



Friday November 10, 2017, 7:30 P.M.

Stony Brook University, Earth and Space Sciences Lecture Theater 001

Dr. Jeroen Smaers, Stony Brook Department of Anthropology

How the Brain Evolved: New Insights from Dinosaurs, Birds, Mammals and Humans

Summary:

Elucidating the evolution of the brain is arguably one of the most challenging endeavors in biology. The central importance of the brain to evolutionary biology is incontrovertible. As the substrate of all behavior, the brain is closely linked to an animal's ability to adapt to changing environments. Because very few neurobiological features fossilize, hereby limiting direct observations of changes in deep time, the main strategy employed by evolutionary neurobiologists is to deduce evolutionary changes from comparisons across species. This approach has provided remarkable new insights into the evolutionary history of the brain. In this lecture we will make a journey through time, discussing how the brain has changed over more than 150 million years of evolution. We will start our journey with the brains of dinosaurs, then discuss how the brain has changed in birds and mammals, and end with the evolution of the brain in primates and in our own species, *Homo sapiens*.

Bio:

Jeroen B Smaers is an assistant professor at the Department of Anthropology, Stony Brook University. He holds graduate degrees in Psychology, Archaeology, Social Anthropology, and Biological Anthropology, and obtained his PhD in Biological Anthropology at the University of Cambridge in 2010. His research focuses on unravelling large scale patterns of evolution in vertebrates, with a principal focus on the evolution of the brain. He has published several data sets detailing newly mapped brain areas in primates and developed new statistical approaches to study large scale patterns of evolution. He has received funding from the Natural Environment Research Council (UK), the Leakey Foundation, and the Wenner-Gren foundation.