



## **SHRIMP dating of zircon in crystalline rocks clasts from the Carpathian flysch**

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The Western Outer Carpathians (WOC) sedimentary basins were supplied with clastic material from internal (ridges) and external (northern margin) source areas (e.g. Oszczytko 2006). The source areas avoided Miocene thrusting and tectonic transport to the current position of the WOC. Investigation of clastic material is therefore the only method available to characterize lithologies in these source areas since they are not exposed in the modern land-surface.

Samples of crystalline rocks cobbles were collected in the Silesian Unit. Two granites considered to be derived from the Silesian Ridge, and one gneiss considered to be derived from the Northern rim of the WOC were selected for this study. Separated zircon grains were analyzed using the Sensitive High Resolution Ion Microprobe (SHRIMP II) at the National Institute of Polar Research in Tokyo (Japan).

Zircon grains in all samples are euhedral and reflect oscillatory zoning related to the igneous growth. Zircon in both granites gave concordant ages of ca. 605 Ma. The same age of ca. 607 Ma obtained from gneiss is interpreted as the age of igneous protolith. This is consistent with previous monazite chronology of crystalline rocks considered to be derived from the same sources (e.g. Poprawa et al. 2005). Similar age was also reported for the primary monazite in a gneiss cobble from Gródek (Budzyń et al., submitted), where based on chemical whole-rock analyzes the protolith was considered to be related to the volcanic arc granites (Michalik and Budzyń, unpubl.

data). In conclusion, chronological data indicate importance of the ca. 600 Ma igneous activity in the former of the Silesian Ridge and the Northern rim of the WOC.

## **References**

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