THE HISTORY OF LIGHTING

New York (NAPS)--Stone lamps 20,000 years old were recently discovered in the Lascaux caves of France--offering evidence that our ancestors didn't live in the dark ages after all.

The Sumerians, 2,500 years before the birth of Christ, used lamps of gold and alabaster. The Romans were also extravagant when it came to lamps; Pliny records that one richly decorated lighting device set its owner back 50,000 sesterces (roughly \$3,000)--and it probably didn't even have a shade!

Remarkably enough, the Romans are said to have preserved lamps in some of their sepulchres for centuries, and many legends are told of their never burning out. In the papacy of Paul III (1534-40), a lamp was found in Cicero's daughter's tomb, which had been shut up 1,550 years before, and was supposedly still burning.

One of the most famous sources of light to shine from the ancient world, was built by the Romans at Boulougne, on the coast of France. It was a lighthouse 200 feet high and 192 feet in circumference—using great bonfires for signals—and it stood as a reliable guide for mariners for more than 14 centuries!

Gas lamps, on the other hand--the most "modern" source of light before Edison--were used by the ancient Chinese who

brought gas up from 1,600 feet below the surface of the earth, then piped it around town in bamboo rods.

Some of the lighting devices of today are just as remarkable. For example, there is a lamp that prevents wool shrinkage and another that can make flowers grow at night. Even more recently, industry has come out with unbreakable flexible light—in panel or tape form!

Known as an EL lamp, the device emits soft glowing light and offers a life of about five years. It consists of separate layers of aluminum foil, phosphors, translucent conductor material and copper leads—all sealed within special plastic film made by Allied Chemical Corporation.

Called Aclar, the film acts as a moisture—proof sandwich—which protects the light from cracking, chipping, pealing and corrosive atmosphere.

In tape form the light may be a mile or so long. For practical applications, one firm, Madigan Electronics, Farmingdale, N.Y., uses the material to make flashing belts and signs for highwayworkers and emergency crews.

More recently, EL lamps are being used as instrument panels for the Lunar Exploratory Module and Command Modules of Apollo spacecraft. Who knows? EL lamps may one day light our way to the moon!

But EL lamps and their bright electrical cousins that we use every day, were a long way in coming. For it was way back in 1801 that Sir Humphrey Davy invented the carbon-arch lamp--and ushered in the <u>beginning</u> of electrical lighting. But the lamp proved to be merely an unusual novelty and oil lamps continued in vogue during the 19th century.

Between 1878 and 1880, Thomas A. Edison and Joseph W.

Swan finally developed a practical electric lamp for interior lighting. After many attempts, they discovered a filament that glowed satisfactorily in a vacuum and which didn't use up too much current; this filament was a thread of carbon—that glowed brightly with a yellowish light.

Today, the United States leads the world in making electric light bulbs--turning out about 2-1/4 billion lamps every year. More than 700 million of these are for general lighting (15 to 150 watts). About 500 million are for miniature lamps, and some 120 million are Christmas tree lights.

Engineers in the meantime, have developed many types of bulbs. Two of the most efficient of these are sodium-vapor and mercury-vapor lamps--which are used to light highways, factories, television studios and canals. Lamps filled with rare gases such as neon and krypton are widely used for airport fog lights and advertising signs.

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Fluorescent lamps furnish so-called "cold light." Using the same amount of power, they are able to produce several times more light and only one-fourth as much heat as filament lamps do. And then, of course, there is the most modern type of light, the EL lamp, wrapped in Aclar--the unbreakable flexible light in tape form.

We've come a long way from the first stone lamps which our ancestors used some 20,000 years ago--and it's been a very bright and enlightening journey to be sure.