

A new look at the Emsian (Early Devonian), sarcopterygian fishes from the Holy Cross Mountains, Poland, with a special reference to porolepiforms

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Sarcopterygian remains are relatively common in the so-called “Placoderm Sandstone” (storm-origin bone-bearing breccia) from the Emsian (Lower Devonian) of Podlądzie in the Holy Cross Mountains (Poland). Previous studies have mainly referenced the presence of dipnomorphs, chiefly portrayed by porolepiforms and occurrences of dipnoans. Porolepiforms are represented by *Porolepis* ex gr. *P. posnaniensis*, based on scales, skull and shoulder-girdle elements, whereas other remains have been attributed to *Heimania* sp. The aim of this paper is to present the most detailed description of the porolepiforms and other sarcopterygian fishes from the “Placoderm Sandstone” from the Holy Cross Mountains since 1960s. Here, I present a new study based on more than 200 specimens, using both microtomographic (CT-scan) and silicon casts analyses, which indicate that not two, but at least three different taxa of sarcopterygians occur in the “Placoderm Sandstone” from Podlądzie. The new data presented herein depict a more diversified assemblage of sarcopterygians in the marginal-marine environment of the Lower Devonian of the Holy Cross Mountains than previously thought, and shed a new light on sarcopterygian diversity along the shores of the Old-Red continent.

Key words: Sarcopterygii, Porolepiformes, Placoderm Sandstone, Devonian, Holy Cross Mountains, Poland.

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