

## A Brackish Gastropod Fauna of the Lunz Strata <sup>1)</sup>

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(Mit 1 Tafel)

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The Lunz strata are well known in connection with their coal deposits, their abundance of plant remains, and vertebrate findings such as the "lung-fish." Invertebrate fossils are not uncommon, but gastropods are rather rare. The present collection was obtained by Reg. Rat Hans CHLUPAČ with the following note: "Ober-Trias — Unterkarnische Stufe (= julische Unterstufe), Lunzerschichten, Aus den unmittelbaren Begleitschichten der Kohlenflöze, gesammelt auf der Halde des alten Poellenreither Albrecht-Stollens, gegenüber dem Bahnhof von Lunz, NÖ."

In addition to the group of gastropods which are recorded in this paper, there are a few separate valves of *Corbula*-like bivalves being found together with the gastropods. Their state of preservation does not permit satisfactory identification. New material should be gathered for a biostratigraphic study of these strata. The collection of specimens here described and recorded are preserved in the Geologisch-Palaeontologischen Abteilung, Naturhistorisches Museum in Vienna.

The present author has seen several early collections of the Lunz localities both in the Museum and in the Geologischen Bundesanstalt, and found that they are valuable material. Some of them will probably never be replaced. The material from Polzberg indeed poses an interesting paleoecological problem. He saw a number of sizable pieces of matrix which contain species of *Trachyceras* together with numerous minute species of *Estheria*. Is it an example of two different groups of different habitat areas to be preserved in a third place? There is no question that the Lunz strata comprise all 3 major facies: Marine, brackish and fresh waters. The band which contains the species recorded here evidently represents a brackish-water facies in an estuarian area. Related species of *Acteonina* may be taken as an example to indicate such environment at the mouth of a Recent river.

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*Omphaloptycha lunzensis*, n. sp.

Pl. 8, figs. 2 and 4

Shell of rissoid outline, small in size, imperforate with an acutely elevated spire and descendingly inflated body whorl. The spire is slightly higher than the body whorl. Whorls gently convex, increasing rapidly in size, coiling below the periphery, bearing both fine and costulate growth lines on the surface. Aperture ovate in outline, having its peristome continuous, outer lip thin, roundly convex, inner lip thickened with parietal wall attaching the body whorl. Columella slightly curved forming a slight notch at the joint with the outer lip. The height of shell is 6,0 mm, its width 4,2 mm and about  $5\frac{1}{2}$  whorls.

Over half a dozen of specimens represent this species on a piece of slab of about 11 by 6 cm in size. Its surface is thinly encrusted with a coating of fine pyritized sediments. After careful cleaning, several examples are well recognizable.

This species reminds one of some Rissoacea of the Tertiary to Recent ranges except its apertural features. It resembles *O. nota* AMMON, but it differs by its much smaller size and thicker inner lip margin. It also resembles "*Natica*" *argus* KITTL (1894, p. 153, pl. 10, figs. 44—46) in size, outline of shell, and the apertural features, but it has a smaller and less dilated body whorl. One of KITTL's type-specimens measures 7,0 in height of shell, 4,5 in its width with 6 and  $\frac{1}{4}$  whorls. KITTL's generic determination, although it has been followed by DIENER (1926), should be considered as provisional, as it is certainly not based on the conception of the recent and fossil species of typical *Natica*. That species may possibly belong to this Triassic group.

*Macrochilina sandbergeri* LAUBE

1868 *Macrocheilus sandbergeri*, LAUBE, Fauna von St. Cassian III, p. 41, pl. 25, fig. 4.

1894 *Macrochilina sandbergeri*, KITTL, Die Gastropoden der Schichten von St. Cassian der Südalpinen Trias III, p. 228, pl. 16, figs. 31—33.

There are two examples which are identified to this species. They are rather poorly preserved, and a better one measures 13,0 mm in height of shell, 7,5 mm in width with over 5 whorls.

*Coelostylina (Pseudochrysalis) stotteri* KLIPSTEIN

Pl. 8, fig. 5.

1843 *Melania stotteri*, KLIPSTEIN, Beiträge zur geologischen Kenntnis der Östlichen Alpen, Giessen, I, p. 186, pl. 12, fig. 10.

1894 *Coelostylina (Pseudochrysalis) stotteri*, KITTL, l. c., p. 208, pl. 14, figs. 22—31.

Single but well preserved specimen agrees well with this species also of St. Cassian. It measures 9,2 mm in height of shell, 4,0 mm in its width with 5+ whorls.

*Trypanostylus ladinus* KITTL

Pl. 8, fig. 7

1894 *Eustylus ladinus*, KITTL, l. c., p. 212, pl. 15, figs. 51—53.

Single specimen seems to agree well with this Triassic species of St. Cassian. It measures 9,0 mm in height, 3,5 mm in width with 6+ whorls. The state of preservation is poor, and the identification is the nearest which can be made.

*Trypanostylus* cf. *T. militaris* KITTL

1894 *Eustylus militaris*, KITTL, l. c., p. 212, pl. 15, figs. 48—50.

Single specimen may be compared with this rather minute species. Its whorl surfaces cannot be clearly observed. Its apertural features, including its columella are characteristic, however, it is much smaller in size. It measures only 4,0 mm in height, 2,1 mm in width with about 6 whorls. It is possibly a new species, but the material is inadequate to describe the detail features at present.

*Promathildia margaritifera* MUENSTER

Pl. 8, fig. 6

1841 *Turritella margaritifera*, MUENSTER, Beiträge zur Geologie und Petrefaktenkunde des südöstlichen Tirols, Bayreuth, IV, p. 120, pl. 13, fig. 45.

1894 *Promathildia margaritifera*, KITTL, l. c., p. 242, pl. 18, figs. 24—26.

There are about half a dozen imperfect specimens representing this species. A best preserved one measures 7,0 mm in height, 3,0 in width with about 7 whorls. There are two spiral ridges on the exposed surface of the whorls, and a third one below the periphery, which is usually embraced by the succeeding whorl, but occasionally appearing along or slightly above the suture.

*Acteonina (Cylindrobullina) scalaris* MUENSTER

pl. 8, figs. 1 and 3

1841 *Tornatellina ? scalaris*, MUENSTER, Beiträge, IV, p. 103, pl. 10 fig. 26.

1894 *Acteonina scalaris*, KITTL, l. c., p. 261, pl. 20, figs. 24—31.

The species seems to be a common one in this area. Numerous examples are recognizable. According to the previous records, this species had a wide paleogeographic distribution in the Alpine area and the South. Their earlier records are given by DIENER (1926, p. 225).

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#### Explanations of the Plate

- Fig. 1. An assemblage view showing *Acteonina scalaris*.
- Figs. 2 and 4. *Omphaloptycha lunzensis*, n. sp.
- Fig. 3. *Acteonina scalaris* MÜNSTER.
- Fig. 5. *Coelostylina stotteri* KLIPSTEIN
- Fig. 6. *Promathildia margaritifera* MÜNSTER.
- Fig. 7. *Trypanostylus ladinus* KITTL.

