Jonathan Kandell

(From the New York Times Obituaries, Friday, April 13, 2001)

Richard Evans Schultes, a swashbuckling scientist and influential Harvard University educator who was widely considered the preeminent authority on hallucinogenic and medicinal plants, died on Tuesday in Boston. He was 86 and lived in Waltham, a Boston suburb.



Dr. Schultes (pronounced SHULLtees) was often called the father of ethnobotany, the field that studies the relationship between native cultures and their use of plants. Over decades of research, mainly in Colombia's Amazon region, he documented the use of more than 2,000 medicinal plants among Indians of a dozen tribes, many of whom had never seen a white man before.

"I do not believe in hostile Indians," Dr. Schultes was quoted as saying in a 1992 article about him in *The New Yorker* by E. S. Kahn Sr. "All that is required to bring out their gentlemanliness is reciprocal gentlemanliness."

Tall, muscular, wearing a pith helmet, he hiked and paddled through Amazonia for months at a time. He collected more than 24,000 plant specimens. More than 120 species bear his name, as does a 2.2 million-acre tract of protected rain forest in Colombia, Sector Schultes, which the government there set aside in 1986.

"The last of the great plant explorers in the Victorian tradition," was the way one of his former students, Wade Davis, described him in his 1985 best-selling book, *"The Serpent and the Rainbow"* (Simon & Schuster).

But more than a real-life Indiana Jones, Dr. Schultes was a pioneering conservationist who raised alarms in the 1960's - long before environmentalism became a worldwide concern - that the rain forests and their native cultures were in danger of disappearing under the onslaught of modern industry and agriculture. He reminded his Harvard students that more than 90 tribes had become extinct in Brazil alone over the first three-quarters of the 20th century.

"He believed ours would be the last generation fortunate enough to be able to live and work among these tribes as he had," wrote one of Dr. Schultes's disciples, Mark J. Plotkin, in *"Tales of a Shaman's Apprentice,"* (Viking, 1993), "to experience their traditional way of life firsthand, and to record their

vast ethnobotanical knowledge before the plant species - or the people who used them - succumbed to the march of progress."

Dr. Schultes's research into plants that produced hallucinogens like peyote and ayahuasca made some of his books cult favorites among youthful drug experimenters in the 1960's. His findings also influenced cultural icons like Aldous Huxley, William Burroughs and Carlos Castaneda, writers who considered hallucinogens as the gateways to self-discovery.

Dr. Schultes disdained these self-appointed prophets of an inner reality. He scathingly dismissed Timothy Leary, the drug guru of the 1960's who also taught at Harvard, for being so little versed in hallucinogenic species that he misspelled the Latin names of the plants.

According to a 1996 article in The Los Angeles Times, when Mr. Burroughs once described a psychedelic trip as an earth-shaking metaphysical experience, Dr. Schultes's response was. "That's funny, Bill, all I saw was colors."

Dr. Schultes may have contributed to the psychedelic era with his ethnobotanical discoveries, but to him these were the sacred plants of Indians that should be studied for their medicinal value. He was in many ways a throwback to an earlier epoch of scientific research. He had no interest in publicity or self-promotion. Rather than confine himself to a narrow specialty, he was a generalist who criss-crossed several scientific disciplines.

Dr. Schultes taught more by personal example than by the use of forceful intellect, His lecture room resembled an ethnographic museum, with huge maps of Amazonia, native dance costumes, demon masks, opium pipes, dried specimens of medicinal and hallucinogenic plants, and a blowgun for poison-tipped darts, whose use he sometimes gingerly demonstrated in class.

His former student, Dr. Plotkin, recalled a lecture in which the professor showed slides of masked dancers in the Amazon under the influence of a hallucinogenic potion. Referring to himself, Dr. Schultes told the class: "The one on the left has a Harvard degree. Next slide please."

Richard Evans Schultes traced his fascination with the South American rain forests to the fantasies evoked while he was bedridden as a child. He was born on Jan.12, 1915, in Boston, where his father was a plumber and his mother was a homemaker, Confined to his room for months with a stomach ailment when he was about 5 years old, he listened enraptured to excerpts read to him by his parents from "Notes of a Botanist on the Amazon and the Andes," a travel diary kept by the 19th century British naturalist Richard Spruce. The impression left by those passages was so powerful that the boy decided to follow in Spruce's footsteps.

Receiving a full scholarship to Harvard, Mr. Schultes wrote an undergraduate paper on the mind-altering properties of peyote, based on research he undertook with Kiowa Indians in Oklahoma who ingested the hallucinogen in ceremonies to commune with their ancestors. For his doctoral thesis, also at Harvard, he

chose the plants used by the Indians of Oaxaca, a southern state of Mexico. In his research there, he came across a species of morning glory seeds that contained a natural form of LSD.

In 1941, Dr. Schultes traveled to the Colombian Amazon, where he would spend most of his field research, and an area Spruce had studied. At first, Dr. Schultes concentrated on plants that produced curare. This substance, used by Indians as a fast-dissipating poison to hunt prey, also proved to be vital as a muscle-relaxant during major surgery in hospitals. The professor identified more than 70 plant species from which the Indians extracted curare.

Dr. Schultes was deep in the Colombian rain forest when news of Pearl Harbor reached him more than a week after the Japanese attack. He immediately made his way back to Bogota, the Colombian capital, and visited the United States Embassy to enlist in the armed forces. But the United States government decided his World War II services would be much more valuable as a botanist doing research on natural rubber, particularly since the Japanese occupied the Malayan plantations that accounted for much of the world's rubber supplies.

Dr. Schultes soon became the leading expert in the field, collecting and studying more than 3,500 specimens of *Hevea*, the tree that produces the latex from which rubber is made.

Throughout the 1940's and until the early 1950's, Dr. Schultes lived almost continuously in the South American rain forests, with only brief visits to the United States. On his journeys through the tropics, he traveled lightly. He navigated scores of tributaries of the Amazon River, using an aluminum canoe that he could handle himself, though he usually hired Indians as paddlers and guides.

His supplies included a single change of clothing, a camera and film, a hammock and blanket and a machete and clippers for plant collecting. For food, he carried only cans of instant coffee and Boston baked beans, preferring to rely on food offered by his Indian hosts. This included the ground manioc roots that were their staple, fish, wild game, insect grubs, fruit and chicha, a drink made from fruits chewed and fermented by spittle.

His medicine kit consisted of vitamins, antibiotics and morphine - in case he broke a limb and had to be transported for days before he could receive proper treatment.

To collect and preserve plant specimens, Dr. Schultes devised a method field researchers still use today. He soaked his plants in formaldehyde diluted with water and then pressed them between newspaper sheets. "On a good day, out in the forest, Schultes would collect 20 or 30 specimens that he thought merited further attention," Mr. Kahn wrote in *The New Yorker*. "Along a riverbank, where foraging was easier, he sometimes bagged 80 or 90."

Often Dr. Schultes would consult local Indian shamans about the properties of these species. A number of these medicinal plants now carry his name, including, among many others, *Pouroma schultesii*, a bark whose ashes are used to treat ulcers, *Piper schultesii*, a stem brewed as a tea to relieve tubercular

coughs, and *Hiraea schultesii*, leaves whose soakings are used to cure conjunctivitis.

Dr. Schultes asserted that contrary to popular conceptions, Indian shamans were eager to share their medical secrets with outsiders. But "time is running out," he warned In a 1994 article in the journal *The Sciences*, asserting, "The Indians' botanical knowledge is disappearing even faster than the plants themselves."

In 1953, Dr. Schultes moved back to the United States as a professor and botanical researcher and curator at Harvard. Six years later, he married Dorothy Crawford McNeil, an opera soprano who performed in Europe and the United States. His wife survives him, as do their three children, Richard Evans Schultes II, a corporate executive; Alexandra Ames Schultes Wilson, a physician; and her twin, Neil Parker Schultes, a molecular geneticist.

Dr. Schultes, who retired from Harvard in 1985, published 10 books and more than 450 scientific articles. For 18 years, beginning in 1962, he edited the scientific journal *Economic Botany*, and over much of the same period, he served as an active member of the editorial boards of *Horticulture*, *Social Pharmacology*, the *Journal of Latin American Folklore* and other publications.

Among numerous awards, he received the 1992 gold medal of the Linnean Society of London, which is often equated to a Nobel Prize for botany.

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