CNAS Public Lecture Series – Spring 2015

February 10, 2015 7:30 PM – 8:30 PM **TEMPLE 002**

AN EVOLUTIONARY PERSPECTIVE ON OUR FEAR OF SNAKES

Speaker: Brian Greene, Associate Professor, Department of Biology

People are rarely indifferent about snakes and our emotional reactions to these reptiles range from curiosity and fascination to disgust and fear. We are apparently not born fearful of snakes but possess an innate ability to recognize them, which leads to learned avoidance. Dangerous snakes, including large constrictors and venomous species, have coexisted with primates throughout their evolutionary history and likely posed a constant threat to our ancestors. Anthropologists believe that predator recognition and vigilance against predatory threat played key roles in human evolution. One of the proposed survival advantages of enhanced visual senses for primates is improved predator detection, which is especially pertinent to dangerous animals that are both cryptic and secretive, like snakes. Some anthropologists now suggest that mortality risk associated with snakes influenced the evolution of primate brains. This presentation will summarize evidence for snakes as agents of evolutionary change in humans, integrating recent research from herpetology, psychology, ethnography, neurobiology and anthropology.

March 17, 2015 7:30 PM – 8:30 PM **TEMPLE 002**

HOW SUSTAINABLE FOOD PRODUCTION RELIES ON NATURAL PLANT BIODIVERSITY - A MISSOURI PERSPECTIVE

Speaker: Laszlo Kovacs, Professor, Department of Biology

Global climate change poses an unprecedented challenge for agriculture, which can only be met with the cultivation of novel, resilient plant varieties. The development of such varieties relies on genes derived from wild relatives of crop species that adapted to the stress exerted by local environment, pests, and pathogens. Climate chaos combined with man-made changes to the environment, however, severely impact native plant communities as well, undermining the very resource that holds the key for sustainable food production in the future. An example of such a vanishing genetic resource is the rock grape, a wild plant which has become nearly extinct in its natural range across North America, but still thrives in the Missouri Ozarks. Our lab is studying DNA markers in extant natural populations of this plant to find clues that explain the specie's predicament and to guide conservation efforts to save it from extinction.

April 7, 2015 7:30 PM – 8:30 PM **TEMPLE 002**

GEOLOGY OF THE WEAUBLEAU IMPACT STRUCTURE, WEST-CENTRAL MISSOURI: THREE STRIKES AND A HYPOTHESIS IS OUT

Speaker: Kevin Evans, Professor, Department of Geography, Geology & Planning

The Weaubleau structure is five miles in diameter within an eccentrically positioned 12-mile-diameter area of structural deformation. Recovery of shocked quartz indicates it formed from a large meteorite impact. Fossils have been used to date the impact to about 335 million years ago. Weaubleau is one of three impact structures aligned across the Missouri Ozarks over a distance of 160 miles. Other investigators have suggested these were part of a serial impact. Age dates of other impact structures are poorly constrained, but likely preceded regional uplift of the Ozarks. The inferred low-angle trajectory to the northeast and tightly constrained age shows Weaubleau occurred later.

PARKING WILL BE AVAILABLE IN LOT 4, SOUTH OF TEMPLE HALL