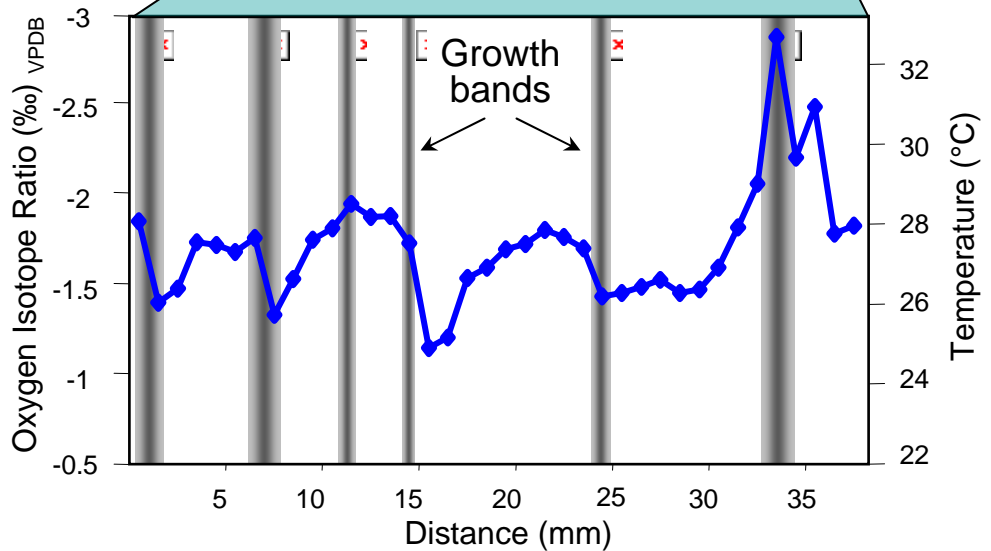
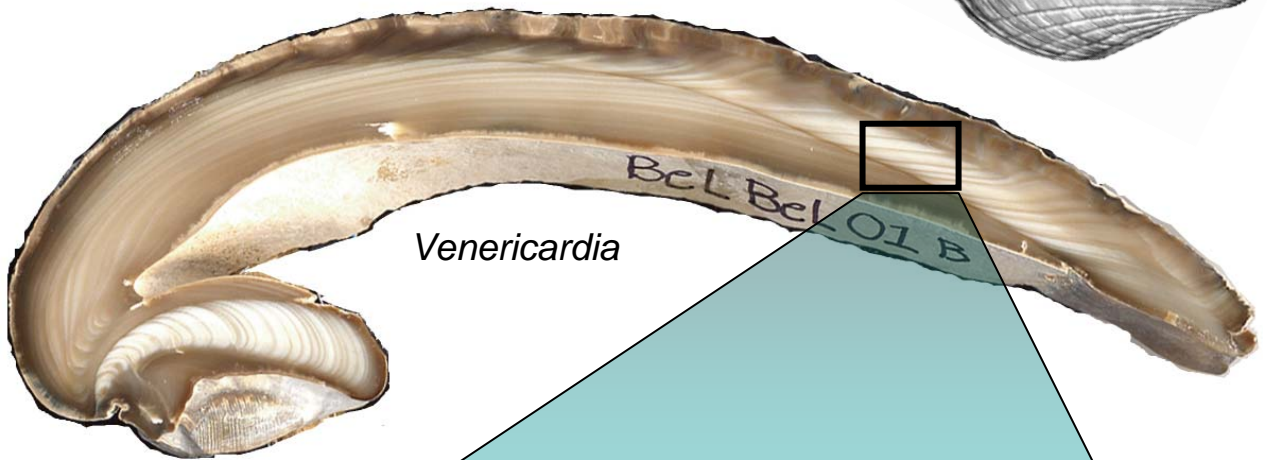


SEASONALITY IN THE EARLY EOCENE WARM CLIMATE OF THE U.S. GULF COASTAL PLAIN

Linda C. Ivany ~ Syracuse University

Jocelyn Sessa ~ Penn State University



From Fossil Clams to Ancient Climate...

The chemistry of fossil bivalve shells records the temperature of the water in which the clams grew. Since clams grow more or less continuously, their growth bands (like tree rings) record seasonal changes in temperature as they accrete. By sampling growth bands at very high resolution, one can reveal the temperature of the winters and summers at that location in the Earth's distant past. We collected 55 million-year-old bivalves from the US Gulf Coast to understand the nature of climate variability during an especially warm interval of Earth's past, when the planet was experiencing a super-greenhouse effect. Our results will help to constrain computer models of Earth's paleoclimate during this enigmatic interval of time, and give insight into the relative importance of latitude (solar insolation) and mean annual temperature in controlling seasonality.