

The curare plant (*Chondrodendron tomentosum*) grows as a large vine in the canopy of the South American rainforest. The curare plant produces alkaloids (called curarines) that are neurotoxins, probably as defense compounds. Curarines are paralytic agents that interfere with nerve transmissions to the muscles. The muscles do not get the signal to contract, and a limp or flaccid paralysis results (unlike the rigid type of paralysis in botulism or lockjaw). If the respiratory muscles are affected, the victim eventually suffocates, but remains conscious until then, just unable to move. As early as 1811, it was noted that the heart keeps beating in paralyzed victims, so curarines were studied in the 1940s for use in anesthesia to temporarily paralyze surgery patients. As long as breathing was maintained, they would recover with no ill effects. The curare vine in the Tropical Dome was originally a gift from Abbott Laboratories. They had collected curare plants in Peru for research. Today other medical compounds are used instead.

People native to the South American rainforest discovered that they could cook curare roots and stems into a sticky syrup to coat arrow tips and blowgun darts to aid in hunting. Paralysis of the prey made it easier to catch. Curare kills birds in about two minutes, but larger animals might take as long as 20 minutes. Luckily, the curare neurotoxin has to be in the blood stream and is not absorbed in the stomach, so it was still safe to eat the meat of animals hunted in this way. The native people use the curare vine for many medical applications.

Curare vines may get as thick as four inches at the base. As shown in the image, the leaves are large and heart-shaped and produced alternately along the vine. The lower side of the leaf is covered with numerous tiny hairs that make them look white. The flowers are small and greenish-white. Some flowers are male and provide pollen; other flowers are female and produce seeds after pollination. The fruit are fleshy but very tiny. They are said to be edible, but bitter. Many poisonous plants taste bitter- a good warning for those who had to figure out which plants were safe to eat in olden days.

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