

The "Cephalopod Limestone" of The Prague Basin (Silurian, Czech Republic)

A. Ferretti¹ & J. Kríz²

Silurian cephalopod limestones developed in the northern Gondwana region at the same stratigraphic horizons, as also revealed by the analysis of bivalve-dominated communities. The absence of a major tectonic overprint together with the presence of extensive outcrops make the Prague Basin one of the ideal areas to study this limestone.

Five sections (Braník, Cephalopod Quarry, Marble Quarry, Pankrác Section and Kosov Quarry) have been investigated both directly in the field and with oriented thin sections. Additional samples have been collected from Jinonice, Muslovka Quarry and Karlstein.

Two facies types have been recognized. A first type (Braník type), which is regarded as the "normal" sedimentation facies, is the result of a surface current which transported empty shells of cephalopods, larvae of bivalves and other fauna. This current was in connection with the Silurian equatorial current regime of other northern Gondwana areas. The second type (Kosov type) is the effect of storm event redepositions within the current itself in a local shallower and better ventilated environment.

Cephalopod shells have peculiar orientations in these two facies types. They share a preferred unidirectional SW-NE direction in the Braník type cephalopod limestone, while they have a NS direction but opposite orientations according to shell size in the Kosov type cephalopod limestone.

These two facies types must be regarded as perspectives of the same view, as they simply represent two depositional cases of different depths and hydrodynamic regime. In the deepest parts of the Prague Basin, black shales sedimentation and anoxic conditions continued undisturbed in Wenlock and Ludlow time.

¹ Istituto di Paleontologia, Università di Modena, Via Università 4, 41100 Modena, Italy

² Czech Geological Survey, P.O. Box 85, Praha 011, 118 21 Czech Republic