



## **Calcareous nannoplankton of the terminal flysch deposits in the Polish Outer Carpathians**

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The Oligocene-Early Miocene closing of the northern sector of the Outer Carpathian sedimentary area is manifested by deposition of Krosno /Malcov synorogenic lithofacies. The Malcov lithofacies is typical for the Pieniny Klippen Belt/Magura Basin, while the Krosno one occupied the Grybów-Dukla-Silesian/Sub-Silesian/Skole and Boryslav -Pokuttua basin system. The beginning and termination of these deposits was diachronic and migrated across the basins towards the north. These lithofacies reveal the fining and thinning upwards sequences. Towards the top sedimentary sequences are dominated by marly pelites. In the PKB and Krynica Zone of the Magura Basin the deposition of the Malcov lithofacies was initiated during the NP 24 and persisted to NP25 zone, whereas in the Ra zone in NP24 and NP25 respectively. In the northern part of the Magura Basin (Siary zone) the youngest deposits (so called Supra-Magura beds) belongs to NP24 zone. In the Grybów-Dukla units the Krosno shally facies belongs to NP25. Towards the north this facies terminates in NN1 to NN3/NN4 zones in the Silesian/Subsilesian and Skole/Skiba nappes respectively. In more external part of the basin (Boryslav-Pokuttya Folds) the Krosno (Polyanytsia) lithofacies pass into Vorotyshcha Salt Formation (NN4 zone). During the Late Oligocene (NN25/NN1) the frontal part of Magura Nappe thrust northwards onto the terminal Krosno flysch basin. The clastic material derived from eroded front of orogene has been found in Krosno beds of Silesian Basin. The northwards thrusting of the Magura Nappe was also accompanied by the formation of the piggy-back basin on the Magura Nappe, filled with the synorogenic turbidites of the Zawada and Kremna formations (NN 2-3). This paper was financed by the Polish Ministry of Sciences and

High Education (Grant 1997/PO1/2006).