EXCEPTIONALLY HIGH DIVERSITY IN THE FRASNIAN (UPPER DEVONIAN) TORNOCERATIDAE (AMMONOIDEA) FROM BÜDESHEIM (RHENISH MASSIF, GERMANY)

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The famous Büdesheim Formation in the Eifel region (Germany, North Rhine-Westphalia) is known to be an extraordinary place to study upper Frasnian ammonoids. While previous studies focused mainly on the Gephuroceratidae, we take a closer look on the equally significant Tornoceratidae. A total of over 1400 well preserved tornoceratid ammonoids from Büdesheim are investigated in terms of morphometry and taxonomy and reveal a highly diverse fauna with 24 tornoceratid taxa including a new genus for involute aulatornoceratids and five new species. Additionally, a new Büdesheim collection from slightly younger strata than typical ("*Archoceras*" Genozone, UD I-K, Intra-Kellwasser level) confirms slight changes of species composition but, overall, no measurable decline in tornoceratid species richness and biodiversity during the Lower Kellwasser Event. This indicates that during the extended Kellwasser Crisis (Late Devonian mass extinction) the younger Upper Kellwasser Event at the Frasnian-Famennian boundary was the significant extinction event for ammonoids leading to the complete extinction of the Gephuroceratidae and most Tornoceratidae.