

**FLORISTIC TURN-OVER AND STABILITY IN THE NAMURIAN (SERPUKHOVIAN-LOWER BASHKIRIAN) OF THE UPPER SILESIAN COAL BASIN (POLAND) AS AN INDICATOR OF PALEOCLIMATIC CHANGE IN THE MID-CARBONIFEROUS TROPICS**

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The Upper Silesian Coal Basin is a triangular fore deep basin straddling the border between Poland and the Czech Republic. During the Namurian the basin experienced extremely rapid subsidence in its western part resulting in a very thick sequence of beds that thins towards the East. Biostratigraphic and chronostratigraphic control was established through plant macrofossils, palynology, and fossil fauna.

Paleobotanical studies of macroflora in the Polish part of the basin were originally done to aid coal mining. The overall character of the floras found in the clastic beds accompanying coal seams is that of tropical floras of wet depositional lowlands. Within the Namurian two major turnovers occurred and one origination event allowing the recognition of four stratigraphic intervals with distinguishable floras. The first extinction/origination event coincides with the Enna Horizon that represents a longer and well recognized highstand. At this turnover species disappeared that were characteristic of somewhat drier environments ("flözfern" of Havlena), while species typical of wetter environments appeared. The second extinction/origination event coincides with the major hiatus that corresponds to the Mississippian/Pennsylvanian boundary lowstand and includes the Cholkerian and Alportian Stages (H1 and H2 cephalopod zones). The third event is characterized by originations only and lies in another hiatus.

Each paleobotanical change coincided with a high stand/hiatus and could thus be interpreted as an apparent effect that telescoped the slow changes that occurred during the time interval not represented. However, the point is that there was stasis during the time between the events and that the hiatuses did not produce the same effect. The change at the Enna horizon was from a flora of drier conditions to one of wetter conditions, i.e. it reflects a climate change. The other two changes were different from each other and the climatic component less obvious. However, these turnovers were true changes in comparison to the stasis in the intervening intervals.