Pacific Cocktail

The history, chemistry and botany of the mind-altering kava plant

By KATHY A. FACKELMANN

Lindstrom

Pacific islanders often visit the local kava bar after work.

A young virgin on a South Pacific island chews the dried roots of a prized native plant. She spits a mouthful of macerated root mixed with saliva onto a leaf. The older men take the mashed-up root and pour cold water over it, a process that yields an intoxicating greenish-brown beverage called kava.

The men form a circle. One villager hands another a coconut-shell cup filled with kava. The man drains the cup and then, as an offering to the gods, spits out the last mouthful of the bitter liquid. He prays for a bountiful harvest.

Each man in turn swills the mud-colored kava. Ten minutes later, the conversation flows easily as the villagers kick back and savor the enhanced colors and sounds of a tropical sunset. It's Friday night in paradise.

Legend has it that half a coconut shell full of strong kava will put you into a deep, dreamless sleep for two hours. Weaker versions of the drink will relax the muscles and produce a mildly euphoric state characterized by feelings of tranquility. While the folklore surrounding kava is extensive, three researchers now have compiled the most comprehensive botanical, chemical and anthropological data so far on kava use in Pacific Ocean societies.

The islands of the Pacific include coral atolls as well as lush, volcanic islands. Natives from New Guinea to Hawaii indulge in kava, also called the intoxicating pepper, or kava-kava.

"Kava is truly the Pacific drug," says Mark Merlin of the University of Hawaii in Honolulu. "It is traditionally very important throughout Polynesia, Melanesia and parts of Micronesia."

Merlin presented his team's research findings in March at the annual conference of the Society for Ethnobiology, held in Washington, D.C. He and his collaborators, chemist Vincent Lebot and anthropologist Lamont Lindstrom, have written a book called *Kava: The Pacific Drug* (Yale University Press, 1992), which is expected to be available in December.

"Kava is the official inebriating beverage of the South Seas," adds Mark Blumenthal, executive director of the American Botanical Council in Austin, Texas. "It's like drinking a martini."

The term kava refers to the beverage made from the root of *Piper methysticum*, a domesticated shrub with heart-shaped leaves that grows several feet high. However, Merlin notes, kava's ancestral roots go back some 3,000 years to *Piper wichmannii*, which grows wild on the damp hillsides of New Guinea, the Solomon Islands and Vanuatu, a group of South Pacific islands formerly called the New Hebrides. Both plants are members of the black pepper family.

Merlin and his colleagues believe that islanders on Vanuatu were the first to discover the psychoactive properties of *P. wichmannii*. These people then introduced the plant to other islanders as they migrated eastward in sailing canoes to Fiji and westward into New Guinea and parts of Micronesia.

Over the years, the natives of Vanuatu selected the *P. wichmannii* plants that produced the best high, Merlin says. After sampling a particularly good brew of kava, islanders would go back to their garden and cut off some branches to create identical clones of the mother plant. Merlin says their efforts eventually produced the wild plant's domesticated version, *P. methysticum*, which is found throughout the Pacific islands today.

One of the first historical accounts of kava comes from the notes of 18th-century British explorer James Cook, Merlin says. The more adventurous members of Cook's crew sampled the drink on their voyage to the South Seas. According to a botanist on that trip, kava has a mild, somewhat peppery taste. However, most people find it has a vile flavor and slimy texture. Even islanders who relish the psychoactive beverage typically grimace as kava first assaults their taste buds, Merlin says.

Lebot, who now works at the Centre Technique Forestier Tropical in Madagascar, has found that kava packs its punch via a slew of lipid-like substances known as kavalactones. A brew with the right mix of these chemicals yields the mild euphoria that drinkers expect. The wrong combination can trigger nausea and headaches — effects that can linger for days, says Lebot.

There are six major kavalactones in kava: yangonin, methysticin, kavain, dihydromethysticin (DHM), dihydrokavain and demethoxy-yangonin. Although chemists can synthesize some of these in the laboratory, the resulting drink doesn't produce the same effects as kava prepared from fresh rootstock, Merlin says. Other reports indicate that kava's buzz may result from a synergistic blending of kavalactones.

Lebot's studies have focused on the chemical composition, or chemotype, of various kava plants. After collecting thousands of specimens for analysis, he observed that kava plants in Vanuatu contained the most diverse palette of chemotypes. By contrast, plants in Fiji and New Guinea had relatively homogeneous chemical makeups. This chemical evidence points to Vanuatu as the original source of kava, Lebot concludes.

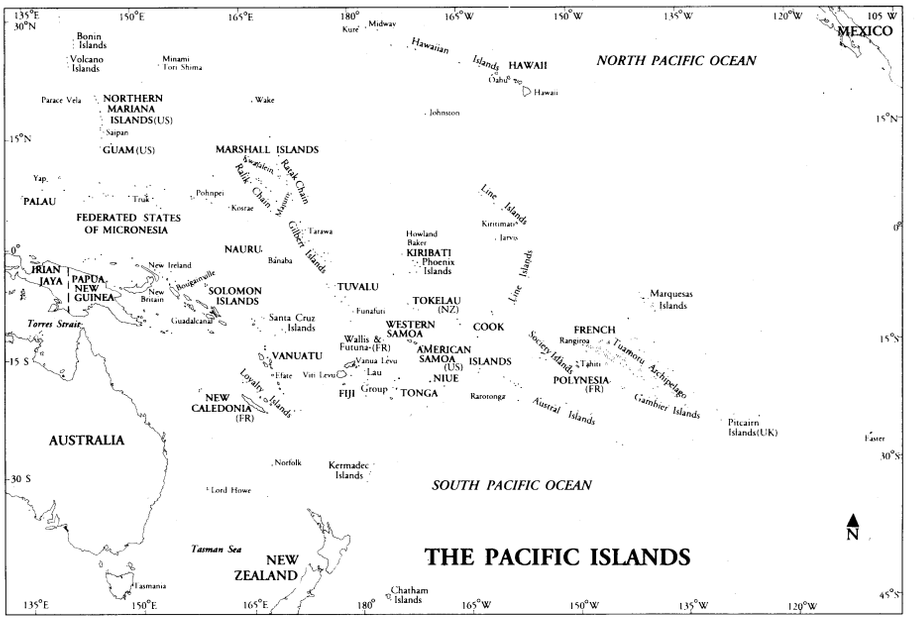
Islanders use a more down-to-earth approach to classify kava brews. Plants

that yield kava with desirable chemotypes are preferred for everyday use. For example, plants with a high percentage of kavain produce a kava beverage that yields a pleasant, rapid high with no hangover. Islanders shun plants with lots of DHM, a kavalactone that causes nausea. In the pidgin English spoken by the people of Vanuatu, one variety of DHM-rich kava is called *tudei,* a name that refers to the two-day bender induced by this beverage.

Chemists compare kava to minor tranquilizers such as diazepam (Valium). Unlike diazepam, however, kava usually leaves drinkers alert. The best kava enhances one's ability to communicate and sharpens the senses, Merlin contends. While the mind remains clear, the body starts to mellow as the muscles and spine relax. Some drinkers claim kava actually boosts their thinking ability.

With excess consumption of kava, however, the muscles fail to respond properly, says Merlin. The drinker appears inebriated and walks with an unsteady gait. If taken in large enough quantities, the drug can put people soundly to sleep.

According to Lebot's field observations, obvious addiction to kava does not occur. However, heavy kava drinking can lead to scaling of the skin and bloodshot eyes. Kavalactones may trigger an allergic reaction that causes this condition, he says. The symptoms disappear as soon as the drinker reduces his or her consumption of kava.



While Merlin looked at the drink's history and Lebot looked at its chemistry, Lindstrom looked at how kava fits into the historical, social and cultural milieu of Pacific societies. Traditionally, islanders drank the mind-altering beverage in order to communicate with the gods, says Lindstrom, who chairs the anthropology department at the University of Tulsa in Oklahoma.

"Particularly in the past, one of the ways to contact the supernatural realm was to alter consciousness," Lindstrom says.

"Some people in Vanuatu drink kava and wait to be inspired by words from their ancestors," adds Merlin, who says islanders believe the drink's powers can make it easier for the dead to speak to the living.

This use of a psychoactive drug to interact with the spirit world fits with a long history of similar practices by people around the world, notes Timothy Johns, an ethnobotanist at McGill University's Macdonald campus in Ste. Anne de Bellevue, Quebec.

Lindstrom's field work on Tanna Island in Vanuatu suggests that kava also has political significance. Political assemblies often start with a ritual cup of kava, and the goodwill generated by a nip of kava helps with management of village life, Lindstrom says. For instance, when two families start to feud, other villagers may mediate the argument over a round of kava. One way to make peace is to offer an enemy cuttings from a particularly fine kava bush.

While living on Tanna, Lindstrom found that the best way to collect anthropological data was to join the kava round each night. Islanders typically celebrate their joys and sorrows with kava. Very large, elaborately decorated kava plants are exchanged at festivals, weddings and other important life events. Villagers often give the plants to people mourning the death of a family member.

While the kava traditions haven't persisted in large cities or in every Pacific Ocean society, the use of the drink as a mild sedative has gained popularity, especially in Fiji and New Guinea. Just as Westerners might visit a bar after work to forget about the tensions of the day, islanders are likely to relax at a kava bar, usually an open-air affair that serves the drink in coconut-shell cups. Unlike the ritual kava, which relies on a virgin's cud, the beverage served at modern kava bars is produced by the more hygienic method of pulverizing roots with a meat grinder to free the psychoactive ingredients, Merlin says.

Although alcohol use gained ground in the 1970s, kava is experiencing a resurgence of popularity in the islands today, Lindstrom says. Most islanders welcome that change, he contends. They say kava calms drinkers and doesn't produce the aggressive or violent behavior associated with alcohol.

Johns believes the kava story can be seen as a model for the way people around the world make use of psychoactive plants. Such practices can represent a positive and normal part of the human experience, he maintains.

He points out that the farmers in the Peruvian Andes often chewed the leaves of the coca shrub in order to get a cocaine boost during the workday. The amount of cocaine they ingested was minuscule, producing less stimulation than the caffeine in a cup of strong coffee, he says.

Kava's traditional uses go beyond sedation, Merlin adds. Pacific islanders turned to the kava plant in various forms to treat a wide range of disorders, including epilepsy, muscle aches, toothaches and some sexually transmitted diseases. In New Guinea, natives chew scrapings of the kava root to ease a sore throat.

Unlike cocaine, kava never developed a following as a recreational drug in the United States. However, herb enthusiasts buy the root whole or in an already pulverized form in some U.S. health food stores. A mild version of kava, in pill form, is sold over the counter in Europe as a remedy for menstrual cramps and as a sedative.

Merlin thinks the plant could provide the West with an alternative to drugs like diazepam. Blumenthal notes, however, that drug companies in the United States hesitate to invest in plant-derived pharmaceuticals because the Food and Drug Administration requires them to test each active ingredient for safety and efficacy — a process that can be quite expensive.

Even if kava stays rooted in its tropical setting, ethnobotanists believe the traditions surrounding this plant can offer the Western world important insights. Although rapid change has swept the Pacific Ocean societies, kava remains the beverage of choice for many islanders.

"It does tie these people with their past," says Johns. "On the other hand, it ties them to each other in the same way that they have been connected throughout history." □