

**PERONIDELLA BALOGHI,
A NEW INOZOA FROM THE UPPER PERMIAN OF THE
BÜKK-MOUNTAINS (HUNGARY)**

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INTRODUCTION

The Upper Permian of the Bükk-Mountains was last described by K. BALOGH [1964]. In his monography of this region, the description of the Permian was based on the determination of the brachiopoda by Z. SCHRÉTER [1963] and of the algae by M. HERAK & KOCHANSKY, V. [1963]. In 1944 F. HERITSCH described some Permian corals from this region but most of his determinations are incorrect [H. FLÜGEL, 1970].

For stratigraphical studies the most important profiles are the outcrops in the railway-cuts near Nagyvisnyó. During a short visit to these localities the writer found specimens of a new Inozoa in a bed situated a few meters over the "Lyttonia-bank" of the Upper Permian. Descriptions of sponges from that stratigraphic horizon are rare.

COLLECTING LOCALITY

The sponges were obtained from the railway-cut Nr. 5, 2 km northeast of Nagyvisnyó near railway-point 435 [K. BALOGH, 1964. p. 596]. The profile at this point is to divide in two parts that are separated by a limestone-bank with *Leptodus* (= *Lyttonia*) *nobilis* WAAGEN. The lower part consists of dark-grey limestone-beds with algae, foraminifera, bryozoa, molluscs and crinoids. The upper part is made of black and grey marls alternating with thin beds of limestone containing a large brachiopod-faune (= "beds with *Lyttonia*" in BALOGH, 1964). The sponges occur cca 3 m over the *Lyttonia*-bank within a biomicritic limestone.

PALAEONTOLOGICAL DESCRIPTION

CALCISPONGEA

ORDO: *Pharetronida* ZITTEL

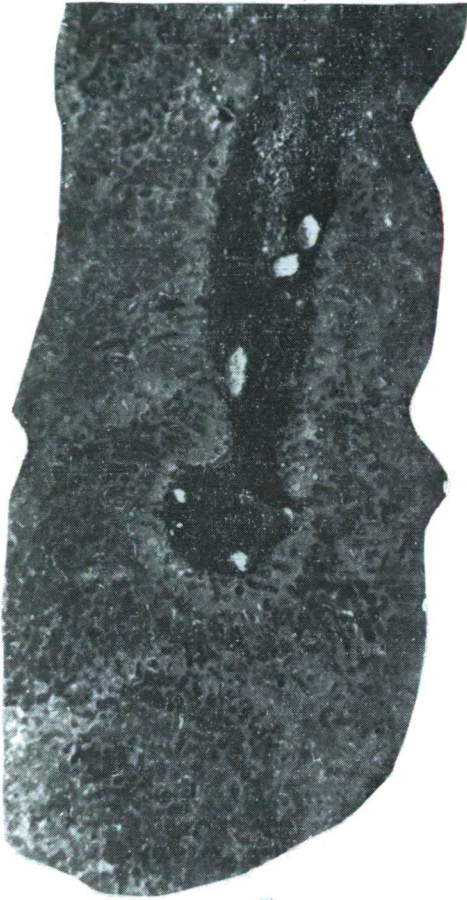
SUBORDO: *Inozoa* STEINMANN

Fam.: *Elasmostomatidae* DE LAUBENFELS 1955

GENUS: *Peronidella* HINDE 1893

Peronidella baloghi n. sp.

(PLATE I, Figs. 1—3)



1



2



3

Material: Specimens UGP. 226a, b

Holotype: Specimen UGP. 226a, pictured in Plate I, *Figs. 1—3*

Locus typicus: Railway-cut Nr. 5. northeast Nagyvisnyó

Stratum typicum: Upper Permian, Codonofusiella-zone

Derivatio nominis: Named after K. BALOGH

Diagnosis: Species of *Peronidella* with an elongated shape and a large cloaca.

Description: The sponges occur singly or loosely compounded. Their shape is elongate-cylindrical with a large, round, osculum at the summit. The type-specimen is more than 90 mm in height and 55×40 mm in cross-section; inarticulate cylindrical cloaca of these specimens are more than 80 mm in height with an osculum having a cross-section of 18×12 mm. Fused triacts from 0,05 mm to 0,2 mm in thickness from the open tissue of the wall. The primary triact structure cannot be seen due to a strong recrystallization of the fibers, but the primary triact nature is shown by the occurrence of knots always having three rays at the skeleton. Aporrhyses and epirrhyses are not present.

Remarks: The inarticulate body of the sponge is typical for the *Inozoa* ZITTEL. The cylindrical shape of the cloaca, the lack of canals within the wall and the construction of the tissue composed of triacts are features of the genus *Peronidella*. — Until now this genus has not been described from the Permian.

AGE OF THE BEDS WITH PERONIDELLA

The beds with *Peronidella* belonging undoubtedly to the higher part of the Upper Permian, are overlain after a few meters by Neogene sediments. Therefore a gap of unknown extension separates the Permian of this outcrop from the Lowermost Triassic of its surroundings, here. After BALOGH, however, this gap between the two formations can correspond to an uppermost Permian sequence of 30—35 m in thickness that appears in other localities characterized with *Waagenophyllum*.

In my opinion, the brachiopod-fauna of the "Lyttonia-beds" of the Bükk is to correlate to the Upper Permian faunas of Transcaucasia and Iran with *Leptodus nobilis* WAAGEN, *L. richthofeni* (KAYSER), *Spinomarginifera helica* (ABICH), *Tscher-nyschewia typica* STOYANOV and *Tyloplecta yangtzeensis* (CHAO). These forms occur in the Djulfa-region in the Araxilevis/Araxoceras zone of the Djulfian [RUZHENTSEV, 1965], in Central Albroz in the Tyloplecta zone of the Upper Nesen formation [STEPANOV *et al.*, 1969], in Central-Iran in the unit 4 of the Abadeh formation [Taraz, 1971]. This association is named by WATERHOUSE [1971] the Baisalian fauna. Following ROSTOVTSSEV & AZARYAN [1971] and WATERHOUSE [1971], the Permian/Triassic boundary should be drawn between the Paratirolites zone and the Claraia beds. The Dorshamian stage of Djulfa to be found between the Araxoceras zone

PLATE I

Peronidella baloghi n. sp. Holotype

Fig. 1. Vertical section $1,3 \times$

Fig. 2. Vertical section $1,3 \times$

Fig. 3. Exterior transverse view $1,3 \times$

and this boundary has a max. thickness of 70 m. It is therefore possible that in the Bükk-Mountains, the gap above the "Lyttonia-beds" corresponds to the Dorsham stage of Transcaucasian.

As mentioned above, BALOGH [1964] raised the possibility that the beds with *Waagenophyllum*, occurring south of Nagyvisnyó (in the Nyárjuhegy) at great length along the boundary-line between the superficial extents of Permian and Triassic, are younger than the "Lyttonia-beds", and represent the Uppermost Permian. Unfortunately, the specimens of this coral from Nyárjuhegy have been flattened out by strong tectonic movements. The corallities are small (max. 5—6 cm in diameter) and have 14—19×2 septa. The same corals were described by F. HERITSCH [1944] from the quarry next to the railway-station Nagyvisnyó as *Waagenophyllum indicum mongoliense*, but a revision of this material by H. FLÜGEL [1970] has shown, that they belong probably to *Waagenophyllum kueichowense* or *W. huangi*. Namely, *Waagenophyllum indicum* has a greater (6—8 mm) diameter and more septa (20 and more ×2), than the mentioned forms.

Obviously the *Waagenophyllum*-occurrences at the railway-station belong to a deeper horizon than that of the Nyárjuhegy. Some difficulties, however, are caused by the fact that the genus *Waagenophyllum* appears in the lower beds of the railway-cut Nr. 5, in a pretty depth below the "Lyttonia-beds", as well. Therefore it is to raise if the *Waagenophyllum*-limestone of Nyárjuhegy and that of the lower part of the railway-cut Nr. 5 should have the same age.

Together with *Peronidella baloghi* also *Codonofusiella* sp. occurs in the railway-cut Nr. 5. This foraminifer is typical for the beds below the *Araxilevis* zone in Djulfa. RUZHENTSEV [1965] was of the opinion that the *Codonofusiella* zone belongs to the base of the Djulfian, whereas STEPANOV *et. al.* [1969] interpreted the *Codonofusiella* zone as the top of the Khachikian. Following WATERHOUSE [1971] this zone is characterized by the Kathwai-fauna that includes the uppermost representatives of *Waagenophyllum* in this section, too.

Relying upon these findings the present author correlates the stratigraphical position of the Latest Permian beds of the railway-cut Nr. 5 near Nagyvisnyó compared to that of the Djulfa region as presented on the Table 1.

TABLE 1

Stage	Faunal horizon of Waterhouse	Iran/Transcaucasia	Railway-cut Nr.5 near Nagyvisnyó (Bükk-Mountains)
Djulfian	Makarewan Ogbian Vedian	Dorsham stage	?
	Baisalian	<i>Vedioceras</i> <i>Araxoceras</i> <i>Tyloplecta</i> - <i>Araxilevis</i> fauna	<i>Lyttonia</i> beds
Gua- da- lu- pian	Kathwai	<i>Codonofusiella</i> zone	Underlay of the „ <i>Lyttonia</i> beds”

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