

Rare Devonian terebratulids (Brachiopoda) from the Prague Basin (Bohemia)

(2 pls.)

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Abstract. Two species (one new) of *Mutationella* are described from the Lochkov and Praha Formations. *Stringocephalus bohemicus* Barrande, 1879 is redescribed and assigned to *Kaplex* (Eifelian age, Acanthopyge Limestone).

Abstrakt. Z lochkovského a pražského souvrství jsou popsány dva druhy rodu *Mutationella* (z toho jeden nový). *Stringocephalus bohemicus* Barrande, 1879 eifelského stáří (acanthopygové vápence) je přiřazen k rodu *Kaplex*.

Introduction

Despite single species of *Cryptonella*, terebratulids are rare elements in benthic brachiopod assemblages in the Devonian of the Prague Basin. Rare finds of mutationellids come from the Lochkov and Praha Formations, but available material shows only external features. Poorly known species *Stringocephalus bohemicus* Barrande, 1879 is assigned to *Kaplex* on the basis of internal morphology (absence of septa and stalk-like cardinal process) and its Eifelin age.

The material is deposited in the National Museum, Prague (NM) and in the Geological Survey, Prague (collection of V. Havlíček – VH).

Mutationellidae Cloud, 1942

Mutationellinae Cloud, 1942

Mutationella Kozłowski, 1929

Mutationella plicata sp. n.

Pl. I, fig. 1

Holotype: Shell figured on pl. I as fig. 1; VH 4338.

Type horizon and locality: Lochkovian, Lochkov Formation, Kotýs Limestone; Skalice near Měňany.

Material: One shell, two fragments.

Exterior: Shell small, equally biconvex, widest in mid-length. Cardinal margin subterebratulid, anterior commissure uniplicate, crenulate; lateral margin straight. Pedicle valve 95 % as long as wide, moderately convex in both profiles with flat median sector passing anteriorly into shallow sulcus. Beak short, gently incurved dorsally; beak angle 105°. Palintrope very low; foramen and deltidial plates not preserved.

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Brachial valve 85 % as long as wide and 92 % as long as pedicle valve, moderately convex in both profiles. Beak short, inconspicuous, beak angle 140°.

Ornamentation consists of simple, slightly anteriorly widening costellae with rounded tops. Interspaces deep, U-shaped, as wide as costellae. Between 7–8 mm from the apex, there are 6–7 costellae per 3 mm; total number of costellae on single shell available is 36. Growth lines very fine, preserved only in anterior part of the shell; growth lamellae absent.

Dimensions (in mm):

specimen	pvL	pvW	bvL	bvW	H	pvL/pvW	bvL/bvW
VH 4338	8.4	9.0	7.7	9.0	5.4	0.93	0.85

Comparison: *M. plicata* is distinct from *M. podolica* (Siemiradzki) and other species of *Mutationella* (Boucot et al. 1963, Binnekamp 1965) by uniplicate commissure; moreover *M. podolica* differs by less convex brachial valve and more elongate outline.

Occurrence: Skalice near Měňany, Karlik.

Mutationella aff. *guerangeri* (Verneuil, 1850)

Pl. I, fig. 2

Material: One shell.

Exterior: Shell 18 mm wide, ventri-biconvex, with maximum of width at mid-length. Outline of the shell nearly circular with straight middle part of anterior margin. Lateral and anterior commissures straight, crenulate. Cardinal margin subterebatulid. Pedicle valve moderately and evenly convex in both profiles, deepest in mid-length, 94 % as wide as long. Beak short, slightly incurved over brachial valve, perforated by a large foramen, submesothyrudid in position; beak angle 105°. Palintrope low, equal to half of valve width, bounded by indistinct beak ridges. Delthyrium wide, with sides enclosing 75°, closed by a pair of deeply notched, conjunct deltidial plates; median suture short and prominent. Dorsal valve 90 % as long as pedicle one and 105 % as wide as long. Beak inconspicuous, beak angle 125°. Brachial valve gently convex in lateral view; in transverse profile the valve is gently convex with flattened median sector.

Ornamentation consists of strong angular ribs moderately widening anteriorly but decreasing in size toward flanks. Interspaces V-shaped, deep, with rounded bottoms, as wide as costae. Growth lines fine, preserved on the bottoms of interspaces; growth lamellae prominent, irregularly spaced. On the single shell available, there are 25 costae.

Comparison: Specimens from Spain, assigned to *M. guerangeri* by Binnekamp (1965) have two ribs in median sector of pedicle valve that are stronger than other ribs on the same shells; Spanish specimens are exceptionally larger than 14 mm in the width. The Bohemian specimen is close to *M. guerangeri*, but possesses all ribs comparable in size and one available specimen is larger. The specimen from St. Jean, Mayenne, France, figured by Cloud (1942) on pl. 20 as figs. 26–28 and labelled by him as *Mutationella*? cf. "*Trigeria*" *guerangeri* (Verneuil), sp. B, is very similar to the Bohemian specimen; this differs only by more incurved beak and greater number of costae.

Occurrence: Pragian, Praha Formation, Koněprusy Limestone; Císařský quarry near Koněprusy.

Stringocephalidae King, 1850

Bornhardtinae Cloud, 1942

Kaplex Ficner - Havlíček, 1975

Kaplex bohemicus (Barrande, 1879)

Pl. II, figs. 1–3

1879 *Stringocephalus bohemicus* Barr.; Barrande, pl. 83, fig. IV.

1942 *Stringocephalus bohemicus* Barrande, 1879; Cloud, p. 107.

Holotype (by monotypy): Shell figured by Barrande in 1879; re-figured herein on pl. II as fig. 3; NM L 20467.

Type horizon and locality: Eifelian, Acanthopyge Limestone; Koněprusy.

Material: One complete and two incomplete shells, three pedicle and one brachial valves.

Exterior: Shell large, thick-walled, subequally biconvex; the largest specimen reaches 52 mm in the width. Anterior and lateral commissures straight. Pedicle valve as long as wide, moderately convex in transverse profile; in lateral profile the convexity is highest near umbo and gently decreases toward the front margin. Ventral beak strong, sharp, strongly incurved over brachial valve. Ventral interarea high, one-third as wide as valve width, strongly concave in both lateral and transverse profiles. Delthyrium large with sides enclosing 60°, closed by large, thick deltidial plates with medianly prominent suture. Foramen hypothyriddid, elongate. Beak angle 80°. Brachial valve evenly and gently convex in both profiles, with strongly incurved beak, 85–90 % as long as pedicle one and 85 % as long as wide, nearly circular in outline. Beak angle 120°.

Ornamentation: Shell surface smooth except for fine growth lines; growth lamellae scarce but strong.

Interior: Teeth strong, large, buttressed by deposits of secondary shell, dental lamellae absent. In young and medium sized specimens, the low, wide median ridge extends over half length of pedicle valve; anterior end of ridge bifurcate. Ventral muscle field small, flabellate, gently impressed, not extending beyond ends of the teeth. Brachial valve interior devoid of septum and stalk-like cardinal process; other internal structures not available to study.

Comparison: The dorsal interior of *Stringocephalus bohemicus* is poorly known, but owing to the shape of ventral median ridge, absence of septum and stalk-like cardinal process in dorsal interior, and the Eifelian age of the species, *S. bohemicus* is closer to *Kaplex* than *Bornhardiina*. *Kaplex obessisimus* Ficner - Havlíček, 1975 is close to *K. bohemicus*, but differs by more elongate outline of the shell, larger size and stronger median septum on ventral valve.

Occurrence: Eifelian, Choteč Formation; Holyně; the same formation, Acanthopyge Limestone; Koněprusy.

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References

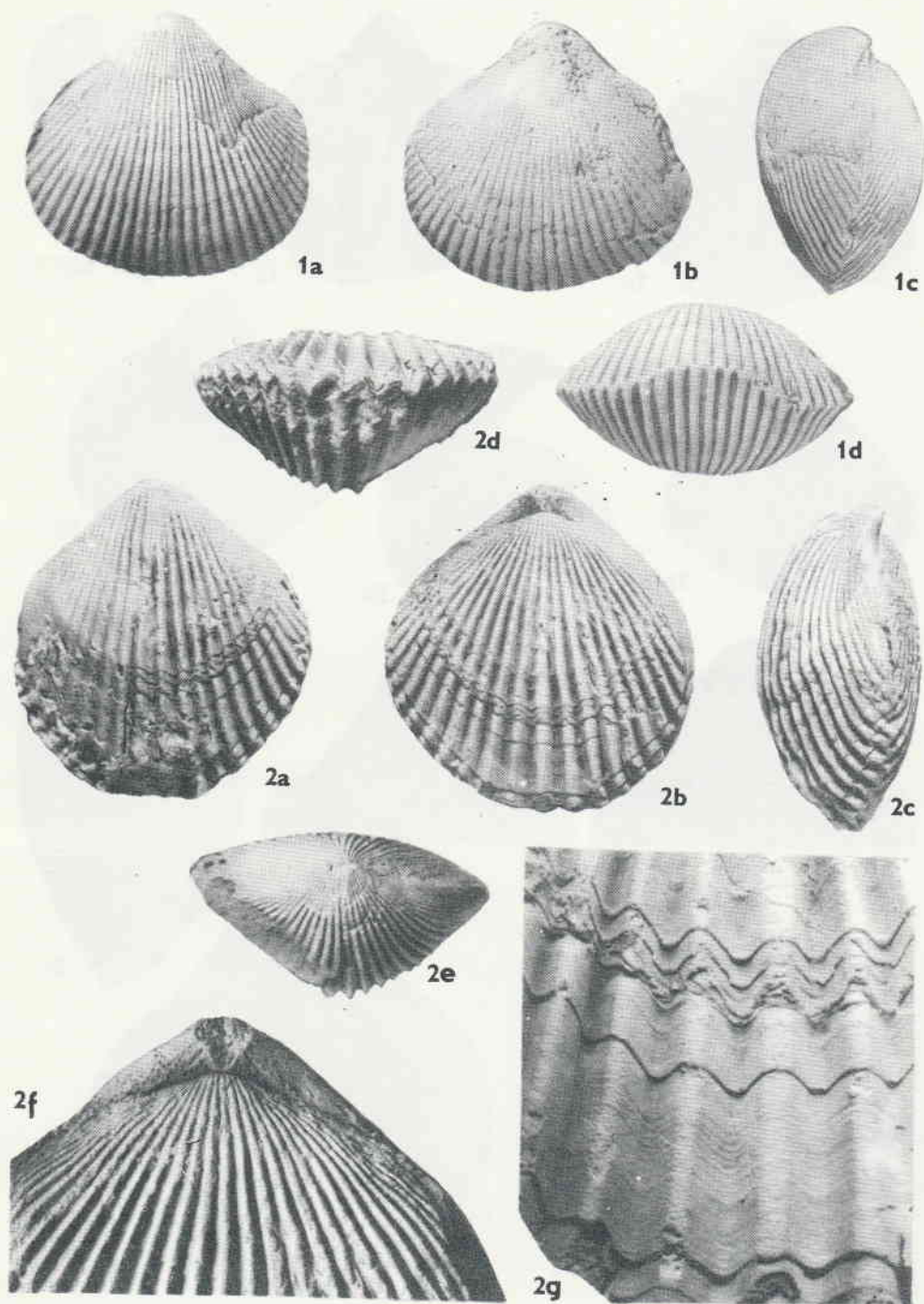
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Explanation of plates

Photos by M. Mergl

Plate I

1 - *Mutationella plicata* sp. n., ventral, dorsal, lateral and anterior views; × 4.5; Lochkov Formation Skalice near Měňany, VH 4338. 2 - *Mutationella* aff. *guerangeri* (Verneuil), ventral, dorsal, lateral, anterior and posterior views (a – e, × 2.5), palintrope and delthyrium (f, × 4.5), and detail of ornamentation (g, × 8); Koněprusy Limestone, Praha Formation, Cisařský quarry near Koněprusy, VH 4194.



For explanation see p. 231

