



# Ethnobotanical Leaflets

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## Cannabis: The Hemp Plant

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Probably one of the oldest plants known to man, Cannabis was cultivated for fiber, food, and medicine thousands of years before it became the "superstar" of the drug culture (Schultes, 1973). Cannabis, as it turns out, not only has many usage's, but has been employed in various ways by different cultures.

Linnaeus first classified Cannabis sativa in 1753 as a monotypic species (i.e., one of its kind with respect to its genus). Now, however, this question with regard to the lack of diversity of the genus has come under fire. Richard Evan Schultes proposed a polytypic classification in 1974. Many questions still remain about Cannabis.

Is there one species of Cannabis or are there several or more? Many scientists have argued that the genus is monotypic. Indeed, even the Federal government and at least a dozen states have enacted marijuana laws that are based upon the assumption that the genus consists of only a single species, C. sativa. Others, on the other hand, believe the genus is comprised of many species. For example, Russian students in the 1920's and 1930's claimed that there were at least a dozen species of Cannabis. At the time, the Russian views were not widely accepted. However, in the late 1960's scientists began to accept the idea that there were more than one species, and more investigations were initiated.

Looking back, the polytypic concept of Cannabis dates to 1783 when Lamarck published an account of Cannabis indica in his Encyclopedia, (Volume 1), and fully contrasted it with the account of C. sativa (Emboden, 1974). Many species have been proposed or claimed over the years, but have been later found to be identical to existing plants. The three species now widely accepted are C. sativa, C. indica, and C. ruderalis. Cannabis sativa is very tall, loosely branched, and the branches are remotely positioned from one another. On the other hand, C. indica is low-growing and densely branched, with more compact branches and with a tendency to be more conical or pyramidal in habit. Compared to other plants, C. ruderalis is small and slightly branched. However, the cannabolic content is highest in C. indica (Schultes, 1975).

Cannabis plants are comprised of both staminate and pistillate plants. The female produces large amounts of seed, and the male produces pollen. The staminate plants generally are shorter in height than

the pistillate. The differences between these two necessitates two periods of harvesting. The first harvest is around mid-August when the male plants are pulled. The second harvest of female plants is a little later when the seeds are ripe (Steam, 1975).

*Cannabis sativa*, *C. indica*, and *C. ruderalis* are some of the scientific names that have been applied to the hemp plant. Marihuana, the product of *C. sativa*, has numerous slang names. These names have resulted from various groups of people developing a cryptic language between the members of their group to tell who uses this drug and who does not. This lingo reflects the values, habits, fears, and attitudes of the user group. However, like all slang, marihuana lingo is forever changing since after a time all terms become common to the everyday public. Slang terms are not only related to the drug user's culture, they can also relate to various uses of the plant. Most of these terms refer to the use of the marihuana plant as an important source of fiber. Some have to do with criminal activities (Abel, 1982).

*Cannabis*, one of man's oldest cultivated plants, may have been first cultivated for food. *Cannabis* is an Asiatic plant and probably first grew in a widespread area of temperate Asia, from the Caucasus Mountains and Caspian Sea to Eastern Asia. Specimens have been found by archaeologist that are 3,000 to 4,000 years old at an Egyptian site. Hemp fabrics have been excavated from sites located near Ankara, Turkey, dated in the 8th Century B.C. (Schultes, 1970). *Cannabis* was also harvested in Palestine and Mesopotamia at the time of Christ. The oldest evidence of *Cannabis* is 6000 years old, and comes from a coarse cloth of hemp fiber that was found in some of the oldest sites of human habitation in Asia. Even though *Cannabis* is noted as being cultivated during the time of Christ, there is no evidence that it was a major plant before the Christian era. However, from 500 A.D. onward its significance as an ethnobotanical is well noted.

With respect to the first archaeological evidence found in China, the *Cannabis* plant probably had numerous uses in ancient times. Once cultivation occurred, *Cannabis* became an extremely important plant. In fact the cultivated fields were called "land of mulberry and hemp". The mulberry plants fed the silkworms that produced silk while the hemp plants produced textile fibers in mass numbers. From the standpoint of textile fibers, three centers can be recognized in the ancient Old World: the linen culture in the Mediterranean region, the cotton culture in India, and the hemp culture in Eastern Asia. Hemp fibers were used to make various things from ropes to fishing nets. Hemp clothes were also used to mourn the death of parents. Another important role of the *Cannabis* fiber is its use in making paper. The oldest existing paper made of hemp was discovered in a grave in Shensi province that dates before the reign of Emperor Wu of the Early Han dynasty (Hui-Lin Li, 1975).

Fiber is not the only ancient use of this plant, it was also an important food plant. It was formerly listed as one of the five major grains along with millet, rice, barley, and soybeans. Later on during the 6th Century A.D., oil was extracted from the seeds. After awhile the grain was forgotten all together because other cereal crops came along.

*Cannabis* was also known for having medicinal properties. The drug was used as a cure for various diseases, and as an effective pain killer. Sometime between 110 and 207 A.D., a famous physician, Hua

To, used hemp boiled with wine to anesthetize his patients during surgical operations on abdominal organs. Other medical uses of the hemp plant include blood clearing, relieving temperature, undoing rheumatism, and discharging of puss. The Chinese finally discontinued the use of Cannabis for medical purposes because they did not like the altered states of consciousness. Later pharmacopoeias repeated or confirmed the properties of Cannabis but indicated that the plant was rarely used, and then only by necromancers for its hallucinogenic effect (Hui-Lin Li, 1975).

There are numerous uses for Cannabis in various cultures. A Mexican Indian tribe uses a variety of marihuana, which they call la santa rosa, in their religious ceremonies (Williams-Garcia, 1975). They chew the leaves and they claim that it makes them speak to the gods freely. Cultural groups in a Columbian Municipio, use *C. sativa* in numerous ways, including for medical purposes. For example, they soak Cannabis in rum and apply it to the skin for pain of the joints and muscles. And, sometimes Cannabis is smoked to reduce fatigue and augment sexual intercourse, or to relax and socialize with friends (Partridge, 1975).

Cannabis was brought to America during the early colonial period. George Washington and Thomas Jefferson were both hemp farmers. During the early period of settlement of the New World, everyone owned or used something made of its fibers. Hemp fibers were known as the toughest durable fibers around. Hemp was even used as currency in some cases (Abel, 1982). But, Cannabis is mainly used as an illegal drug in the United States today.

Hemp is one of the world's most widely distributed plants. It occurs in most of the temperate and tropic regions of the world. It grows in the Himalaya Mountains, tropical Africa, East Africa, South Africa, United States and Canada. It grows widely in the United States, including Hawaii. Escaped forms are abundant in the Midwest. Hemp does not grow well in the dry mountainous regions of the western states but does grow well in other parts of the country. Hemp is reported to be spreading rapidly as a weed in the Midwest (Haney, 1970), but the federal government has now stepped in and has begun an eradication program. Yes, there is still numerous wild plants that are impossible to control, however, the United States government is mainly working today on destruction of illegally grown crops. Where are these illegal domestic crops being grown? In 1987, 20% of domestic marihuana crops were found in National Forests. The estimated street value of this illegal crop is about one billion dollars. This fact, of course, makes our beautiful National Forests extremely dangerous to explore. During raids, law enforcement officials have found booby traps and explosives, including trip wires, firearms, pipe bombs and hand grenades. Another problem is that the land which marihuana growers harvest is treated with poisons to kill all wildlife. The fertilizers used also can leach into streams and endanger public water supply. How abundant is illegal hemp cultivation? Well, pot is often referred to as California's number one cash crop. A lot of illegal pot growing is happening, but the federal and local law enforcement agencies are doing their best. In 1986, a raid produced 117,277 marihuana plants that were seized and destroyed. All these horrible facts about Marihuana lead one to think there are no positive aspects of the Cannabis plant. This is not true, there are numerous medical benefits that have resulted from hemp plants (Hunt, 1987).

Medical uses that are being studied for the future include treatment of anxiety, loss of appetite,

insomnia, severe fever, pain, epilepsy, migraine headaches, high blood pressure, glaucoma and secondary symptoms of the common cold and flu. Physicians also have prescribed marijuana cigarettes to cancer patients receiving chemotherapy. Patients report the cigarettes seem to control vomiting. They also have been prescribed in terminal situations to control severe pain. The chemical property of Cannabis that is responsible for this control of pain is THC. When pure THC was tested to see if it blocked pain sequences, it showed effects that were as potent as codeine and morphine (Burstein, 1988). As previously mentioned, marijuana cigarettes are also used in the treatment of glaucoma. Glaucoma is increased intraocular pressure which results in changes upon the optic disk and eventually can cause blindness. Marijuana cigarettes are sometimes used to relieve this pressure, and have proved to be very effective in some cases.

Cannabis, as many other things in this world, has both a good side to it as well as a bad. Most of the bad comes from populations exploiting the natural properties of this plant. Our society tends to destroy things that have had any negative effects upon us. Hopefully this will not happen to Cannabis, but at the present time it looks as if this may eventually come true.

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