Poříčí-Hronov Fault Zone: Malé Svatonovice locality

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The locality Malé Svatonovice was presented during the field trip at Recent Geodynamics 9th in 2008, as an example of deformation style within the Poříčí-Hronov Fault Zone. Detailed geological mapping complemented with both structural and sedimentological analysis has led the present author to a conclusion that the hitherto proposed overthrust style of the local kinematics of the Svatonovice Fault (SF; cf. Weithofer 1897; Petrascheck 1934, 1944 & 1949) is rather excluded. The SF defines the N boundary of the Poříčí-Hronov Trough (PHT), that formed during the Cainozoic between the Intrasudetic Synclinorium (IS) to the NE and the Karkonosze Piedmont Basin to the SW (Trutnov Basin (TB) according to Holub 1976). Kinematic indicators both within the SF and the adjoining Permian and Cretaceous sedimentary rocks suggests an oblique-slip, dextral-normal kinematics of the local motion on the fault (Fig. 1) (cf. Uličný 2001; Uličný et al., 2002; Wojewoda 2009) accompanied by drape folding of the overlying sedimentary strata (Fig. 2).

Fig. 1. Scheme of structural relationships at Malé Svatonovice. 1 – Svatonovice Fault; 2 – stratification in Cretaceous sediments; 3 – stratification after rotation to horizontal position; 4 – fault striation; 5 – complementary fractures; 6 – complementary fractures after rotation; 7 – fault striation after rotation.