

## Glimpses of Nature

### *Cannabis sativa*: The keeper of heritage

The word “Cannabis” is not familiar to us except those who are accustomed to plants and narcotic products. However, by hearing its popular name “*Ganja*” or “*Bhang*” we can almost immediately relate ourselves with the intoxicated hallucinogenic liquid, which many of us tested during festivals. Although it has many other uses around the globe the plant as a construction material is something worthy of mention. Cannabis has another identity as “hemp” which is well known internationally for its fibre. Hemp fibre has a ubiquitous presence in coir, fabric, paper and automobile industries. However, a new dimension has achieved in the form of “hempcrete”, where hemp fibre and its woody core (hurd) is used with a lime-based binder to form a concrete-like substance, a very useful constituent for green architecture. Europe is already in that track and the United States is also following.

Interestingly, India had that practice quite long ago, back in 6th century A.D. The famous delighting caves of Ellora, a world heritage site, situated near Aurangabad, Maharashtra had partially built upon hemp-based construction material. Research studies conducted in Buddhist cave no. 12 found that interior clay plaster layer on the wall had *Cannabis* plant parts as components. The ancient clay plaster sample was analyzed in the laboratory using various sophisticated techniques, such as scanning electron microscope (SEM), stereomicroscope, and Fourier transform infrared spectroscopy (FTIR). Researchers have identified pieces of shoots, fragmented leaves, and flower of *Cannabis* plant from the samples. It has been suggested that *Cannabis* was used as a thermal insulator and strength increasing material for plasters. The interior of the cave had a pleasant microenvironment owing to thermal and sound insulation property of *Cannabis*. It is still unknown whether this psychoactive plant had any role in diet or recreation of the inhabitants but its role as a comfort builder is quite certain. So, respect our green keeper of heritage.

Source: Singh M. and Sardesai M.M. (2016) *Cannabis sativa* (Cannabaceae) in ancient clay plaster of Ellora Caves, India. *Current Science* 110 (5):884-891

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