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On Carnian Brachiopods of the Gaisberg near Kirchberg in Tirol (Northern Calcareous Alps, Tyrol)

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7 Text-Figures and 1 Plate

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Tirol
Nördliche Kalkalpen
Karn
Brachiopoden
Taxonomie

Contents

Zur karnischen Brachiopodenfauna des Gaisbergs bei Kirchberg i.T. (Nördliche Kalkalpen, Tirol)

Zusammenfassung

12 Brachiopoden-Taxa werden aus dem Karn des Gaisbergs bei Kirchberg i.T. beschrieben (inklusive eine neue Art *Rhaetina tirolensis* sp.n.)

Abstract

The Carnian limestone from Gaisberg near Kirchberg i.T.has yielded 12 brachiopod taxa (incl.1 new species *Rhaetina tirolensis* sp. n.).

1. Introduction

Brachiopods are practically the only macrofossils in the limestones occurring on the E slopes of Gaisberg (1770 m), SW of Kirchberg i.T. The fossiliferous locality is situated NW of Bärstättalm (Text-Fig.1) in an altitude of 1520 m, where the tourist path towards Gaisberg top is crossing an about 5 m-thick carbonate interval. Dark grey micritic limestones there yielded brachiopods mainly in the lowermost 1.0–1.5 m-thick horizon, the uppermost more marly parts seem to be devoid of any macrofossils. The locality was discovered in 1997 by H. LOBITZER. My own collections were made there in 1997 and 1998, and the results of the brachiopod study are presented in this report.

The brachiopod fauna is on average small sized and consists mostly of terebratulid and athyridid types, 1 rhynchonellid specimen was found only. Many specimens are represented by single valves, or they are incomplete, too damaged for specific determination. The scarcity of suitable material made the elucidation of internal characters difficult or even impossible.

The following brachiopod species have been ascertained: *"Rhynchonella"* aff. *carinthiaca* BITTNER, *Balatonospira lipoldi* (BITTNER), *Balatonospira* aff. *lipoldi* (BITTNER), *Dioristella indistincta* (BEYRICH), *Euractinella trisulcata* (BITTNER), *Tetractinella* aff. *quadricostata* (BRAUN in WISMANN & MÜNSTER), *Adygella bittneri* (WÖHRMANN), ? *Cruratula* sp.,

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Rhaetina tirolensis sp. n., *Rhaetina* sp., *Aulacothyris zirlensis* (WÖHRMANN). In the last century, some of the mentioned species were described from the North Alpine *"Carditaschichten"* of the Carnian age, and the same age is presupposed for Gaisberg brachiopod fauna. It shows considerable resemblances to that of the same age from Carnia (*"Carditaschichten von Kärnten"* sensu BITTNER, 1890 = LIPOLD's *"Bleiberger Schichten"*). Further comparisons of brachiopod faunas from both areas are for the present made difficult owing to missing modern revision of the brachiopod assemblages of the Carnian age, together with their stratigraphic evaluations.

2. Systematic descriptions

Order: **Strophomenida ÖPIK, 1934**
Superfamily: **Thecospiracea BITTNER, I890**
Family: **Thecospiridae BITTNER, 1890**
Genus: ***Thecospira* ZUGMAYER, 1880**

Thecospira guembeli (PICHLER, 1857)

(Pl. 1, Fig. 8)

1857 *Crania Gümbeli* – PICHLER, p. 693, Text-Fig.1.
1988 *Thecospira guembeli* (PICHLER) – SIBLÍK, p. 28 (cum syn.).

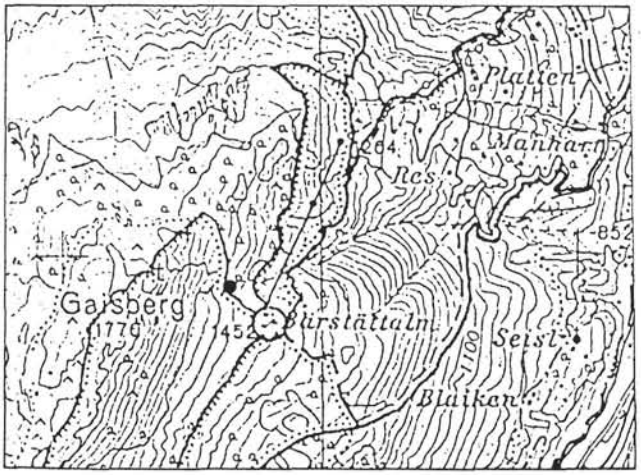
Material: Two specimens with dimensions ?5.5 x 5.9 x 3.5 mm (figured) and 5.2 x 5.0 x 1.9 mm.

Remarks: The detailed description of the species was given already by WÖHRMANN (1889, p. 198, Pl. 5, Figs. 28–33). Our specimens resemble well WÖHRMANN's material and differ from it in a weaker concentric ornamentation only. In this respect, the specimens from Gaisberg correspond better to BITTNER's specimens from Lavatsch (BITTNER, 1890). WÖHRMANN's material is deposited in the Bayerische Staatssammlung für Paläontologie und hist. Geologie in Munich (AS XVI 32 - 37 = WÖHRMANN,1889, Pl. 5, Figs. 28–31,?33, 33a), BITTNER's specimens in the Institut für Geologie und Paläontologie of the Innsbruck University (1890, Pl. 38,Fig. 25 – no. 3802 – B 23) and in the Geologische Bundesanstalt in Vienna (1890, Pl. 38, Fig. 26). *Thecospira guembeli* shows a considerable resemblance to *Thecospira tenuistriata* BITTNER, 1890 from the *"Carditа-Schichten"* of Carnia but differs from it in the absence of radial ornamentation. However, a very faint radial striation was later ascertained in *Thecospira guembeli,* too (see BITTNER, 1890, p.143 at bottom). The relation between the two species has not been cleared up since, due to scarce material. The punctate *"tenuistriata"* was incorrectly included by DAGYS (1974, p.75) in his new genus *Thecospiropsis* which is characterized by non-punctate shells.

Age: Carnian (*"Carditaschichten"*, Tyrol).

Text–Fig. 2. Tourist path crossing the lowermost carbonate horizon at the fossiliferous locality.

Order: **Rhynchonellida KUHN, 1949**
Superfamily: **Rhynchonellacea GRAY, 1848**
Family: **Rhynchonellidae GRAY, 1848**



Text–Fig. 1. Situation map of the locality Gaisberg SW of Kirchberg i. T. (marked by a dot).

Text–Fig. 3. Middle part of the locality with scarce brachiopods.

Genus: ***Rhynchonella*** **Fischer, 1809, s. l.**

? "Rhynchonella" aff. carinthiaca **Bittner, 1890**
(Pl. 1, Fig. 3)

aff. 1890 *Rhynchonella carinthiaca* nov. spec. – Bittner, p. 134, Pl. 4, Figs. 1–2.

Material: One juvenile specimen with dimensions 2.1 x 1.9 x 1.2 mm.

Description and remarks: Subtrigonal outline, equibiconvex profile, 8 rounded ribs anteriorly on brachial valve (3 of them confined to the low fold), shallow median sulcation posteriorly on brachial valve, narrow suberect pedicle umbo. The general appearance of the specimen – subtrigonal outline and semicostate character – suggests that it may be related to the Carnian *"Rhynchonella" carinthiaca* described from Oberseeland (Zgornje Jezersko) in Slovenia. The profile of the latter species is dorsibiconvex, however. Further comparisons are for the present made difficult owing to the tiny dimensions of the specimen studied.

Order: **Spiriferinida Ivanova, 1972**
Suborder: **Spiriferinidina Ivanova, 1972**
Superfamily: **Pennospiriferinoidea Dagys, 1972**
Family: **Balatonospiridae Dagys, 1974**
Genus: ***Balatonospira*** **Dagys, 1974**

Balatonospira lipoldi **(Bittner, 1890)**
(Pl. I, Fig. 5)

1890 *Spiriferina Lipoldi* nov. spec. – Bittner, p. 139, Pl. 28, Figs. 20–21.
1972 *Balatonospira lipoldi* (Bittner) – Detre, Pl. I, Fig. 2.
1974 *Balatonospira lipoldi* – Dagys, p. 137, Text-Fig. 92, Pl. 39, Fig. 1.
1988 *Balatonospira lipoldi* (Bittner) – Siblík, p. 62 (cum syn.).

Material: 1 pedicle and 1 brachial valves, and 1 complete specimen with dimensions of 5.1 x 5.7 x 3.8 mm.

Remarks: Both our specimens correspond well to the original Bittner's description which was based on the material from the "*Cardita*- Schichten" of Carnia (Lipold's "Bleiberger Schichten"). The type specimens are lost, however. In contrast to the opinion of Wöhrmann (1894), Bittner believed that his new species could be well distinguished from the North Alpine *Spiriferina gregaria* Wöhrmann, 1889 by its smaller dimensions, greater convexity of valves, strongly incurved pedicle umbos, and stronger, blunt ribs. According to Wöhrmann (1894) *"lipoldi"* is a small variety of *"gregaria"*. Dagys (1974) established a new genus *Balatonospira* with *Spiriferina lipoldi* as a type species. Dental lamellae were not seen in his sections and were not ascertained formerly by Bittner (1890, transverse section on p.139), either. On the other hand, clearly developed dental lamellae were shown by Bittner (1890, p. 146) in *Spiriferina gregaria* which is here following Pearson (1977) attributed to *Sinucosta* Dagys, 1963. Jing & Feng (1977, p. 49, Pl. 2, Figs. 16–21) erroneously connected *"lipoldi"* with *Pseudospiriferina* Yang & Xu, 1966 (as *Pseudospiriferina leopoldi* Bittner -sic!). However, this genus has strong dental lamellae. No dental lamellae were recently seen in the pedicle valve of a topotype specimen of *Balatonospira lipoldi* by Sandy & Stanley jr. (1993, p. 453). They are externally not visible in the specimens from Gaisberg, either. *Balatonospira ?* cf. *Balatonospira lipoldi* (Bittner) described by Sandy & Stanley jr. (1993, p. 452, Text-Figs. 5–7, Pl. 1, Figs. 21–30) from the Early Norian of Nevada reaches greater dimensions than Bittner's *"lipoldi"*, and has dental lamellae. According to mentioned authors, the attribution of Nevadan material to *Spiriferina* would be more appropriate.

Age: Carnian ("Bleiberger Schichten", Carnia).

Balatonospira **aff.** ***lipoldi*** **(Bittner, 1890)**
(Pl. 1, Fig. 4)

Material: One brachial valve measuring 3.6 x 6.2 mm.

Diagnosis and remarks: Small brachial valve of broadly subtrigonal, alate outline. Maximum width at straight hinge line. Median rib forming a low fold bifurcates anteriorly. 5 relatively strong, rounded ribs developed on lateral slopes.

The specimen differs from *Balatonospira lipoldi* in alate outline.Further comparisons are made difficult for the present owing to the scarcity of material.

Order: **Athyridida Boucot, Johnson & Staton, 1964**
Superfamily: **Athyridacea Davidson, 1881**
Family: **Diplospirellidae Schuchert, 1894**
Genus: ***Dioristella*** **Bittner, 1890**

Dioristella indistincta **(Beyrich, 1863)**
(Pl. 1, Figs. 11–12)

1863 *Terebratula indistincta* – Beyrich, p. 34.
1988 *Dioristella indistincta* (Beyrich) – Siblík, p. 77 (cum syn.).
1998 *Dioristella indistincta* (Beyrich) – Siblík, p. 130, Pl. 1, Figs. 8–9 (cum syn.).

Material: 57 mostly fragmentary specimens up to 10.0 mm long, 8.1 mm wide and 6.7 mm thick. The figured specimens measure 9.4 x 7.7 x 6.7 mm (Pl. 1, Fig. 11) and 9.0 x 6.8 x 4.5 mm (Pl. 1, Fig. 12).

Remarks: *Dioristella indistincta* is the commonest species at the locality. Specimens variable, of subtrigonal, pearshaped to ovate outlines, mostly rectimarginate. Three specimens uniplicate, with well-developed median sulcations in the pedicle valves.

Age: Carnian.

Genus: ***Euractinella*** **Bittner, 1890**

Euractinella trisulcata **(Bittner, 1890)**
(Pl. 1, Fig. 9)

1890 *(?) Spirigera trisulcata* nov. spec. – Bittner, p. 141, Pl. 37, Fig. 29.
non 1904 *Athyris trisulcata* Bittn. var. (*"Spirigera"*) – Frech, p. 40, Text-Fig. 53.
1911 *(?) Spirigera trisulcata* Bittn. – Tommasi, p. 4, Pl. 1, Figs. 3–6.
1920 *Euractinella trisulcata* Bittner – Diener, p. 68.
1930 *Euractinella trisulcata* Bittner – Gugenberger, P. 78.
1988 *Euractinella trisulcata* (Bittner) – Siblík, p. 79.

Material: 3 specimens with both valves and 1 pedicle valve. The figured specimen measures 6.6 x 5.8 x 4.6 mm.

Remarks: The holotype – the only Bittner's specimen – has not been traced in the Geologische Bundesanstalt in Vienna and must be presumed lost. The specimen from Gaisberg shows slightly sharper ribs and laterally 1 faint rib more in comparison to Bittner's figure. In the absence of well-preserved internal structure as an indication of generic attribution, one may consider general shape and other external characters.It seems to be no doubt about the determination of our specimen. Frech's *"trisulcata* var." from the Raibl Beds

of the Bakony Mts. with different ribbing and high pedicle umbo differs substantially from BITTNER's holotype and reminds one of *Euractinella contraplecta* (BRAUN in WISSMANN & MÜNSTER) – see also FRECH, 1904, p. 41.

Age: Carnian (*Cardita* – Schichten, Slovenia).

Genus: ***Tetractinella* BITTNER, 1890**

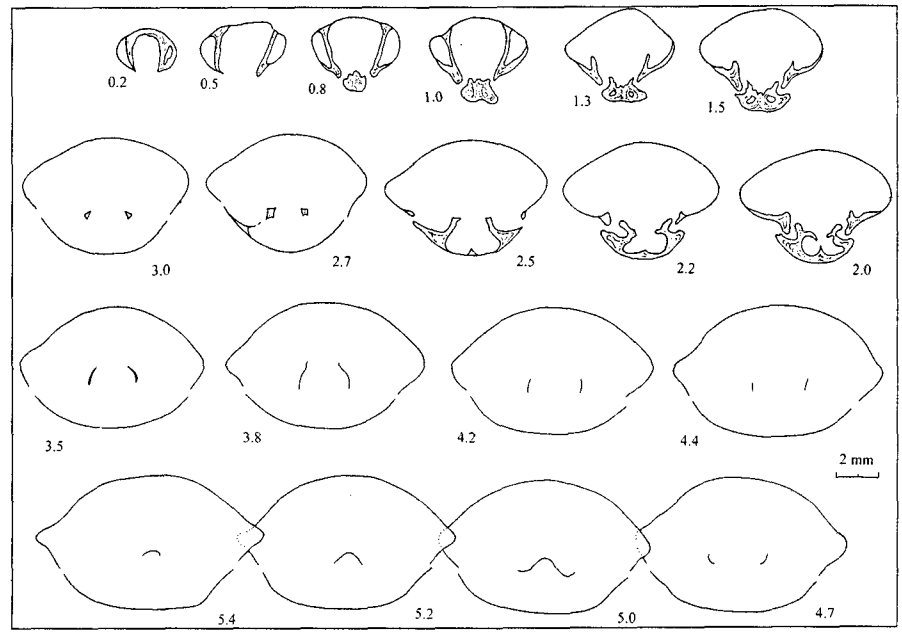
***Tetractinella* aff. *quadricostata* (BRAUN in WISSMANN & MÜNSTER)**
(Pl. 1, Fig. 13)

aff. 1841 *Terebratula quadricostata* BRAUN – WISSMANN & MÜNSTER, p. 60, Pl. 9, Fig. 5.
aff. 1920 *Tetractinella quadricostata* Graf zu MUENSTER – DIENER, p. 63.

Material: One partly damaged specimen with dimensions c. 5.5 x 5.3 x 3.7 mm.

Remarks: Our specimen shows considerable similarity to the type specimen figured by WISSMANN & MÜNSTER (1841), and differs from it essentially in shallower furrows between blunted plications on the valves only. It would not be easy to distinguish our specimen from some young Middle Triassic *Tetractinella trigonella* (SCHLOTHEIM), however.

Age: *Tetractinella quadricostata* comes from the Carnian (St. Cassian). The validity of the species is dubious.



Text–Fig. 4. *Adygella bittneri* (WÖHRMANN).
Serial transverse sections through the posterior part of shell. Original length of specimen 16.0 mm. Magnified.

Order : **Terebratulida WAAGEN, 1883**
Superfamily: **Dielasmatacea SCHUCHERT, 1913**
Family: **Dielasmatidae SCHUCHERT, 1913**
Genus: ***Adygella* DAGYS, 1959**

***Adygella bittneri* (WÖHRMANN, 1889)**
(Pl. 1, Figs. 2, 7, Text-Fig. 4)

1889 *Terebratula Bittneri* n. sp. – WÖHRMANN, p. 199, Pl. 5, Figs. 34–37.
1890 *Terebratula Woehrmanniana* nov. nom. – BITTNER, p. 153, Pl. 39, Figs. 2–7.
1892 *Terebratula (Dielasma) Wöhrmanniana* m. – BITTNER, p. 20, Pl. 2, Fig. 22.
non ? 1934 *Dielasma woehrmannianum* BITTNER – BERNDT, p. 59, Pl. 3, Fig. 10.
?1960 *Dielasma woehrmannianum* (BITTNER) – DESIO, ROSSI-RONCHETTI & VIGANO, p. 305, Pl. 30, Figs. 1–4.
1972 *Dielasma woehrmannianum* BITTNER – ENTCHEVA, p. 28, Pl. 8, Fig. 3.
1988 *Adygella bittneri* (WÖHRMANN) – SIBLÍK, p. 91 (cum syn.).

Material: 32 specimens up to 23.0 mm long, 18.5 mm wide and 9.0 mm thick. The figured specimens measure: ? 16.5 x 12.4 x 7.0 mm (Pl. 1, Fig. 7) and 14.1 x 11.0 x 6.4 mm (Pl. 1, Fig. 2).

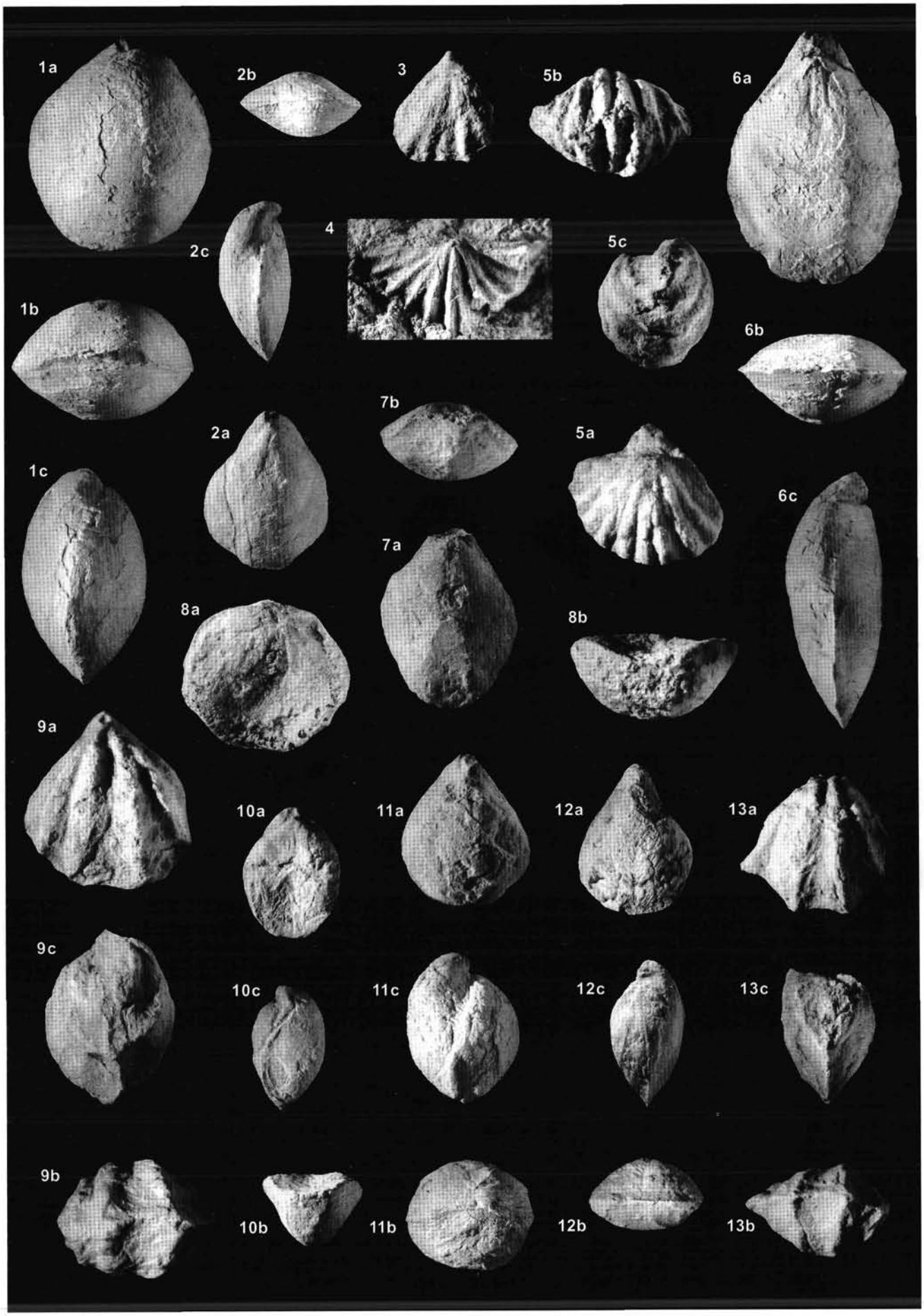
Internal characters (Text-Fig. 4): Pedicle collar not seen, dental lamellae well developed and ventrally diverging, low cardinal process, short septalium present close to umbo, thick and fairly narrow, dorsally directed hinge plates well delimited from inner socket ridges, large sockets, high concave crural processes directed dorsally, low-arched transverse band, very short dorsal septum.

Remarks: Our specimens correspond well to the WÖHRMANN's description and figures, and show the same variability. The outline and character of the anterior commissure belong to the most variable characters in our material, too. BITTNER's specific name *"Wöhrmanniana"* has been commonly used in the palaeontological literature, though it is a

Plate 1

Fig. 1: *Rhaetina* sp.
GBA no.1999/2/1, magn. x 1.5.
Fig. 2: *Adygella bittneri* (WÖHRMANN)
GBA no.1999/2/2, x 2.
Fig. 3: *?"Rhynchonella"* aff. *carinthiaca* BITTNER
Specimen lost, x10.
Fig. 4: *Balatonospira* aff. *lipoldi* (BITTNER)
GBA no.1999/2/3, x 5.
Fig. 5: *Balatonospira lipoldi* (BITTNER)
GBA no.1999/2/4, x 5.
Fig. 6: *Rhaetina tirolensis* sp. n.
Holotype, GBA no.1999/2/5, x 2.
Fig. 7: *Adygella bittneri* (WÖHRMANN)
GBA no.1999/2/6, x 2.
Fig. 8: *Thecospira guembeli* (PICHLER)
GBA no. 1999/2/7, x 5.
Fig. 9: *Euractinella trisulcata* (BITTNER)
GBA no. 1999/2/8, x 5.
Fig. 10: *Aulacothyris zirlensis* (WÖHRMANN)
GBA no. 1999/2/9, x 2.
Fig. 11: *Dioristella indistincta* (BEYRICH)
Unusually thick specimen. GBA no. 1999/2/10, x 3.
Fig. 12: *Dioristella indistincta* (BEYRICH)
GBA no. 1999/2/11, x 3.
Fig. 13: *Tetractinella* aff. *quadricostata* (BRAUN in WISSMANN & MÜNSTER). Specimen lost, x 5.

All specimens coated with ammonium chloride before photographing. They are deposited (except for Figs. 3 and 13) in the Museum of the Geologische Bundesanstalt in Vienna (GBA). Photographs by Mr. J. BROŽEK (Prague).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junior synonym of WÖHRMANN's *"Bittneri"*. According to BITTNER (1890) the species may be well distinguished by its smaller dimensions and biplicate anterior commissure from *Terebratula (=Coenothyris) paronica* TOMMASI, 1887. On the contrary, WÖHRMANN (1894) put *"Bittneri" = "woehrmanniana"* into synonymy of *"paronica"*. BERNDT's determination (1934), who figured a specimen of subcircular outline, coming from the Rhaetian seems extremely doubtful. Serial sections of the specimen from Gaisberg (Text-Fig. 4) showed a low cardinal process. A cardinal process is missing in the sections made by DAGYS (1963, Text-Fig. 80) in the type species of *Adygella – Adygella cubanica*.

Age: Carnian ("Zirler Schichten", Tyrol).

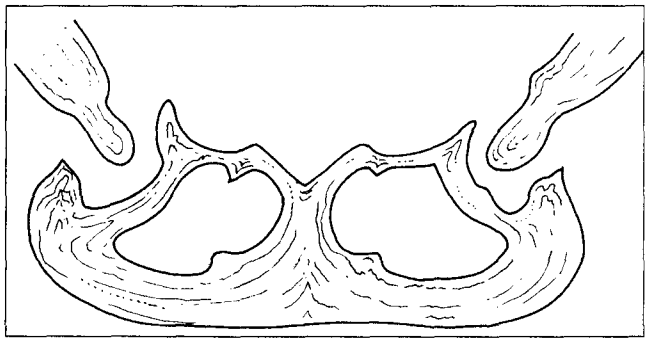
Genus: ***Cruratula* BITTNER, 1890**

***?Cruratula* sp.**
(Text–Fig. 5)

Material: A single incomplete specimen without posterior part of pedicle valve. Dimensions: ? x 19.6 x 10.5 mm.

Description: Large subtrigonal shell with maximum width approximately at mid-length, biconvex profile with much flatter brachial valve, rectimarginate anterior commissure, posterolateral parts of valves flattened forming poorly delimited planareas, shell punctate. Dental lamellae absent. Low, poorly visible cardinal process developed. Hinge plates clearly delimited from thick septalial plates. Deep septalium. Thick and long dorsal septum reaching half-length of valve visible through shell. Other internal details unknown.

Remarks: Subtrigonal outline, depressed posterolateral parts of valves and long dorsal septum are characters that suggest the specimen may be a representative of *Cruratula*. Due to the missing posterior part of pedicle valve it was not possible to consider the character of its umbo. This should usually be long, thick and incurved in *Cruratula* species. A similar general appearance can be found in some specimens of *Cruratula beyrichi* BITTNER or *Cruratula faucensis* (ROTHPLETZ) as figured by BITTNER (1890) on Pl. 6, Fig. 4 or on Pl. 7, Figs. 24–25.



Text–Fig. 5. *? Cruratula* sp.
Transverse section through the posterior part of specimen showing well-developed hinge teeth, thick septalial plates and massive dorsal septum. GBA no. 1999/2/12. Magnified.

Genus: ***Rhaetina* WAAGEN, 1882**

***Rhaetina tirolensis* sp. n.**
(Pl. 1, Fig. 6, Text–Fig. 6)

The holotype: An internal mould figured on Pl.1, Fig.6 and deposited in the collections of the Geologische Bundesanstalt (Museum) in Vienna under registered number 1999/2/5.

Stratum typicum et locus typicus: Carnian, Gaisberg near Kirchberg i.T.

Derivatio nominis: After the country of its origin.

Material: 4 specimens: The better preserved ones measure: 25.0 x ?18.5 x 11.7 mm, 22.6 x 15.4 x 8.8 mm (holotype) and 20.5 x 14.3 x 7.4 mm (sectioned).

Description: Medium-sized smooth shells, narrow elongate - oval outline, evenly biconvex profile, maximum width situated forward of mid-length, rectimarginate to incipiently uniplicate anterior commissure, lateral commissure gently deflected towards pedicle valve, no fold, no sulcation, brachial valve flattened medianly in its posterior third, prominent narrow beak with rounded beak ridges.

Serial sections showed characteristic features of *Rhaetina:* absent dental lamellae, well-developed pedicle collar, low cardinal process, inner hinge plates extending to floor of brachial valve. Crural processes converging ventrally. Transverse band and the other details not seen due to bad preservation.

Remarks: *Rhaetina tirolensis* sp. n. is distinguished from other *Rhaetina* species on the grounds of its narrower outline, relatively flat profile, nearly rectimarginate anterior commissure and prominent beak. These characters are, of course, seen in other variable *Rhaetina* species but the combination is unique. New species bears certain resemblances to *Rhaetina pyriformis* (SUESS). This Kössen species has, on the average, much greater dimensions, pedicle valve more vaulted than brachial valve, and stronger massive beak. The material from the Carnian similar to the new species was described and figured e.g. as *Terebratula* aff. *piriformis* by BITTNER in 1890 (Pl. 39, Figs. 13–14) from the "Oberer Mergelkomplex", Bakony Mts., and in 1892 (Pl. 2, Fig. 21) from the "Carditaschichten", Hohe Wand, and recently as *Rhaetina concinna* sp.n. by SIBLÍK (1990, Pl. 1., Figs. 1–2, Pl. 9, Fig. 4) from the Slovak Karst. All mentioned forms differ externally from *Rhaetina tirolensis* sp.n. by their larger subpentagonal or subcircular outline.

Age and occurrence: Carnian, for the present known from the type locality only.

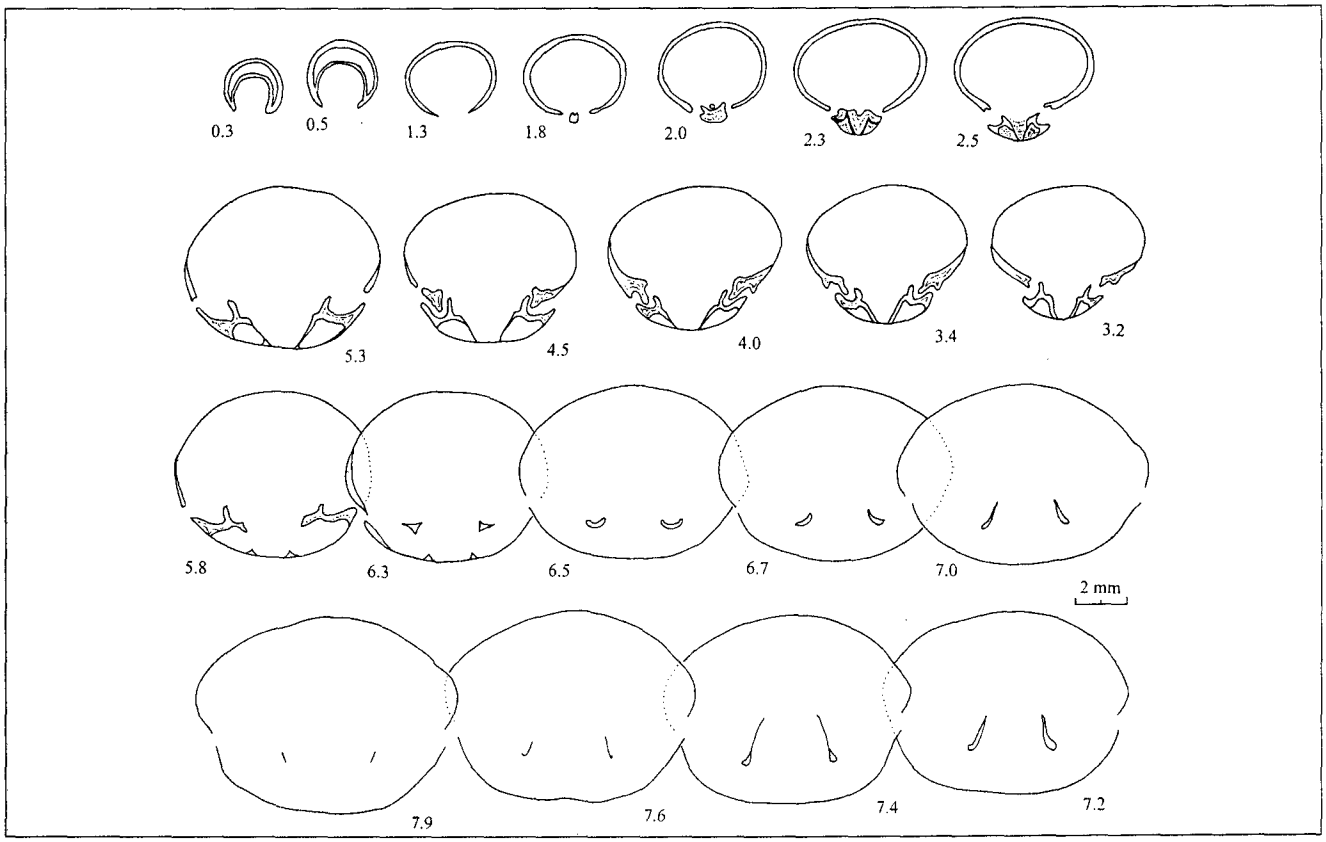
***Rhaetina* sp.**
(Pl. 1, Fig. 1, Text–Fig. 7)

Material: 3 partially damaged specimens. The figured one measures ?26.0 x 21.8 x 15.1 mm, the sectioned one 25.0 x ?20.5 x 12.8 mm.

Description: *Rhaetina* of medium size, subpentagonal outline, evenly biconvex profile, maximum width at or slightly posterior of mid-length, suberect pedicle umbo, large round pedicle foramen, low anterior uniplication, a suggestion of median fold near anterior margin, no sulcation. Weak growth lines ascertainable near anterolateral margin of valves.

Serial sections show characteristic features of *Rhaetina:* Strong, bilobed cardinal process. Inner hinge plates do not fusing with valve floor but uniting posteriorly with low and thick median septum. Large septalium developed. Similar sections shown also by DAGYS (1963, Text-Figs. 63–64) in *Rhaetina pyriformis* and *Rhaetina gregaria* from Caucasus.

Remarks: The specimens could not be easily distinguished from smaller specimens of Rhaetian *Rhaetina pyriformis* (SUESS). Due to the great variability of *Rhaetina,* one can find a series of Upper Triassic forms figured in literature very similar in outline to the specimen figured herein on Pl. 1, Fig. 1.: *Terebratula* aff. *piriformis* from the "Oberer Mergelkomplex", Bakony Mts. (BITTNER, 1890, Pl. 39, Fig. 13), *Terebratula* cfr. *piriformis* from the Hallstatt Limestone of

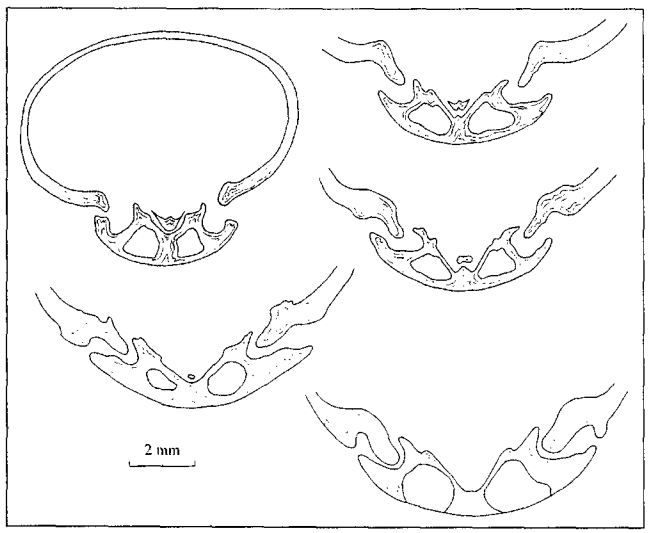


Text–Fig. 6. *Rhaetina tirolensis* sp. n.
Further details damaged (?). Original length of specimen 20.2 mm. Magnified.

Röthelstein" (BITTNER, 1892, Pl. 2, Fig. 20), *Rhaetina taurica* MOISSEEV from the Norian – Rhaetian of Crimea (DAGYS, 1963, Pl. 23, Fig. 2) etc.

The paucity of material prevents a definite designation for our specimens from Gaisberg and their better distinguishing from *Rhaetina tirolensis* sp.n.

Superfamily: **Zeilleriacea ALLAN, 1940**
Family: **Zeilleriidae ALLAN, 1940**
Genus: ***Aulacothyris* DOUVILLÉ, 1879**



Text–Fig. 7. *Rhaetina* sp.
Due to the bad preservation only some of transverse sections has been made. Total length of specimen 25.2 mm. Magnified.

***Aulacothyris zirlensis* (WÖHRMANN, 1894)**
(Pl. 1, Fig. 10)

1894 *Terebratula (Waldheimia ?) Zirlensis* v. WÖHRMANN, n. sp. – WÖHRMANN, p. 649, Pl. 13, Fig. 3.
1972 *Aulacothyris zirlensis* (WÖHRMANN) – DETRE, Pl. 1, Fig. 3.
1988 *Aulacothyris zirlensis* (WÖHRMANN) – SIBLÍK, p. 107.

Material: Except for the figured specimen 12.0 x 9.0 x 6.9 mm, another damaged specimen and 2 pedicle valves.

Remarks: Dental plates and a very long dorsal septum are well visible in the figured specimen. Even if this specimen differs from the holotype (in the Bayerische Staatssammlung für Paläontologie und histor. Geologie in Munich – no. AS XVI 40) in its narrower outline, our second partly damaged specimen has larger subpentagonal outline and enables thus well the attribution of our material to *Aulacothyris zirlensis*. It appears that this species has belonged to the rare finds since WÖHRMANN's times. Owing to the limited number of well-preserved specimens, it is not possible to compare *"zirlensis"* to other Middle and Upper Triassic aulacothyridid species, and to discuss better its generic assignment (*? Aulacothyropsis* DAGYS, 1959).

Age: Carnian ("Zirler Schichten", Tyrol).

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