



Old Stone Fort Archaeological Society

November 2011

The Old Stone Fort Archaeological Society will meet **Thursday, November 10th at 6:00 pm** at the Old Stone Fort Museum in Manchester, Tennessee. The purpose of this Society is to learn more about prehistoric Native American cultures and the early historic period of Tennessee. Our meetings are **Free** and open to the public. Our program this month:

Mark Norton

who will present

Geology Month: California Jade

Most of us have a better than average appreciation for rocks so I think it is appropriate to devote a meeting to the science of geology. I cannot think of a better way to salute geology than by taking a closer look at one of earth's most beautiful rocks, Jade. Unfortunately, jade is not found in middle Tennessee; however, there are a few locations in the U.S. where this precious gem can be found. I recently had the opportunity to visit the beautiful central coast, Big Sur region of California on a quest to find jade.

Jade is found along the central coast of California thanks to plate tectonics, a sub discipline of geology that describes the movement of the earth's crust. The movement and collision of these massive plates create mountains and earthquakes. In this case, the Pacific plate, composed of mineral rich rock is forced under the continental plate (Figure 3). This subduction zone produces tremendous heat and pressure, which causes metamorphism or alteration of these rocks into new rocks. Metamorphism with the addition of chemical changes or metasomatism creates jade within the parent rock serpentine. The continuous uplift of the mountains and subsequent erosion by rain and ocean free the jade from the softer serpentine where it is deposited along the beaches.

This presentation will include a series of drawings and photographs that will simplify plate tectonics and the formation of jade. A sample of Jade artifacts from various parts of the world will highlight ancient cultures reverence for this precious stone. I will also have numerous photographs of the annual Big Sur Jade Festival, exhibiting the complete range of colors of California jade. Also, my small collection of Big Sur jade will be on display at the meeting.

Thanks to Dr. Kevin Smith for providing the excellent presentation on the Gilcrease Museum at our October meeting. Bring jade or other interesting rocks to the November meeting.

See you Thursday, Mark

Information: Mark Norton – 615-741-1588, ext.113

Old Stone Fort State Park 931-723-5073

<http://www.state.tn.us/environment/parks/OldStoneFort/>

Tennessee Archaeology Network

<http://www.mtsu.edu/~kesmith/TNARCH/>

U.S. Geological Survey

<http://www.usgs.gov/>

Tennessee Division of Geology

<http://www.state.tn.us/environment/tdg/>

Plate Tectonics – Wikipedia

http://en.wikipedia.org/wiki/Plate_tectonics

