SILICICLASTIC TERMINATION OF THE CARBONATE SEQUENCE—
SIGNAL OF VARISCAN OROGENY

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Great part of the Devonian in the Barrandian is represented by a carbonate sequence. The topmost
Devonian unit is, however, mostly of siliciclastic nature. The deposition of the Givetian Srbsko For-
mation starts sharply with dark claystones, bedded cherts and intraclastic limestones. Its base corre-
sponds to a transgressive event of global character (Kačák Event). The overlying unit, the Robín Mem-
ber—consists mostly of siltstones and has a flysch character. It corresponds to distal turbidites with
some specific features. The moderately mature detritus is river-borne. Slow and diluted turbidity
currents were triggered by an input of river suspension into the basin. The turbidites were inten-
sively reworked by traction currents. The freshening of water masses accompanied the turbidity sedi-
mentation. The beginning of siliciclastic flysch sedimentation was influenced by an aseismic uplift of
the source areas. The development of soils and terrestrial vegetation could have played also an im-
portant role. All the detritus is formed of a denudational material eroded from a regolith and traspor-
ted by rivers. Regolith (soils) and a stable river system possibly developed in the source area due to the
onset of land vegetation. Thus the turbidity currents filling the basin did not start as earthquake-
triggered slumps but as river suspension inflows.

The Robín Member represents a natural sequence from immature flysch through mature flysch
probably up to supernatute molasse. This molasse, however, is preserved only in a small Koněprusy
area.

THE DEVELOPMENT OF THE CARBONIFEROUS ACCRETIONARY
WEDGE IN THE MORAVIAN—SILESIAN PALEOZOIC BASIN

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The Moravian—Silesian Paleozoic Basin, the most extensive Paleozoic Basin of the Bohemian Massif
represents a relic of a polyhistory large basinial structure. It was formed between Variscan collision
zone on the West, the remnants of the Brunovistulian platform on the East and the Krakowides on
the ENE. The terminal stage of the collision exhibits the basin type transitions from the remnant
basins with flysch sediments (Famenian? — Upper Viséan) overlying predominately carbonate platform
sediments to the foreland basin with marine (uppermost Viséan—Namurian A), paralic (Namurian
A) and finally continental (Namurian A — Westphalian) molasse deposits.

In Late Devonian and Carboniferous, the borders of Brunovistulicum were gradually disinte-
grated. This process was provoked by gradual shifting of Variscan collision zone toward Brunov-
istulicum and was accompanied by formation of the thrust—fold belt which led to the creation of a
mountain relief in the close source area. At the same time, a system of relatively narrow remnant
basins filled by flysch—type sediments originated. During the closing stage of the collision, the foreshore
and foreland basin were filled by marine, coalbearing paralic and coalbearing continental molasse
deposits.

The geometry of the basin passed through great changes due to the subidence axis migration
from collision zone (from W) toward foreland (in E direction) and simultaneous folding and thrusting
of sediments already deposited in western depressions. Under the conditions of the gradual
resedimentation and tectonic reworking, a complicated accretionary wedge of clastic sediments and
metasediments originated in Late Devonian (?) and Carboniferous. Its overall thickness (after
compaction) is more than 10,000 m.

The flysch stage of the accretionary wedge evolution is typical of the sedimentation and
resedimentation by turbidity currents, mudflows and sandflows. Sedimentary lineations (sole marks)
prove the longitudinal filling of the flysch depressions from S to N up to ENE. The Upper Viséan
flysch sediments, which are palaeontologically well proved include a whole megafacies distribution
starting by marginal coarse conglomeratic beds in southern part of Drahanská vysočina Upland (deep
sea midfan) and continuing to the north by fluoxiturbidites, proximal turbidites, distal turbidites (outer
fan) and hemipelagic sediments gradually in the northern parts of the preserved accretionary wedge.