

The history of Hemp: cultivation and use in Europe

Hemp, *Cannabis sativa L.*, is one of the most renowned cultivated plants in the world. The controversial plant is perhaps most famous for the psychoactive properties of its flowers. Extracted Cannabis flowers and their resin, often called “Marijuana” and “Hashish”, are classified drugs in numerous countries. Regardless of its recent illegal status, hemp has been a significant part of human history since prehistoric times.

Despite the plant’s reputation as an illicit drug, hemp was probably not domesticated for this purpose, but primarily as a source of fibres. The fibres can be extracted from the stems and are extraordinarily strong and durable which makes them suitable for production of various textiles and ropes.

Hemp is likely one of the earliest domesticated plants in human history. Today it is generally believed that the plant originated somewhere in Asia, exactly where is still being debated by scientists. The European introduction has been estimated to the Bronze age, c. 2700 -1700 BCE. But where was it introduced first? When did it spread to the rest of Europe and in what scale was it cultivated in different places? When did cultivation begin in Scandinavia? Sometimes we must look at something tiny when we want to understand the big picture. Maybe a pollen grain the size of 20 μm can help us puzzle together the story?

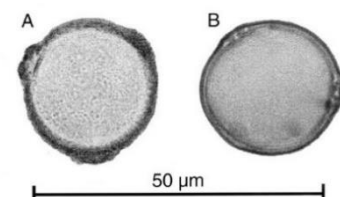
Ancient plant material and seeds have been found all over Europe, some as old as 6000 years. However, these finds are not that common since most plant material decompose over time. Pollen on the other hand, is produced by plants in abundance and can be spread by the wind over large areas. Some falls into lakes and sink to the bottom where they can be stored for thousands of years.

My study of published pollen data shows that hemp was cultivated in Europe continuously from ca. 500 BCE. The most intensive hemp farming took place between 800-1400 CE. Extraordinarily abundance of hemp pollen indicates that the lake has been used for “retting”, a bacterial process that separates the fibres from the other plant material. It is traditionally done by submerging the plants in water, typically in small lakes. The signs of hemp cultivation and retting disappear from the pollen record in the late 1800s, probably as a result of the expansion of cotton production in Europe.

Today the interest of the hemp is on the rise again. As climate change is becoming a reality, hemp textiles might come back in fashion as they are more resource efficient and more sustainable to produce, than for example cotton.



Hemp, *Cannabis sativa L.*, has been cultivated in Europe for textile and rope production since the Copper age (wikipedia.en.org).



A: Ancient pollen of *Cannabis sativa L.* gives us clues about the geographical history of the plant.
B: Pollen of Hops (*Humulus lupulus*), a very close relative to Hemp. Hops too is domesticated by humans and mainly used for brewing beer (Fleming & Clarke 1998).

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P Fleming, M. & Clarke, R., 1998: *Physical evidence for the antiquity of Cannabis sativa L.*