



Fig. 12. Geological sketch of the Pieniny Klippen Belt (Polish sector) and surrounding regions (after Birkenmajer, 1979 – simplified)

DESCRIPTION OF THE TRIP

Passage: Kraków – Skrzydlna – Szczawnica

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The field trip starts in Krakow AGH Science and Technology University parking lot and leads southward to the Carpathians. In Krakow and its vicinity the Mesozoic rocks of the North European Plate are exposed. The platform is dissected by numerous faults into several horsts and grabens. The grabens are filled with the Miocene Molasse deposits, while horsts elevate the Upper Jurassic rocks. These rocks are represented mainly by Oxfordian cyanobacterial-sponge buildups with associated nodular, chalky and micritic limestones (Matyszkiewicz, 1997). Passing the bridge

on Wisła River we can observe the hill of Wawel with the Polish Royal Castle on the top. The Royal Castle was built in X century and remodeled several times. The most important remodeling was done by Queen Bona and her team of Italian architects in XVI century giving the castle its Renaissance character. The Wawel hill is built by the white-weathering Upper Oxfordian massive limestones. These limestones are horst elevated and shaped by karst phenomena. Following southwards the road crosses the Carpathian Foredeep filled with Miocene molasse deposits. Springs of hydrosulphuric mineral waters are connected with the Miocene deposits (Cieszkowski & Ślącza, 2001). These mineral waters are being utilized at spas Mateczny and Swoszowice located within Krakow City limits. After a few kilometers the route passes over the frontal thrust-faults of the Outer Carpathian flysch belt.