

## New genus (*Superbirhyncha* gen. n.) for a rhynchonellid (Brachiopoda) from the Alpine Upper Triassic

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**Abstract:** A new rhynchonellid genus *Superbirhyncha* was established for Upper Triassic *Rhynchonella superba* BITTNER, 1890

**Key words:** Northern Calcareous Alps, Triassic, Hallstatt Limestone, rhynchonellid, brachiopods

### Introduction

During the preparations of the complement to the volume Brachiopoda triadica in the series Catalogus fossilium Austriae (Siblík, 1988) more numerous material of some species appeared making further study possible. In this paper the attention is focused on "*Rhynchonella*" *superba* Bittner, the species known and described from the Upper Triassic Hallstatt Limestone. After the revision, a new genus *Superbirhyncha* gen. n. could be established, based on unusual features recognized in this species.

### Descriptions

**Superfamily:** *Rhynchonellacea* GRAY, 1848

**Family:** *Praecyclothyrididae* MAKRIDIN, 1964

**Subfamily:** *Tetraphynchiinae* AGER, 1965

#### *Superbirhyncha* gen. n.

**Type species:** *Rhynchonella superba* BITTNER, 1890 – Upper Triassic Hallstatt Limestone, Austria.

**Diagnosis:** Medium sized to large rhynchonellids, subtrigonal to rounded pentagonal in outline and strongly dorsibiconvex in profile. Width clearly surpassing length in most specimens. Some pedicle valves nearly flat. Fold and sulcus well developed anteriorly, not sharply separated from lateral slopes. Anterior commissure with strong uniplication. Pedicle beak erect and slightly swollen, pedicle opening submesothyridid. Low, blunt ribs visible anteriorly in the fold and sulcus, losing rapidly their distinctness towards umbos. Posteral and lateral parts of valves nearly smooth or with very poorly developed ribbing. Slight sulcation present posteriorly in brachial valve. Concentric lines visible near margins of shell.

Shell very thick. Lateral umbonal cavities largely filled with secondary shell material, hiding nearly completely dorsally divergent dental lamellae. Teeth strong, situated in large well-developed sockets, crenulated. Short and narrow but relatively deep septalium developed, more or

less hidden in the secondary material. Dorsal septum strong but short, reduced to a ridge. Inner socket ridges coalesced with thick hinge plates (Fig. 5). Crura radulifer. Muscle scars usually strongly impressed (esp. in the brachial valve) (Fig. 2).

**Remarks:** Semicostate valves and extensive development of secondary thickening are the most characteristic features of the new genus. *Superbirhyncha superba* is not very frequent species in the Alpine Triassic, and for the revision it was necessary to use mostly museum material. External resemblance of „*superba*“ and *Moisseievia moisseievi* Dagys from the Upper Triassic of Caucasus was mentioned by Dagys (1963, p. 48). However, the internal characters of *Moisseievia* as shown by Dagys (1963, Text-Fig. 14) differ substantially from those in *Superbirhyncha* gen. n. Dagys' species has fused hinge plates and neither septalium nor dorsal septum.

**Distribution:** Hallstatt Limestone, Upper Triassic.

**Included species:** For the present, the type species only.

#### *Superbirhyncha superba* (BITTNER, 1890)

(Figs. 1 – 5)

1890 *Rhynchonella superba* nov. spec. – BITTNER, p. 228, Pl.

14, Figs. 1-5.

1895 *Rhynchonella superba* BITTN. – BITTNER, p. 368.

1988 „*Rhynchonella*“ *superba* BITTNER – SIBLÍK, p.51.

**Lectotype:** Specimen figured by Bittner, 1890 in Pl. 14, Fig. 2 and deposited in the Institute of Palaeontology, University of Vienna (designated by Siblík, 1988). It derives from Mühlthal near Piesting, Lower Austria (Hallstatt Limestone, Norian).

**Material:** About 30 specimens coming mostly from the collections of the Natural History Museum in Vienna. They are up to 32.0 mm long, 32.5 mm wide and 20.7 mm thick.

**Description:** Quite exact description of the external characters was given already by Bittner (1890) who prop-

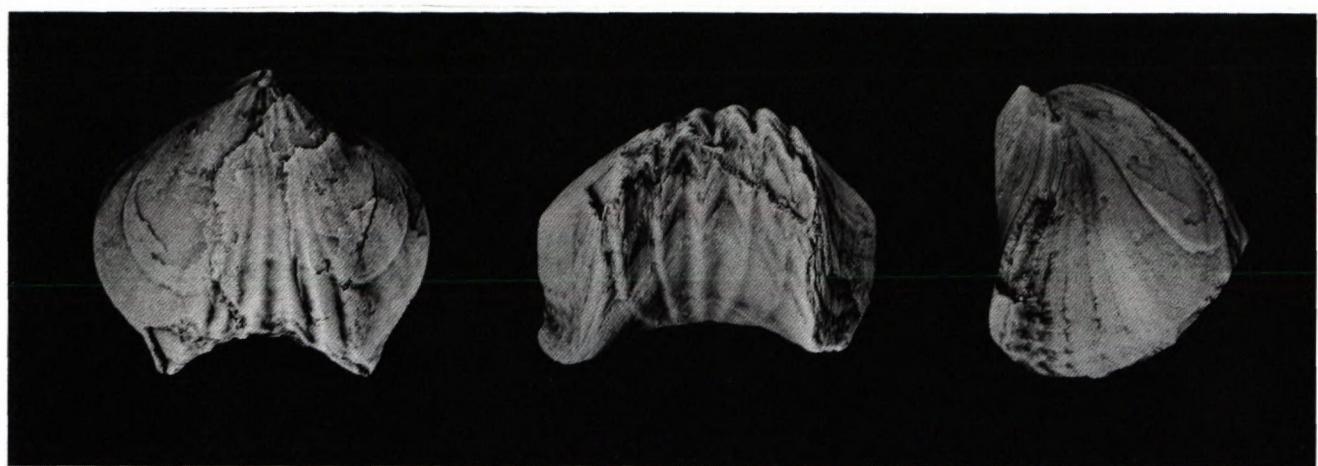


Fig. 1 *Superbirhyncha superba* (Bittner). Hüttenekalpe. NHM Wien. Photographs by Mr. J. Brožek, Prague. Magnified, x1.5

erly mentioned Palaeozoic habitus of „superba“. My comparative material showed 5 to 9 ribs on the fold (most frequently 7).

**Remark:** The most distinctive character of this species is the blunt ribs developed mostly in the fold and sulcus only.

**Distribution:** Norian (Mühlthal – Lower Austria; Leisling, Roßmoos, Siriuskogel, Hüttenekalpe – Upper Austria). A specimen collected by the present author on Feuerkogel near Aussee – Styria came from the scree and is thus without any stratigraphical value.

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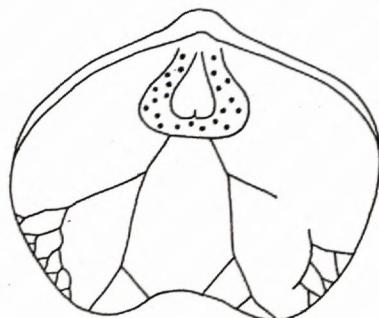


Fig. 2 *Superbirhyncha superba* (BITTNER). Hüttenekalpe. NHM Wien. Dorsal view of the specimen showing general muscle area and part of vascular markings. Enlarged, original width of the specimen 24.3 mm.

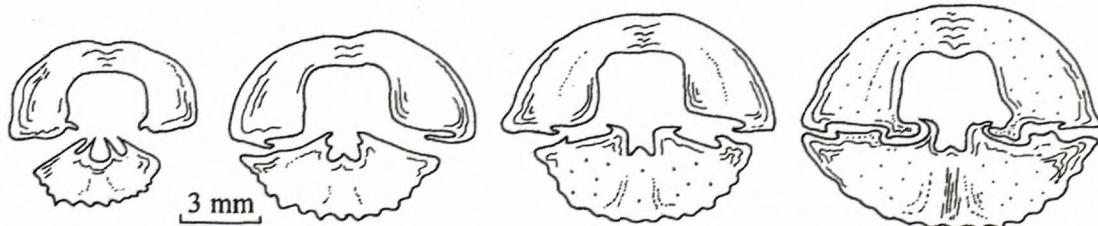


Fig. 4 *Superbirhyncha superba* (BITTNER). Feuerkogel near Bad Aussee. Four serial sections of another specimen through posterior part of shell. Original length of specimen 21.0 mm. Enlarged.



Fig. 5 *Superbirhyncha superba* (BITTNER). Hüttenekalpe. NHM Wien. Four serial sections through another specimen well showing coalesced hinge plates with inner socket ridges. Original length of specimen 23.1 mm. Enlarged.

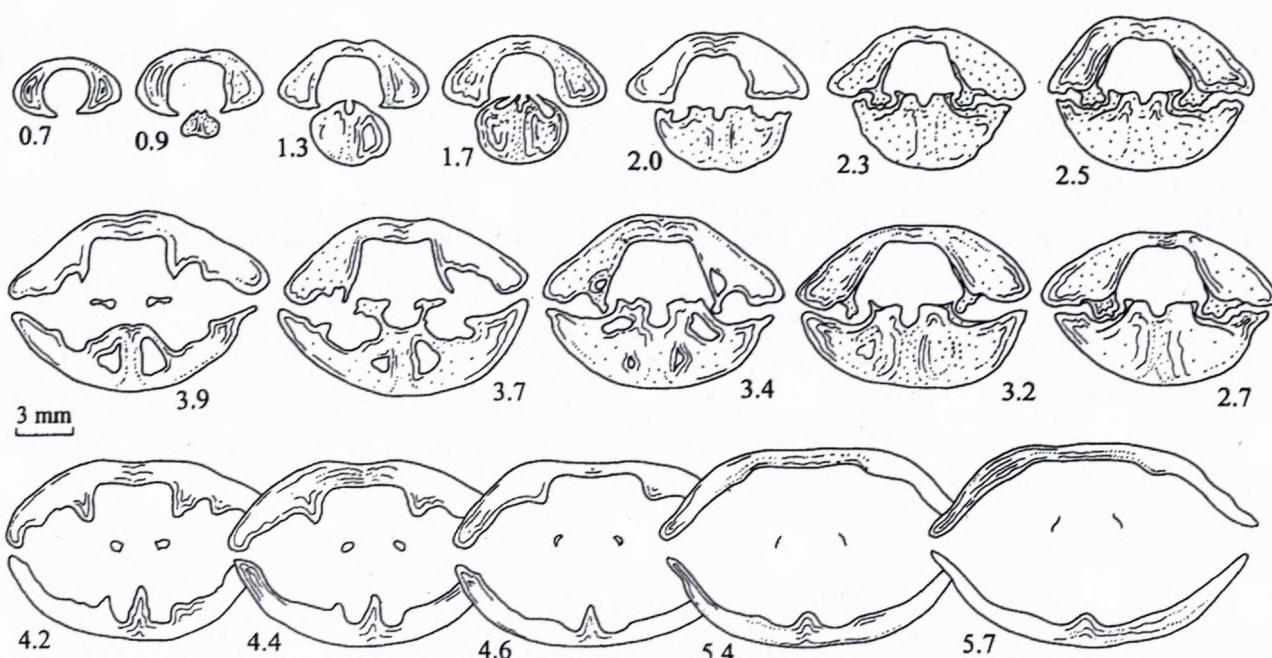


Fig. 3 *Superbirhyncha superba* (Bittner). Hüttenekalpe. NHM Wien. Serial sections through the posterior part of shell. Crura disappeared at 5.9 mm. Original length of specimen 23.6 mm. Enlarged.

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