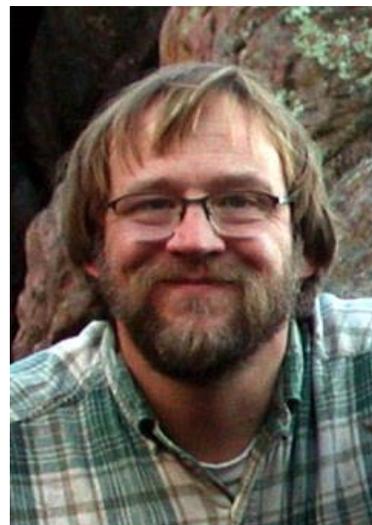


RMS-SEPM Luncheon Talk, January 28th, 2014

Development of Cenomanian-Campanian Chronostratigraphy for the Resource-rich Facies and Basins of the Western Interior Region

Dr. Brad Sageman Professor/Department Chair
Department of Geological Sciences
1850 Campus Drive Evanston, IL 60208-2150, USA
Phone: (847) 497-2257



<http://www.earth.northwestern.edu/current/people/faculty/brad/>

brad@earth.northwestern.edu

ABSTRACT: Refinement of the geologic time scale has been a work-in-progress ever since its earliest development. In recent years, however, there has been a significant pulse of activity, including efforts to intercalibrate different chronometers, as well as improvements in accuracy and precision to per mil levels. In this talk I will present the results of some current efforts to refine the Late Cretaceous time scale based on integration of biostratigraphy, radioisotope dating (Ar-Ar and U-Pb), cyclostratigraphy, and carbon isotope chemostratigraphy from strata of the Western Interior United States. This sedimentary succession is among the best dated in the entire rock record due to the confluence of fossiliferous marine rocks, abundant volcanic ash beds with datable minerals, rhythmically bedded hemipelagic strata that preserve Milankovitch cycles, and enriched levels of organic carbon that allow the generation of continuous $\delta^{13}\text{C}$ records. Organic richness is an attribute that has also made many of the stratigraphic units in this succession excellent hydrocarbon resources. A more refined time scale, and the means to import it into different sub-basins where exploration is most active, should improve ability to more accurately analyze a wide range of parameters, such as bulk sedimentation rates, organic carbon accumulation rates, and basin subsidence rates.

Speaker Biography: Brad Sageman received a B.S. in Biological Science from Denison University in 1979. He worked for a few years (including mudlogging for Tooke Engineering, Casper, WY) before entering the graduate program in Geological Science at the University of Colorado-Boulder (1982). He was awarded a pre-doctoral Fulbright Scholarship for work in Germany in 1987-88, and earned his Ph.D. from UCB in 1991. Brad spent one year as a post doctoral scholar at the Pennsylvania State University and then started as an Assistant Professor at Northwestern University in September 1992. He was promoted to Full Professor in 2004 and became department chair one year later. He has served as department chair since that time, and also holds a position as Co-Director of the Institute for Energy and Sustainability at Northwestern (ISEN). He is the author or co-author of over 50 scholarly publications, recipient of the DuPont Young Professor Award, and a Fellow of the Geological Society of America. His research interests include the sequence and cyclostratigraphy of (mainly) Cretaceous strata, and the geochemical study of organic carbon-rich facies, particularly those associated with Mesozoic ocean anoxic events.

[RMS-SEPM Main Page](#)

[RMS-SEPM Luncheon Page](#)

[RMS-SEPM Luncheon Abstract Archive](#)