

Revisiting Some Carboniferous Stratigraphic Correlations in Ohio, Ernie R. Slucher, Ohio Division of Geological Survey, Columbus, OH 43229-6693, ernie.slucher@dnr.state.oh.us

The stratigraphic succession of Carboniferous-age rocks in Ohio possesses a long and established pedigree. The type sections of several Lower Mississippian units are located in Ohio, as are many of the widely recognized beds in the Pennsylvanian sequence of the Appalachian Basin. Regionally, some of these Mississippian units serve as the foundation of the stratigraphic nomenclature used in large portions of the Appalachian Basin (i.e., Sunbury Shale and Cuyahoga Formation). Similarly, the Pennsylvanian sequence in Ohio has long been deemed as a practical reference section when Pennsylvanian depositional sequences are correlated regionally, particularly the Middle and Upper Pennsylvanian portions. This notion is based on the premise that this portion of the basin was a relatively stable platform that received lesser amounts of the coarser clastics that contributed to variable intervals between key stratigraphic units, particularly when compared to strata deposited further eastward, in the axis of the subsiding Appalachian Basin. However, several recent geologic investigations for carbon dioxide sequestration, and a new interest in coal as a source for CBM in Ohio, suggest some of these long established correlations and stratigraphic relationships may be inappropriate. The Sunbury Shale, for instance, thickens and grades laterally into the Cuyahoga Formation, a relationship very dissimilar to most published stratigraphic sections that show the unit thinning and being overlain by the Cuyahoga. Likewise, some coals thought to be synchronous most likely are diachronous beds in different parts of Ohio. These and other stratigraphic profiles will be illustrated in a series of cross sections.