

OSTRACODES FROM THE DOBROTIÁ FORMATION (ORDOVICIAN, BOHEMIA)

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Abstract. A review is given of the ostracode fauna of the Dobrotivá Formation and their relations to faunas from other regions of Europe are discussed. Better preserved material from new localities is described. Two new species of the genera *Euprimites* and *Pinnatulites* are described.

■ Ostracoda, taxonomy, new taxa, Ordovician, Dobrotivá Formation, Bohemia, palaeobiogeography, Perunica, Baltica, Armorica

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Introduction

The Dobrotivá Formation corresponds to the Dobrotivá Series, introduced as a local unit of the Bohemian Ordovician by Havlíček and Marek (1973). Except for the upper boundary it can be correlated with the Landeillo in the British standard stratigraphical scale. The Dobrotivá Formation consists of two facies, the Skalka Quartzites and the Dobrotivá Shales. The first ostracode species from the Dobrotivá Series was described from Zaječov, by Barrande (1872) as *Primitia transiens*. Further information came from Havlíček and Vaněk (1966, p. 53). In their list of Bohemian fossils from the Ordovician they mentioned two ostracode taxa from the Dobrotivá Formation: *Parapyxion ? transiens* (BARRANDE, 1872) and *Parapyxion prunellus* (BARRANDE, 1872). Přibyl (1979) added the new species *Sigmobolbina (?) plzenecensis* PŘIBYL, 1979 and *Winchellatia ? bulbata* PŘIBYL, 1979 and Schallreuter and Krúta (1984) proposed *Piretella pontis* SCHALLREUTER and KRÚTA, 1984.

Up to now all the described specimens came from the Dobrotivá Shales. The first ostracode from the Skalka Quartzites, *Spinohippula esurialis*, was described by Vannier, Krúta, and Marek (1987) from Ejpovice. Schallreuter and Krúta (1988) mentioned *Quadritia (Krutatia)* sp. from the same locality. The rich ostracode fauna from the Skalka Quartzites from Ejpovice was completely described by Schallreuter and Krúta in Schallreuter, Krúta, and Marek (1996) including 15 species (5 new) out of 15 genera (1 new).

In 1991 Schallreuter and Krúta described *Levisulculus smolai* from Dobrotivá Shales from Praha - Libeň, Bulovka and in 1994 *Piretia hurkaensis* from Hůrka near Plzenec.

In the present paper, findings from the other Dobrotivá Formation localities are considered together with a review of all published information about the ostracode fauna from the Dobrotivá Formation and they are discussed regarding their relations to other European regions.

The specimens are housed in the National Museum, Prague and in the Rokycany Museum.

Abbreviations: NMP - National Museum, Prague, RV - right valve, LV - left valve, L - length, H - height.

Systematic Descriptions

Class **Ostracoda** LATREILLE, 1802 emend. LATREILLE, 1806

Order **Beyrichiocopa** POKORNÝ, 1954

Suborder **Palaeocopa** HENNINGSMOEN, 1953

Superfamily **Eurychilinacea** ULRICH et BASSLER, 1923

Family **Oepikellidae** JAANUSSON, 1957

Levisulculus JAANUSSON, 1957

Levisulculus smolai SCHALLREUTER et KRÚTA, 1991

Pl. 1, fig. 7; Text-fig. 1

1991 *Levisulculus smolai* sp. n. - Schallreuter and Krúta, p. 235; fig. 1.1-2

1996 *Levisulculus* - Schallreuter and Krúta in Schallreuter, Krúta and Marek, pp. 439, 458

Holotype. External cast and steinkern of a female carapace with the valves in juxtaposition (butterfly position), NMP L 29393a - text-fig. 1; Schallreuter and Krúta, p. 235; fig. 1.1

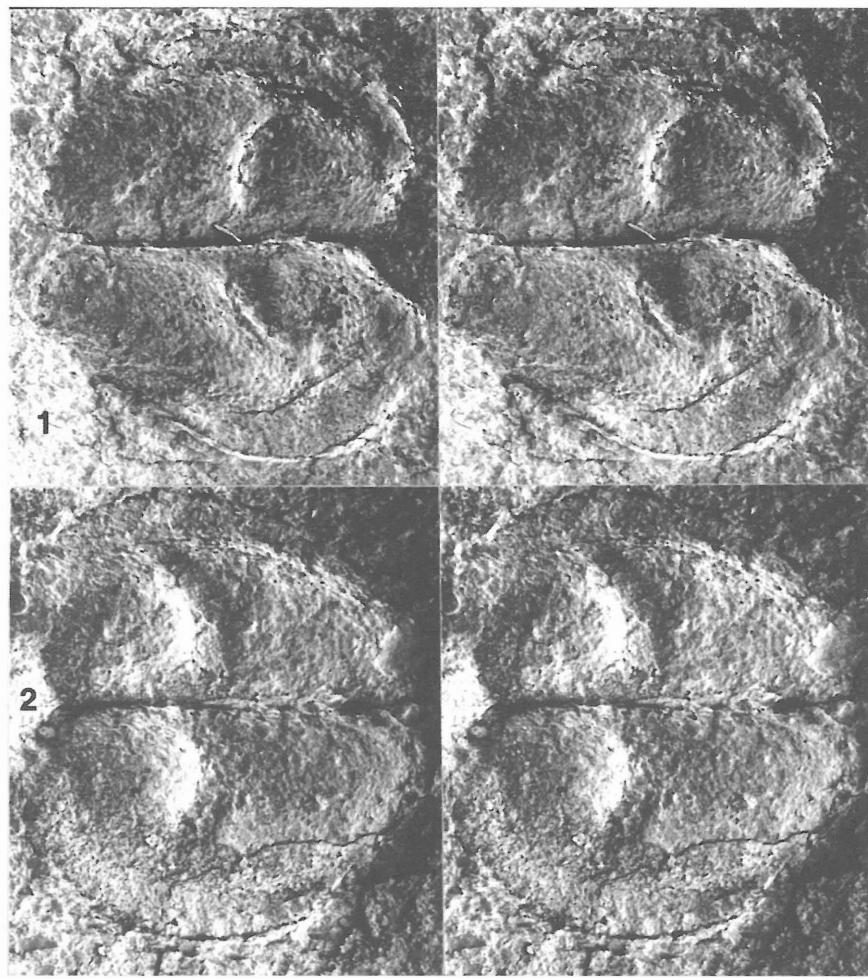
Type locality. Praha - Libeň, Bulovka.

Type stratum: Dobrotivá Shales, Dobrotivá Fm., Ordovician.

Material: Two carapaces with valves in juxtaposition and one steinkern.

Diagnosis and remarks: See Schallreuter and Krúta 1991, p. 235.

Occurrence: Praha – Libeň, Bulovka.



Text-fig. 1. *Levisulculus smolai* SCHALLREUTER et KRÚTA, 1991. Two carapaces with valves in juxtaposition in lateral view (butterfly position), Dobrotivá Formation, Praha - Libeň. 1 Holotype, (NMP L 29393a). 2 Paratype (NMP L 29393b), L 1.22 mm.

Family **Eurychilinidae** ULRICH et BASSLER, 1923
Subfamily **Chilobolbininae** JAANUSSON, 1957

Laccochilina HESSLAND, 1949

Laccochilina ? sp.

Pl. 2, fig. 2

1996 *Laccochilina?* sp. - Schallreuter and Krúta in Schallreuter, Krúta and Marek, p. 442; fig. 1.1

Material: Two steinkerns of tecnomorphic valves (NMP L 31718, NMP L 28473).

Dimensions: NMP L 28473 - L 1.22 mm, H 0.72 mm; NMP L 31718 - L 1.0 mm.

Diagnosis and remarks. See Schallreuter and Krúta in Schallreuter, Krúta and Marek 1966, p. 442.

Occurrence: Ejpovice, Plzeň.

Subfamily **Piretellinae** ÖPIK, 1937

Piretella ÖPIK, 1937

Piretella pontis SCHALLREUTER et KRÚTA, 1984
Pl. 2, fig. 1

1984 *Piretella pontis* n. sp. - Schallreuter and Krúta, pp. 684-686; fig. 1
1986a *Piretella pontis* SCHALLREUTER et KRÚTA, 1984b - Kempf, p. 592

1986b - dito. - Kempf, p. 458

1987 - dito. - Kempf, p. 761

1988 *Piretella pontis* SCHALLREUTER et KRÚTA, 1984 - Schallreuter and Krúta, p. 102

1989 *Piretella* ? *pontis* SCHALLREUTER et KRÚTA - Sayar and Schallreuter, p. 236

1996 *Piretella pontis* SCHALLREUTER et KRÚTA - Schallreuter and Krúta in Schallreuter, Krúta and Marek, p. 442; fig. 1.5

Holotype: External mould of an incomplete tecnomorphic valve, NMP L 22239 - Schallreuter and Krúta 1984a, fig. 1.

Type locality: Plzeň.

Stratum typicum: Dobrotivá Shales.

Material: 1 external mould of a LV (NMP L 28477).

Dimensions: L 1.08 mm, H 0.52 mm.

Diagnosis and remarks: See Schallreuter and Krúta in Schallreuter, Krúta, and Marek 1966, p. 442.

Occurrence: Plzeň, Ejpovice (Barrandian).

Family Oepikiidae JAANUSSON, 1957

***Duringia* SCHALLREUTER, 1984**

***Duringia ? kroki* SCHALLREUTER et KRŮTA, 1996**

1996 *Duringia? kroki* sp. n. - Schallreuter and Krůta in Schallreuter, Krůta and Marek, pp. 442, 444; fig. 2.3

Holotype: External mould of a female (?) RV, NMP L 28480 - Fig. 2.3.

Locus typicus: Ejpovice near Rokycany.

Stratum typicum: Skalka Quartzites, Dobrotivá Formation.

Diagnosis: See Schallreuter and Krůta in Schallreuter, Krůta and Marek 1966, pp. 442, 444.

Occurrence: Ejpovice.

Superfamily Hollinacea SWARTZ, 1936

Family Tvaerenellidae JAANUSSON, 1957

Subfamily Tvaerenellinae JAANUSSON, 1957

***Piretia* JAANUSSON, 1957**

***Piretia hurkaensis* SCHALLREUTER et KRŮTA, 1994**

Text-fig. 2

1994 *Piretia hurkaensis* sp. n. - Schallreuter and Krůta, pp. 559-560, fig. 1.1

1996 *Piretia hurkaensis* SCHALLREUTER et KRŮTA - Schallreuter and Krůta in Schallreuter, Krůta and Marek, p. 444; fig. 1.2

Holotype: External mould of a female right valve, Muzeum Rokycany (MR) 55777 - cast: Schallreuter and Krůta 1994: fig. 1.1.

Locus typicus: Hůrka near Plzenec.

Stratum typicum: 3 Dobrotivá Shale.

Diagnosis and remarks: See Schallreuter and Krůta 1994: 559-560.

Occurrence: Hůrka near Plzenec (Dobrotivá Shales) and Ejpovice (Skalka Quartzites), Bohemia.

***Euprimites* HESSLAND, 1949**

***Euprimites (Euprimites)* HESSLAND, 1949**

***Euprimites (Euprimites) slehoferi* sp. n.**

Pl. 1, figs 1-6

1996 *Euprimites* sp. - Schallreuter and Krůta in Schallreuter, Krůta and Marek, p. 444, fig. 1.3-4

Derivation of name: After the palaeontologist Pavel Slehofer who collected the best samples of the species.

Holotype: External cast of a female right valve, NMP L 31709 - Pl. 1, fig. 1.

Type locality: Praha - Lhotka.

Type stratum: Ordovician, Dobrotivá Formation.

Material: 17 steinkerns and 12 external moulds.

Diagnosis: Length at least up to 1.29 mm. S2 straight to dorsal margin or slightly curved anteriorly ventrally. Peripheral border of the velar flange quite equally curved.

Remarks: The slightly younger *E. locknensis* (THORSLUND, 1940) is very similar and the differences are not very marked. Maybe *E. slehoferi* is perhaps better considered only a subspecies of that species. The S2 in *E. slehoferi* seems to be generally slightly curved anteriorly (indistinct in the holotype) and the peripheral border of the velar flange is more curved (especially anteroventrally). In *E. locknensis* the border of the velar flange runs anteriorly perpendicular to the dorsal margin and ventrally parallel to the dorsal margin, then rather quickly changes direction anteroventrally (Schallreuter 1973, pl. 21, figs 5, 8, 10; 1984, fig. 2B).

Occurrence: Praha - Lhotka, Malé Přílepy Dobrotivá Shales), Ejpovice (Skalka Quartzites).

Family Ctenonotellidae SCHMIDT, 1941

Subfamily Tallinnellinae SCHALLREUTER, 1976

***Quadritia* SCHALLREUTER, 1966**

***Quadritia (Krutatia)* SCHALLREUTER, 1981**

***Quadritia (Krutatia) tromelini* VANNIER
et SCHALLREUTER, 1983**

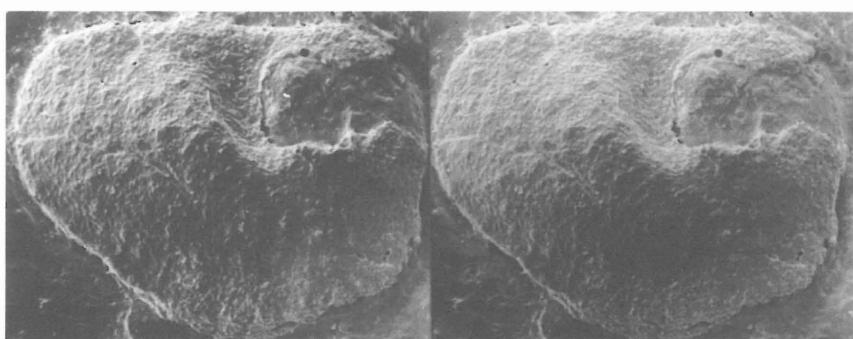
1976 *Kiesowia* sp. - Henry et al., pp. 330-331; pl. 8, figs 7-12

1981 *Quadritia (Krutatia)* sp. nov. - Schallreuter, p. 125

1983 *Quadritia (Krutatia) tromelini* nov. sp. - Vannier and Schallreuter, pp. 583-599; pl. 1, figs 1-8; text-figs 2-10

1984 *Quadritia (Krutatia) tromelini* VANNIER et SCHALLREUTER, - Vannier, pp. 59-61, pl. 9, figs 4-7 (non 4-9 as stated on p.59) (= Vannier and Schallreuter 1983, pl. 1, figs 1, 5, 2b, 4); figs 72, 73 (fig. 73 = Vannier and Schallreuter 1983, fig. 4)

1986b *Quadritia (Krutatia) tromelini* VANNIER et SCHALLREUTER, - Vannier, pp. 179-180; pl.9., figs 4-7 (non 4-9 as stated on p.179) (= Vannier 1984, pl. 9, figs 4-7); figs 42, 43 (= Vannier 1984, figs 72, 73)



Text-fig. 2. *Piretia hurkaensis* SCHALLREUTER et KRŮTA, 1994. Cast of the holotype (MR) 55 777, a right female valve, L 0.95 mm, Dobrotivá Formation, Hůrka near Plzenec.

- 1986a *Quadritia (Krutatia) tromelini* VANNIER et SCHALLREUTER, A – Kempf, p. 650
 1986 – dito. – Kempf, p. 610
 1987 – dito. – Kempf, p. 750
 1988 *Quadritia (Krutatia)* - Schallreuter and Krúta, p. 102
 1993 *Quadritia (Krutatia) tromelini* VANNIER et SCHALLREUTER, - Schallreuter and Krúta, p. 18
 1996 *Quadritia (Krutatia) tromelini* VANNIER et SCHALLREUTER, - Schallreuter and Krúta in Schallreuter, Krúta and Marek, p. 446, fig. 2.1-2.

Holotype: External mould of a right valve, Institut de Géologie de l'Université Rennes (IGR) 30127/A1 - Vannier and Schallreuter: pl. 1, fig. 1; Vannier 1984; 1986b, pl. 9, fig. 4.

Locus typicus: Morgat (steep coast near the sport harbour, peninsula of Crozon, Finistère), Armorican Massif.

Stratum typicum: Postolonnec Formation, Llandeilo.

Bohemian material: 11 steinkerns and 5 external moulds.

Diagnosis and remarks: See Schallreuter and Krúta in Schallreuter, Krúta and Marek 1966, p. 446.

Occurrence: Armorican Massif (France); Buçaco syncline (Portugal); Llandeilo. - Bohemia: Dobrotivá Formation - Ejpovice.

Family Tetradiellidae SWARTZ, 1936
Subfamily Glossomorphitinae HESSLAND, 1954
Tribe Glossomorphitini HESSLAND, 1954

***Jeanlouisiella* VANNIER, 1986**

***Jeanlouisiella caroli* SCHALLREUTER et KRÚTA, 1996**

- 1996 *Jeanlouisiella caroli* n. sp. - Schallreuter and Krúta in Schallreuter, Krúta and Marek, pp. 446, 448; figs 3.1-2

Holotype: External mould of the tecnomorph RV (NMP L 28482) - Schallreuter and Krúta in Schallreuter, Krúta, and Marek 1996, Abb. 3.1.

Locus typicus: Ejpovice near Rokycany (Bohemia).

Stratum typicum: Skalka Quartzites, Dobrotivá Formation, (Ordovician).

Diagnosis and remarks: see Schallreuter and Krúta in Schallreuter, Krúta, and Marek 1996: pp. 446, 448.

Occurrence: Known only from the type locality.

***Reentalina* VANNIER, 1986**

***Reentalina plzenecensis* (PŘIBYL, 1979)**
 Pl. 2, figs 4-7

- 1979 *Sigmobolbina (?) plzenecensis* sp. n. - Přibyl, pp. 58-59; table p. 112/113; text.fig. 1.11-12

- 1986a *Sigmobolbina? plzenecensis* PŘIBYL, 1979 A - Kempf, p. 694

- 1986b – dito. – Kempf: p. 455

- 1987 – dito. – Kempf: p. 685

- 1988 *Sigmobolbina ? plzenecensis* PŘIBYL, 1979 - Schallreuter and Krúta, p. 102

- 1996 *Reentalina plzenecensis* (PŘIBYL, 1979) - Schallreuter and Krúta in Schallreuter, Krúta and Marek, p. 448, fig. 3.3-5

Holotype: Steinkern of a RV, NMP L10049, Akz. Kat. P.II. 270/1922 - Přibyl 1979, text-fig. 1.11-12.

Locus typicus: Hůrka near Plzenec.

Stratum typicum: Ordovician, Dobrotivá Formation.

Diagnosis: See Schallreuter and Krúta in Schallreuter, Krúta and Marek 1966, p. 448.

Dimensions and proportions: Holotype: L 1.38 mm, H 0.70 mm, L:H 1.97 (according to fig. 1.11 of Přibyl: 1.76); the largest specimen of Přibyl (1979, p. 59): L 1.52 mm, H 0.83 mm, L:H 1.83; the largest specimen from Ejpovice (Schallreuter and Krúta in Schallreuter, Krúta and Marek 1996, p. 448): L 1.54 mm, H 0.84 mm (according to fig.3.4), L:H 1.81.

Remarks: Přibyl 1979 described from the Dobrotivá Formation two unisulcate species with a long, only slightly sigmoidal sulcus: *Sigmobolbina? plzenecensis* and *Winchellatia? bulbata*. One or both species may be conspecific with the present material. Přibyl published only a drawing of the holotype of *S.? plzenecensis* in lateral and ventral views (Přibyl 1979, text-figs 1.11-12), and a drawing and a photo of *W.? bulbata* (Přibyl 1979, text-figs 2.9, 12.4). The material of Přibyl could not be found in the museum nor in the collection left by Přibyl. Both species are based on steinkerns. Important features are therefore not visible. However, the holotype of *S.? plzenecensis* is similar in size, shape (L:H ratio), outline, and general appearance and therefore is presumably conspecific with the present material.

Tribe Hippolini SCHALLREUTER, 1983

***Spinohippula* VANNIER, KRÚTA et MAREK, 1987**

***Spinohippula esurialis* VANNIER,
 KRÚTA et MAREK, 1987**

- 1987 *Spinohippula esurialis* VANNIER, KRÚTA et MAREK gen. et sp. nov. - VANNIER, KRÚTA et MAREK, pp. 49-55, pls 50, 52, 54, 56

- 1988 *Spinohippula esurialis* VANNIER, KRÚTA et MAREK 1987 - Schallreuter and Krúta, p. 102

- 1996 *Spinohippula esurialis* VANNIER, KRÚTA et MAREK - Schallreuter and Krúta in Schallreuter, Krúta and Marek, p. 450, fig. 2.4

- 1995a *Spinohippula esurialis* VANNIER, KRÚTA et MAREK - 1987A - Kempf, p. 217

- 1995b – dito. – Kempf, p. 71

- 1995c – dito. – Kempf, p. 125

Holotype: External mould of LV, NMP L 26073 - Vannier, Krúta and Marek 1987, pl. 50, 52.

Locus typicus: Ejpovice near Rokycany.

Stratum typicum: Skalka Quartzites (Dobrotivá Formation, Ordovician).

Occurrence: Known only from the type locality.

Suborder Binodicopa SCHALLREUTER, 1972
Superfamily Drepanellacea ULRICH et BASSLER, 1923

Family Bolliidae BOUČEK, 1936

***Ulrichia* JONES, 1890**

***Ulrichia cf. mayensis* VANNIER, 1986**

1996 *Ulrichia cf. mayensis* VANNIER, 1986 - Schallreuter and Krúta in Schallreuter, Krúta and Marek, p. 450, fig. 4.1

Material: 1 steinkern of a LV (NMP L 28487), figured specimen. Dimensions: No. NMP L 28487 L 0.56 mm, H 0.37 mm, L:H 1.51.

Remarks: See Schallreuter and Krúta in Schallreuter, Krúta, and Marek 1966, p. 450.

Occurrence: Ejpovice: Skalka Quartzites, Dobrotivá Formation. (*U. mayensis*: synclinal de May-sur-Orne, Normandie: Formation de May, Llandeilo).

Klimphores SCHALLREUTER, 1966

Klimphores sp. n. A aff. *vogelweidei* VANNIER, 1986

1996 *Klimphores* sp. n. A aff. *vogelweidei* VANNIER, 1986 - Schallreuter and Krúta in Schallreuter, Krúta and Marek, p. 450, fig. 4:5

Material: 1 corroded steinkern of a LV (?) still partly embedded in sediment (NMP L 28614): fig. 4:5.

Remarks: The specimen is distinguished from the other accompanying binodicopes with distinct nodes by its two elongate nodes which diverge in the ventral direction - contrary to the situation in *Copelandia* VANNIER, 1986. It resembles *K. vogelweidei* from slightly older beds in western Europe but differs by nodes which are equally long [comp. fig. 4.5 and Vannier 1986a, pl. 1 (16), figs 1a, 2a].

Family Circulinidae NECKAJA, 1966

Vannieria SCHALLREUTER, 1999

Synonyms. *Rogerella* VANNIER, 1984, *Copelandia* VANNIER, 1986

Vannieria confluentis (SCHALLREUTER et KRÚTA, 1996)

1996 *Copelandia confluentis* n. sp. - Schallreuter and Krúta in Schallreuter, Krúta and Marek, p. 452, fig. 4. 2-4

Holotype: Steinkern of a RV, partly covered by sediment (NMP L 28488): Fig. 4.2.

Locus typicus: Ejpovice near Rokycany.

Stratum typicum: Skalka Quartzites, Dobrotivá Formation, Ordovician.

Diagnosis and remarks: See Schallreuter and Krúta in Schallreuter, Krúta, and Marek 1966, p. 452.

Occurrence: Known only from the type locality.

Bidion SCHALLREUTER et KRÚTA, 2001

Bidion sp. n. Pl. 2, fig. 3

Material: One RV. NMP L 31720. It is hard to determine whether it is an internal mould, or the external side of a valve.

Dimensions: L 0.68 mm.

Remarks: The single specimen is similar to that of the type-species though this is much larger (holotype: 1.66 mm). The

outline of that species is more asymmetrical: the posterior cardinal corner is distinctly larger than the anterior cardinal corner. The straight hinge-line is relatively shorter. There are also differences in the position of the broadest part of the valve and the convexity: *Bidion* sp. is broadest behind mid-height, the type-species is broadest in the centrodorsal region or a little before mid-height and is more strongly convex in the anterior half than in the posterior. *Bidion* sp. is nearly equally convex longitudinally.

Parapyxion JAANUSSON, 1957

Parapyxion ejpovicensis SCHALLREUTER et KRÚTA, 1996

?1996 *Parapyxion prunellus* (BARR.) - Havlíček and Vaněk, p. 53

?1988 *Parapyxionella prunella* (BARR.) - Schallreuter and Krúta, p. 102

1996 *Parapyxion ejpovicensis* n. sp. - Schallreuter and Krúta in Schallreuter, Krúta and Marek, pp. 452-453, fig. 5.1-2

Holotype: External mould of RV, NMP L 28824 - Schallreuter and Krúta in Schallreuter, Krúta, and Marek 1996, Fig. 5.1.

Type locality: Ejpovice near Rokycany.

Stratum typicum: Ordovician, Dobrotivá Formation, Skalka Quartzites.

Dimensions (paratype): L 0.93 mm, H 0.71 mm.

Diagnosis and remarks: See Schallreuter and Krúta in Schallreuter, Krúta and Marek 1996, pp. 452-453.

Occurrence: Known only from the type locality.

Skalka SCHALLREUTER et KRÚTA, 1996

Skalka biplex SCHALLREUTER et KRÚTA, 1996

1996 *Skalka biplex* n. sp. - Schallreuter and Krúta in Schallreuter, Krúta and Marek, p. 453, fig. 5.3-4

Holotype: Internal mould of RV, NMP L 28616 - Schallreuter and Krúta in Schallreuter, Krúta, and Marek 1996, Fig. 5.3.

Type locality: Ejpovice near Rokycany.

Stratum typicum: Ordovician, Dobrotivá Formation, Skalka Quartzites.

Diagnosis and remarks: See Schallreuter and Krúta in Schallreuter, Krúta and Marek 1996, p. 453.

Dimensions and proportions: No. NMP L 28616 (holotype): L 1.61 mm, H 0.99 mm, L:H 1.63; paratype No. NMP L 28617: L 1.10 mm, H 0.71 mm, L:H 1.55.

Occurrence: Ejpovice near Rokycany.

Family inc.

Pinnatulites HESSLAND, 1949

Pinnatulites trapezoides sp. n. Pl. 1, fig. 8

Derivation of name: After the characteristic trapezoidal outline.

Holotype: External cast of a right valve, NMP L 31716 - Pl. 1, fig. 8.

Type locality: Malé Přílepy.

Type stratum: Ordovician, Dobrotivá Formation.

Diagnosis: Length up to 1.36 mm. Centroventral margin paral-

lel to the straight dorsal margin. Lateroventral bend anteroventrally distinct, posteriorly almost absent. Puncta rounded.

Remarks: The type-species, *P. procerus* (KUMMEROW, 1924) [= *P. reticulatus* (STEUSLOFF, 1895)] is larger (- 1.98 mm), possesses a more rounded outline ventrally, a more distinct, more or less spine-like lateroventral bend posteriorly and elongate puncta (Schallreuter 1993, pl. 37B, fig. 1; pl. 45B, fig. 1; pl. 47A, figs 3, 4; pl. 47B, figs 2-4; pl. 48B, fig. 3).

Occurrence: Malé Přílepy.

Suborder Eridostraca ADAMCZAK, 1961

Family Conchoprimitiidae HENNINGSMOEN, 1953

Conchoprimitia ÖPIK, 1935

Synonyms: *Conchoides* HESSLAND, 1949, *Conchoprimites* HESSLAND, 1949.

Conchoprimitia transiens (BARRANDE, 1872)

Pl. 2, fig. 8; Text-fig. 3

1872 *Primitia transiens* BARR. - Barrande, pp. 542, 553, 589; pl. 27, fig. 13a, b

1934 *Primitia transiens* BARR., *Primitia ? transiens* BARR. - Bassler and Kellett, pp. 54, 458

1954 *Primitia transiens* BARR. - Hughes, p. 43

1966 *Parapyxion (?) transiens* (BARR.) - Havlíček and Vaněk, p. 53

1979 *Anisochilina transiens* (BARRANDE, 1872) - Přibyl, pp. 55-57, 59, pl. 8, figs 1-3; text-fig. 1.1-3, table (between p. 112/113)

1986a *Anisochilina transiens* (BARRANDE, 1872A) PŘIBYL,

1979 A; *Parapyxion ? transiens* (BARRANDE, 1872a) HAVLÍČEK et VANEK, 1966 A; *Primitia transiens* BARRANDE, 1872 A; *Primitia ?* (BARRANDE, 1872A) Bassler and Kell, 1934 A - Kempf, pp. 54, 579, 618

1986b dito - Kempf, p. 600

1987 dito - Kempf, pp. 684, 468, 63, 183

1988 *Anisochilina transiens* (BARRANDE, 1872) - Schallreuter and Krúta, p. 102

1996 *Anisochilina transiens* (BARRANDE, 1872) - Schallreuter, p. 65

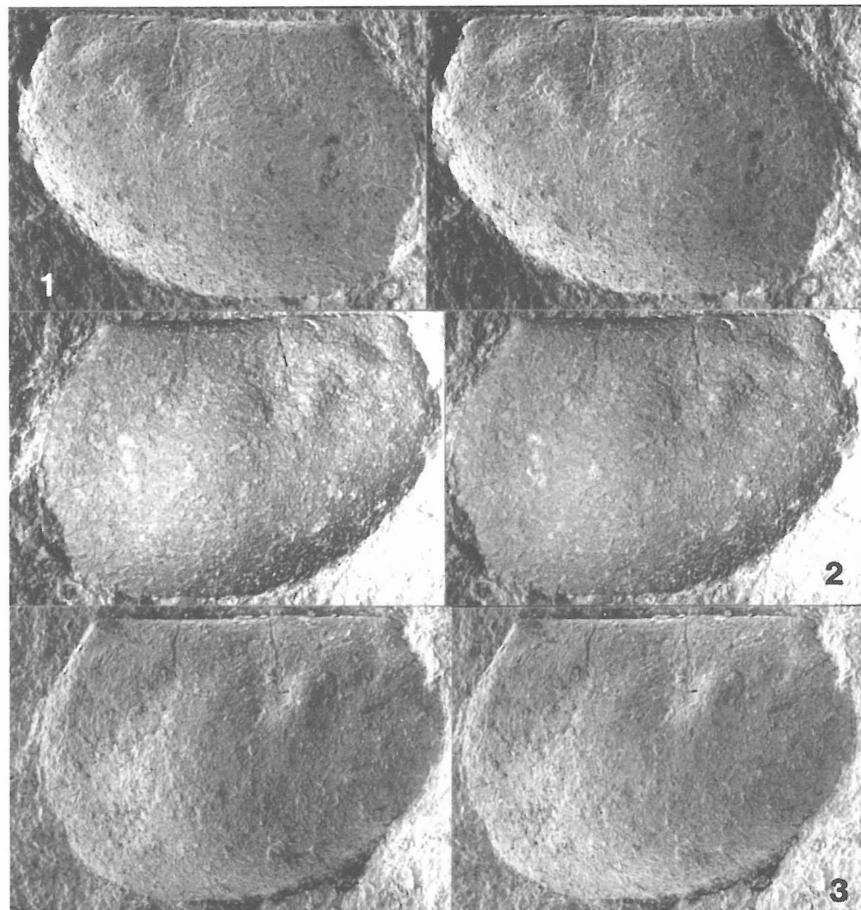
Lectotype: Carapace with valves in juxtaposition, NMPL 8845 - Barrande 1872, pl. 27, figs 13a, b; Přibyl 1979, text-fig. 8.1-2 (specimen to the left).

Type locality: Zaječov (= Svatá Dobrotivá) near Komárov.

Type stratum: Ordovician, Dobrotivá Formation.

Diagnosis: Length up to 4.18 mm. Shape (gestalt) rather variable (L:H 1.40 – 1.90) possibly due to sexual dimorphism. Outline strongly postplete. Surface apparently smooth without any punctuation. Retention furrow and blood canals not observed.

Remarks: The figured specimen (NMPL 31725) has a very high shape (L:H 1.41). The shape is apparently rather variable in this species: Přibyl (1979, p. 56) mentions a ratio of 1.52 - 1.90 (mean 1.67). He explained the high variation in shape as possibly a sexual



Text-fig. 3. *Conchoprimitia transiens* (BARRANDE, 1872), RV, external mould (1-2) (NMPL 31725) and steinkern (3) (NMPL 31727); fig. 2: photographic cast of the external mould, L 3.85 mm. Dobrotivá formation, Palcová rokle.

dimorphism: the higher variants he considers as heteromorphic. However because this kind of sexual dimorphism is unknown in the genus, measurements of extensive material are necessary to prove the bimodal distribution or a strong variability.

Sexual dimorphism of a different kind is occasionally mentioned in *Conchoprimitia* ÖPIK, 1935: In *C. micropunctata* (HESSLAND, 1949), the type-species of *Conchoides* HESSLAND, 1949, the types interpreted as different sexes are very similar in size and outline and both are minutely punctate, but one of them has, additionally, somewhat larger puncta scattered in the anterior part. It is also somewhat more arched anteriorly. Though Hessland (1949, p. 138) wrote that it is impossible to decide whether this type is male or female he thought that it was the male. - In *C. meganotifera* HESSLAND, 1949 [= *C. glauconitica* (KUMMEROW, 1924)] Hessland (1949, p. 155) observed slight dissimilarities with regard to the sloping of the dorsal region, the gibbosity of the carapace, and the distinctness and extension of the surface pattern. The different gibbosity in the middle of the carapace may be due to the different size of the sexual organs, but whether the males or the females require the most space in this respect is, according to Hessland, unknown. Since the adult specimens of this species are considerably higher, and because the other type is more arched anteriorly, possibly owing to larger locomotion organs, he considered that type to be the female (Hessland, 1949, p. 162). - Also Sarv (1966, p. 15; 1971, p. 12) observed in the adults of *Conchoprimitia sulcata* (KRAUSE, 1889) (= *Primitia tolli* BONNEMA, 1909) that some shells have a wider mediodorsal part, especially behind the median groove (op.cit., pl. 1, figs 1-4).

The specimens of *C. socialis* (BRÖGGER, 1882) and *C. socialis vulgaris* HENNINGSMOEN, 1954 from the Lower Ordovician reach about equal sizes (4.55 and 4.45 mm, resp.) and show a similar node and sulcus, but are more amplete in outline (Henningsmoen 1954, pl. 1, figs 8, 9, pl. 2).

Přibyl placed *C. transiens* in the leperditiocepe genus *Anisochilina* TEICHERT, 1937. The type-species, *A. punctulifera* TEICHERT, 1937, is of similar size (5.3 mm), but is distinguished by the characteristic ventral triangular platform of the contact margin (Teichert 1937, pl. 22, fig. 11).

Occurrence. Zaječov.

Order Podocopa SARS, 1866

Suborder Metacopa SYLVESTER-BRADLEY in BENSON et al., 1961

Superfamily Bairdiocypridacea SHAVER in BENSON et al., 1961

Family Bairdiocyprididae SHAVER in BENSON et al., 1961

Medianella NECKAJA, 1966

Medianella ? sp.

1996 *Medianella* ? sp. - Schallreuter and Krůta in Schallreuter, Krůta and Marek, pp. 453-454, fig. 5.5

Dimensions: No. NMP L 28618: L 1.32 mm, H 0.63 mm.

Remarks: Schallreuter and Krůta in Schallreuter, Krůta, and Marek 1996, pp. 453-454.

Occurrence: Ejpovice.

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- ## Explanations to the plates
- ### PLATE 1
- Euprimites slehoferi* sp. n. Casts of external moulds.
1. holotype, female RV (NMP L 31709), lateral view, Praha - Lhotka, L 1.29 mm.
 2. tecnomorphic RV, lateral view (NMP L 31710), Malé Přílepy, L 1.29 mm.
 3. paratype, tecnomorphic carapace, dorsal view (NMP L 31711), Praha - Lhotka, L 1.19 mm.
 4. paratype, female carapace, anterior view (NMP L 31712), Praha - Lhotka, H 0.61 mm.
 5. paratype, female carapace, ventral view (NMP L 31713), Praha - Lhotka, L 1.12 mm.
 6. juvenile LV, lateral view, Malé Přílepy (NMP L 31714), L 0.58 mm.
- Levisulculus smolai* SCHALLREUTER et KRÚTA, 1991
7. steinkern of female ? RV, lateral view (NMP L 31715), Praha - Libeň, Bulovka, L 1.22 mm.
- Pinnatulites trapezoides* n. sp.
8. holotype, RV (?), cast of an external mould (NMP L 31716), Malé Přílepy, L 1.36 mm.
- ### PLATE 2
- Piretella pontis* SCHALLREUTER et KRÚTA, 1987
1. tecnomorphic RV, cast of external mould (NMP L 31717), Malé Přílepy, L 0.95 mm.
- Laccochilina* sp.
2. steinkern of tecnomorphic LV (NMP L 31718), Malé Přílepy, L 1.0 mm.
- Bidion* sp.n.
3. steinkern of RV (NMP L 31720), Praha - Libeň, Bulovka, L 0.68 mm.
- Reuentalina plzenecensis* (PŘIBYL, 1979):
4. steinkern of tecnomorphic LV (NMP L 31719), Praha - Libeň, Bulovka, L 1.58 mm.
 5. tecnomorphic RV (NMP L 31721), cast of external mould, Sutice - Sedlec, L 2.55 mm.
 6. steinkern of tecnomorphic RV (NMP L 31722), Sutice - Sedlec, L 2.24 mm.
 7. steinkern of tecnomorphic RV (NMP L 31724), Hůrka near Plzenec, L 1.46 mm.
- Conchoprimitia transiens* (BARRANDE, 1872)
8. RV and LV (NMPL 31723), Zaječov, LLV 3.77 mm, RV 3.7 mm.
- All figures lateral views.

