
Stratigraphy of the Fredericksburg-Washita Division (Comanche-Cretaceous), Texas, Emphasizing the Person and Georgetown Formations: The “Classic” View

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EXTENDED ABSTRACT

Carbonate rocks of the Upper Albian–Lower Cenomanian Fredericksburg-Washita Division are ubiquitous across the Comanche Shelf of Texas. They represent the gradual marine inundation of the Comanche Shelf as Comanchean time concluded. They were deposited in four adjoining depositional provinces: (1) the Central Texas Platform, represented by the Edwards Group; (2) the pelagic open-marine shelf of North and West Texas; (3) Maverick Basin; and (4) Stuart City and Devils River shelf-edge trends.

The Fredericksburg-Washita Division of Texas consists of three transgressive-regressive depositional sub-cycles, in upward order, the Fredericksburg sub-cycle, the lower Washita sub-cycle, and the upper Washita sub-cycle. In the Balcones Fault Zone and adjacent subsurface, the peritidal Edwards Group comprises the Kainer Formation and the overlying Person Formation, separated by the thin, widely traceable, slightly argillaceous Regional Dense Member (RDM) at the base of the Person Formation. The RDM is laterally continuous northward with the Kiamichi Shale, basal member of the pelagic-shelf Georgetown Formation of North Texas and the East Texas Basin. Because the Georgetown was universally accepted as lower Washita, the Person Formation was also assigned to the lower Washita sub-cycle. This assignment was supported by correlation of the Person Formation with the Segovia and Fort Lancaster formations of the Edwards Group in the Edwards Plateau, both also accepted as lower Washita.

Thus the Person Formation represented the peritidal shelf facies of the pelagic-shelf Georgetown Formation. This view of Fredericksburg-Washita stratigraphy, documented by extensive mapping and described cores and measured sections, and endorsed by eleven different published authorities over nearly 60 years, is represented here as the “classic view.”

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