
Tidal Depositional Systems in the Wilcox/Carrizo of Bastrop County, Texas: Sedimentology, Ichnology, and Palynology

Christopher N. Denison¹, Thomas D. Demchuk², and Jennifer M. K. O'Keefe³

¹Astra Stratigraphics, 501 Lone Star Rd., Bastrop, Texas 78602

²RPS Group Inc., 20405 Tomball Pkwy., Ste. 200, Houston, Texas 77070

³Department of Earth and Space Sciences, Morehead State University,
404-A Lappin Hall, Morehead, Kentucky 40351

GCAGS Explore & Discover Article #00218*

http://www.gcags.org/exploreanddiscover/2017/00218_denison_et_al.pdf

Posted October 30, 2017.

*Article based on an extended abstract published in the *GCAGS Transactions* (see footnote reference below), which is available as part of the entire 2017 *GCAGS Transactions* volume via the GCAGS Bookstore at the Bureau of Economic Geology (www.beg.utexas.edu) or as an individual document via AAPG Datapages, Inc. (www.datapages.com), and delivered as an oral presentation at the 67th Annual GCAGS Convention and 64th Annual GCSSEPM Meeting in San Antonio, Texas, November 1–3, 2017.

EXTENDED ABSTRACT

Stratigraphic relationships and paleoenvironmental interpretations of the Paleocene to Eocene Wilcox/Carrizo interval remain in flux, despite decades of studies. The need for data to support source-to-sink models related to Gulf of Mexico hydrocarbon exploration has driven an upsurge of interest in outcrop studies. Much of the updip succession is poorly known in Central Texas, as outcrops only provide small and scattered windows into the stratigraphy. To resolve some of these issues, we have focused on outcrops in Bastrop County that span the Wilcox/Carrizo boundary (Fig. 1), using a combination of sedimentology, ichnology, and palynology.

The generally accepted stratigraphic succession in Bastrop County, in ascending order, is Calvert Bluff and Sabinetown formations (sometimes combined) in the uppermost Wilcox, with the Carrizo as the lowermost formation of the Claiborne. The type Sabinetown, on the Texas-Louisiana boundary, consists mainly of glauconitic sandstones; potentially coeval deposits in the Bastrop vicinity are muddy to sandy upwards-coarsening tidally-dominated parasequences. Despite this marked difference, we continue the use of 'Sabinetown' for this unit pending formal proposal of a new formation name.

...