

The History of Paper

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Before Paper

Before paper many other media were used to record stories, laws, and customs.

- Cave walls
- Marble slabs
- Girginnaku (clay tablets)
- Shell
- Bone
- Wood
- Wax
- Metal plates (bronze or lead)
- Steles (stone and bronze slabs)
- Papyrus
- Amate
- Rice paper

Papyrus most closely resembles paper and was in use in Egypt from about 3200 B.C.E. It remained in use until paper production became more cost efficient in the tenth century. The production of papyrus was not completely dissimilar to that developed for paper: the plant material was layered at right angles and beat to form sheets. Paper fibers aren't layered, but beat into a pulp and then poured and pressed into sheets.

Parchment can be documented to the fourth century B.C.E. in Pergamum, a city of Ancient Greece, in what is now Turkey. Though it was more expensive than papyrus, it was far superior as a medium for documents and so held its own.

In South America bark rather than leaves were the primary part of the plants used for "paper" making. Archaeological finds in Peru date to 2100 B.C.E. The tree used was a relative of the ficus. The bark was removed in a single strip and soaked for several days. It was then beaten with wood over a flat tree trunk until it was ready for use. When

Cortes first encountered the Aztecs, pleated accordion books of this material were among the treasures found. Aztec descendants still produce a similar paper today, called amate.

Rice paper is not considered a parent of paper; it has more in common with papyrus and amate. In fact, it is not "rice" at all. It is made from the bark and leaves of the rice-paper plant, a member of the ginseng family. The English misunderstood and called it rice paper. It is also not likely older; the earliest anecdotes of its production and use are to the eighth century.

Paper's Invention

- Chinese General Mung-Tian wanted a locally produced kind of papyrus and ordered research in the 2nd century B.C.E.
- Han Hsin (247-195 B.C.E.) determined how to make felt from silk; text was brushed on in a lacquer-based paint.
- T'sai-Lun succeeded in creating the first kind of "modern" paper in 105 C.E. When it became a success, he set up the first paper factory in Mongolian Turkistan.

T'sai-Lun extracted plant fibers from rags, fishing nets, mulberry tree bark, nettle and hemp. These materials were left to ferment in lime water before being ground to a pulp. This paste was mixed with water and then strained onto a bamboo or cloth screen. The screen was left to dry in the sun or on the side of an oven. When dry, the paper was peeled off and polished with a stone. Some papers were waterproofed with an algae or plant juice solution.

Paper Goes Global

It is no surprise that such a desirable medium came into demand in place after place. Here is the spread of paper as best it is known.

- Hunan Province, China, 105 C.E.
- Turfun, Northern China, 400 C.E. From there it moved along the Silk Road.
- Papermaking also made its way east to Korea in 610 C.E., then on to Japan.
- Samarkand (modern Uzbekistan) 751 C.E. Chinese paper makers are taken prisoner after losing a battle with Muslims. They teach papermaking in exchange for preferred treatment. The Muslims proliferate the technology.

- Baghdad, Iraq, 793 C.E. A large papermaking factory is built by the Muslims.
- By 1035 C.E. paper was in common use in Mecca and Cairo.
- By 1200 C.E. Fez has 400 operating mills.the Arabs refined the making of pulp from rags and introduced metal mesh strainers. They also began using wheat starch paste as a glue. By the 10th century more paper was produced than papyrus. Dyed paper was also introduced to make the paper look "old." Yellow was made with saffron; brown was made with sycamore sap.
- Arabs brought paper to Europe by way of the Iberian peninsula. It is believed that Córdoba, Spain, was the first place paper was made on the continent, then Toledo. The earliest records of a mill are in Xativa and Cataluna in 1065 C.E. The mill on the outskirts of Xativa employed 20 people and imported flax from Valencia for pulping.
- France, 1189 C.E.
- Italy, 1230 C.E. Bologna, Fabriano, and on to Sicily
- Nuremberg, Germany 1400 C.E.
- Britain, @ 1500 C.E.
- Russia, Sweden and North America @ 1600 C.E.

Paper continued to be made by hand in hydro powered mills until the end of the 18th century when the industrial revolution began.

Sources Consulted

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"The History of Rice Paper," <http://www.rice-paper.com/about/history.html>. Accessed 3Mar15

Wikipedia entries on Papermaking, rice paper, Pergamum.

Sources yet to be reviewed will be shared on my blog.

www.cjmconnors.com