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***Paraclausastrea vorarlbergensis* sp. nov.; a new coral from the Lower Cretaceous of western Austria (Scleractinia; upper Barremian-lower Aptian; Schrattenkalk Fm.; Vorarlberg)**

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Abstract

The new taxon *Paraclausastrea vorarlbergensis* sp. nov. is described from the upper Barremian-lower Aptian (Schrattenkalk Fm.) of western Austria (Vorarlberg). It belongs to the montlivaltiids and is characterized by thamnasterioid to submeandroid corallite integration, diameters of corallites ranging between 3 and 6.5 mm, and septa that are generally developed in 4 incomplete cycles in 6 generally irregular systems. In a small number corallites that are around 6 mm in diameter, 4 complete cycles are present. In corallites that are around 2 mm in diameter, usually between 12 and 18 septa are present. The new species differs from all other forms of *Paraclausastrea* in having the largest number of septa. This is the first report of this genus for the Schrattenkalk Formation.

Key words: Lower Cretaceous, Helvetic Unit (Schrattenkalk Fm.), Vorarlberg (Austria), taxonomy, morphology, Scleractinia

Introduction

Up to now, the genus *Paraclausastrea* ZLATARSKI, 1968, has been reported from only a very small number of Lower Cretaceous localities. The species *P. chevalieri* ZLATARSKI, 1968, and *P. grandidentata* ZLATARSKI, 1968, were described from the Aptian of Bulgaria. SIKHARULIDZE (1985) assigned material from the Hauterivian of Georgia (in Caucasus) to *P. aff. grandidentata* ZLATARSKI, 1968. Later, MORYCOWA & MASSE (1998) described the species *P. pulchra* and *P. valclusensis* from the Lower Aptian of southern France. Subsequently, the species *P. pulchra* was reported from the upper Aptian-Albian of the Esfahan region of central Iran (BARON-SZABO *et al.*, 2003) and from the upper Aptian-Lower Albian of the Koppeh Dagh region of northeastern Iran (described as *P. cf. pulchra*) (PANDEY *et al.*, 2007).

From the Schrattenkalk Formation (upper Barremian-lower Aptian), various types of solitary and colonial montlivaltiids have been known for over a century (e.g., KOPY 1896–1898; SCHOLZ, 1984; MORYCOWA *et al.*, 1995; MORYCOWA & DECROUEZ, 2006; BARON-SZABO, 1997, 2014), but the genus *Paraclausastrea* was never reported until now. The purpose of the current work is to describe the new species *Paraclausastrea vorarlbergensis* from the Schrattenkalk Formation of western Austria (Fig. 1).

Material and methods

The material used in the current work was collected from the Schrattenkalk Formation at Brandalpe-Kuhberg (upper Barremian-lower Aptian) in western Austria (Vorarlberg) (Fig. 1). The material is housed at “Inatura” Museum (VNS), Dornbirn, Vorarlberg, Austria. For identification of the material, polished surfaces of the specimen and thin sections of both cross and longitudinal views were used.