
**PALAEOZOIC
OF THE BARRANDIAN**
(Cambrian to Devonian)

*This publication is dedicated to the memory of Joachim Barrande 200 years after his birth
The publisher, Czech Geological Survey, Prague, celebrates 80th anniversary of its foundation the same year*



JOACHIM BARRANDE
11. 8. 1799 – 5. 10. 1883

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I. Chlupáč, V. Havlíček, J. Kříž, Z. Kukał, P. Štorch



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Contents

I. Introduction (<i>I. Chlupáč</i>)	7	V. Prague Basin (<i>V. Havlíček</i>)	39
II. The knowledge development of the Barrandian Palaeozoic		Ordovician (<i>V. Havlíček</i>)	41
(<i>I. Chlupáč, V. Havlíček, J. Kříž</i>)	8	Tremadoc	41
Cambrian (<i>V. Havlíček, I. Chlupáč</i>)	8	Třenice Formation	43
Ordovician (<i>V. Havlíček, I. Chlupáč</i>)	9	Mílina Formation	47
Silurian (<i>J. Kříž</i>)	11	Arenig	48
Devonian (<i>I. Chlupáč</i>)	12	Klabava Formation	48
III. Origin of the Lower Palaeozoic basins in the Barrandian area (<i>V. Havlíček</i>)	16	Llanvirn (Oretan)	53
IV. Příbram-Jince Basin (<i>V. Havlíček</i>)	19	Šárka Formation	53
Cambrian (<i>V. Havlíček</i>)	20	Dobrotivá	57
Lower Cambrian	21	Dobrotivá Formation	57
Žitce-Hluboš Formation	21	Beroun	61
Žitce Conglomerate	21	Libeň Formation	67
Hluboš Conglomerate	22	Letná Formation	69
Sádek Formation	22	Vinice Formation	70
Holšiny-Hořice Formation	23	Zahofany Formation	73
Holšiny Conglomerate	23	Bohdalec Formation	74
Hořice Sandstone	24	Kralodvor	76
Paseky Shale	24	Králův Dvůr Formation	76
Klouček-Čenkov Formation	25	Kosov	78
Klouček Conglomerate	25	Kosov Formation	78
Čenkov Sandstone	26	Silurian (<i>J. Kříž</i>)	79
Chumava-Baština Formation	27	Silurian palaeogeography and basin development ..	80
Chumava Conglomerate	27	Silurian synsedimentary movements, volcanism,	
Baština Sandstone	27	facies development, faunal succession,	
Middle Cambrian	29	lithostratigraphy and biostratigraphy	83
Jince Formation	29	Llandovery (Rhuddanian, Aeronian, Telychian) ..	83
Brdy area	29	Želkovice Formation	83
Skryje-Týřovice area	31	Llandovery (uppermost Aeronian, lower	
Ohrazenice Formation	33	Telychian)	85
Upper Cambrian	35	Litohlavy Formation	85
Pavlovsko Formation	35	Llandovery and Wenlock (upper Telychian,	
Strašice and Křivoklát-Rokycany		Sheinwoodian, Homerian)	86
Volcanic Complexes	38	Motol Formation	86
Strašice Volcanic Complex	38	Western Segment (west of the Tobolka Fault) ..	87
Křivoklát-Rokycany Volcanic Complex	38	Southern Segment (south of the Koda Fault) ...	88
		Central Segment (between the Koda Fault	
		and the Tachlovice Fault)	88
		Northern Segment (north of the Tachlovice	
		Fault)	90
		Ludlow (Gorstian, Ludfordian) and earliest	
		Přídolí	91

Kopanina Formation	91	Siltstones	141
Western Segment (west of the Tobolka Fault) . .	91	Clayey sediments	141
Southern Segment (south of the Koda Fault) . .	93	Carbonate sediments	143
Central Segment (between the Koda Fault and the Tachlovice Fault)	93	Silicites	144
Northern Segment (north of the Tachlovice Fault)	95	Other sediments	145
Uppermost Ludlow and Pfidolí	96	Red beds	145
Požáry Formation	96	The source of clastic material and palaeocurrents .	145
Conclusions	98	Sedimentary environments	147
Devonian (<i>I. Chlupáč</i>)	101	The palaeoclimate	147
The Silurian/Devonian boundary	103	Events and their impacts on the sedimentation	148
Lower Devonian	105	VIII. Volcanism (<i>P. Štorch</i>)	149
Lochkov Formation (Lochkovian up to the base of Pragian)	105	Cambrian volcanism	149
Radotín Limestone	106	Křivoklát-Rokycany Complex	150
Kotýs Limestone	108	Strašice Complex	152
Other facies	109	Chemistry and tectonomagmatic position of the Cambrian volcanism	153
Praha Formation (Pragian to lowermost Emsian)	109	Basalt dykes of Přeborn ore district	154
Dvorce-Prokop Limestone	111	Ordovician volcanism	154
Řeporyje Limestone	112	Komárov Complex	155
Loděnice Limestone	112	Upper Ordovician volcanism	156
Slivenec and Vinařice Limestones	114	Chemistry and tectonomagmatic position of the Ordovician volcanism	157
Koněprusy Limestone	114	Silurian volcanism	158
Zlíchov Formation (Zlíchovian)	116	Effusive basalts and volcaniclastics	160
The lower part of the Zlíchov Formation (Chapel Coral Horizon and its equivalents) .	118	Intrusive doleritic basalts	160
Middle and upper part of the Zlíchov Formation	119	Ultrabasic rocks	161
Chýnice Limestone	121	Chemistry and tectonomagmatic position of the Silurian volcanism	162
Daleje-Třebotov Formation (Dalejan, lowest Eifelian)	121	Devonian volcanism	163
Daleje Shale	122	Chemistry and tectonomagmatic position of the Devonian volcanism	163
Třebotov Limestone	124	Biotite lamprophyres	163
Suchomasty Limestone	125	Chemistry and tectonomagmatic position of biotite lamprophyres	163
Lower/Middle Devonian boundary	125	IX. Variscan folding and faulting in the Lower Palaeozoic basins (<i>V. Havlíček</i>) . .	165
Choteč Formation (Eifelian)	126	Post-Givetian phase	165
Choteč Limestone	126	Pre-Westfalian phase	167
Acanthopyge Limestone	128	Faults	168
Srbsko Formation (late Eifelian to Givetian) . .	129	Age and duration of movements	168
Kačák Member	130	Strikes	168
Roblín Member	132	Amplitudes of movements	169
VI. Rožmitál trough (<i>V. Havlíček</i>)	134	X. Relationships of the Barrandian Palaeozoic within the Bohemian Massif (<i>I. Chlupáč</i>)	170
VII. Sediments of the Barrandian Palaeozoic (<i>Z. Kukul</i>)	136	XI. Epilogue (<i>I. Chlupáč</i>)	173
Sedimentary sequences and sediment volumes	136	References	174
The characteristics and development of the individual sediment classes	137		
The conglomerates	137		
Sandstones	139		

I. Introduction

The Barrandian area is situated in the central part of the Bohemian Massif, i.e. within the easternmost part of the Variscan (Hercynian) Fold Belt in central Europe. Regionally viewed, it represents a terrain bounded by the Variscan Central Bohemian Pluton in the SE and diverse metamorphic units in the SW and NW. Towards the NE, the Barrandian Proterozoic and Palaeozoic merges under the cover of younger deposits and continues further eastward as the basement of the Bohemian Cretaceous Basin.

The Barrandian sequence consists of two units bounded by a marked unconformity: the Late Proterozoic, and the Palaeozoic (Cambrian to Devonian). While the Proterozoic unit (synthem) was affected by the Cadomian orogeny and towards the periphery progressively metamorphosed (probably during both the Cadomian and Variscan processes), the overlying Palaeozoic unit is only slightly deformed and mostly free of metamorphism, and is overlaid by postorogenic Late Carboniferous and Cretaceous deposits.

The subject of our work is the Cambrian to Devonian sequence which crops out in the central part of the Barrandian between the towns Prague and Plzeň in central and western Bohemia. A small occurrence near the town Rožmitál, situated close to the Central Bohemian Pluton, is also included, though it shows some differences in facies development and relationships to the "Islet Zone" (mantle relics) of the Variscan Central Bohemian Pluton.

Unusually rich in facies differentiation, fossil record and completeness of Palaeozoic sequence together with simple tectonics, instructive exposures, easy accessibility, and a high degree of investigations with almost 200 years of tradition make the Barrandian a world famous area influencing the general progression in knowledge of Cambrian to Devonian systems on a wide international scale.

Our book, which is a supplemented and updated version of the Czech edition (Chlupáč et al. 1992), is intended as a review summarizing the results of the fifty year etape of investigations after 1945. We concentrate on stratigraphy, facies development and fossil content, as these are the most enriching to general scientific progress. As the present state roots in the past, chapters on historical develop-

ment of views are included. The main part of the book is arranged stratigraphically, succeeding summarizing chapters are devoted to sedimentology, volcanics, tectonics and comparison of the Barrandian Palaeozoic with other Cambrian to Devonian occurrences within the Bohemian Massif.

Individual chapters were written by different authors whose authorship is fully respected. Consequently, subjective approaches and interpretations, in some cases even controversial, appear (e.g. in evaluation of tectonics, palaeogeography, local versus global factors etc.). We suppose that diversity of views accompanies the progress, and no editorial changes were made in this respect (some basic differing concepts are pointed out in the Epilogue).

The whole territory of the Barrandian Palaeozoic has been geologically mapped to the scale 1:25 000, and locally even to smaller scales (1:10 000, 1:5 000). A list of official new maps covering the Barrandian Palaeozoic area and edited by the Czech Geological Survey, Prague, is enclosed along, with the list of references.

Our book is incomplete in many respects: the volume did not allow us to deal with individual, even internationally important outcrops and fossil localities, and to present more complete lists of fossils. The book therefore cannot replace the many papers at least partly reported in the list of references. Particularly the systematic palaeontologic literature dealing with individual fossil groups is so rich that only papers with direct impact on stratigraphy and palaeoenvironmental reconstructions are cited.

Data on localities suitable for geological excursions are contained in new guidebooks, in particular by Chlupáč (1988b, 1993, Proterozoic to Devonian) and Kříž (1992, selected Silurian outcrops).

Though the present status of knowledge of the Barrandian Palaeozoic is advanced, it cannot be regarded as satisfactory: particularly modern micropalaeontological, structural and geochemical studies are needed, and the same is needed for the systematic palaeontology of some fossil groups. A vast amount of work in the future still remains.

Ivo Chlupáč

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