

DOWN AND OUT IN BOHEMIA-DECLINING TRILOBITE FAUNAS OF THE KRÁLŮV DVŮR FORMATION, CZECH REPUBLIC

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Approximately 40 trilobite genera have been described from the Ashgillian Králův Dvůr Formation of the Prague Basin by Barrande and later systematists. The bulk of these appear defensible on the basis of a current systematic restudy, although some are rare or known only from the type species.

As known to Barrande and documented by Chlupáč in the early 1950's, the Králův Dvůr has a varied lithology and accompanying varied generic assemblages. The trend over time, however, is a reduction in generic diversity. Subsequent to a carbonate unit high in the Králův Dvůr ('pelocarbonate' or 'perník' bed) diversity drops sharply and presumed glacial conditions are announced by the Kosov sands with dropstones.

The carbonate bed trilobite fauna has pronounced affinities to north European and even Gaspésian faunas, in contrast to most earlier parts of the Králův Dvůr. A variety of plate movements and shifting ocean currents, including the suggested rotation of the Prague Basin microplate (Hammann, 1992) can be used to explain these rapid changes in faunas and sediments. Paradoxically, as was possibly the case with the North Atlantic Pleistocene, a shift of warmer currents poleward may have provoked the Hirnantian glaciers.