



# SPRING 2015 SEMINAR SERIES

## Annual Ludwick Lecture in honor of Professor Jack C. Ludwick

DEPARTMENT OF OCEAN, EARTH, AND ATMOSPHERIC SCIENCES  
3PM – ROOM 200 IN THE OCEANOGRAPHY/PHYSICS BUILDING  
THURSDAY APRIL 14<sup>th</sup>, 2016

### “CLIMATE OF THE LAST 6000 YEARS: NATURAL OR ANTHROPOGENIC?”

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#### ABSTRACT

For more than a decade, scientists have argued about the warmth of the current interglaciation. Was the warmth of the pre-industrial late Holocene natural in origin, created by orbital changes that had not yet driven the system into a new glacial state? Or was it in considerable degree the result of human interference in the climate system because of gas emissions from early agriculture? In this talk, I summarize new evidence that moves this debate forward by evaluating a wide range of evidence to test the predictions of natural and anthropogenic hypotheses. By comparing Holocene responses to those that occurred during previous interglaciations, I assess whether the Holocene responses look different (and thus likely anthropogenic) or similar (and thus likely natural in origin). I also review paleoecological and archaeological syntheses that provide ground-truth evidence on the size and timing of early anthropogenic releases of greenhouse gases.

**FTER THE SEMINAR, PLEASE JOIN US IN ROOM 404, THE ZANEVELD CONFERENCE ROOM, FOR COFFEE AND COOKIES, AND TO MEET WITH THE SEMINAR SPEAKER.**