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The oldest shark face—anatomy of the Devonian elasmobranch *Phoebodus*

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Phoebodus was recognized as the earliest elasmobranch known from articulated remains, a group which constitutes most modern cartilaginous fish comprising sharks, skates and rays. Its elongate body, the presence of two dorsal fins with fin spines, and the elongate head had already been described. Based on spectacularly well-preserved fossils, we add new anatomical information on its exact body proportions, the paired and caudal fins, the dermal denticles, the skull morphology, the endocast, and the gill skeleton. These new skeletons from the Famennian (Upper Devonian) of Morocco (c. 367 Ma) permit a much-improved reconstruction of the anatomy of *Phoebodus*. The new materials comprise the oldest elasmobranch specimens preserving the complete head in three dimensions. Additionally, the new materials yield information about growth and diet and thus position in the trophic network. Despite the newly coded characters, the phylogenetic position of the genus *Phoebodus* with the oldest teeth dating to the early Givetian remains that of the oldest stem-elasmobranch in the Bayesian analyses.

Key words: Chondrichthyes, Elasmobranchii, Famennian, ontogeny, exceptional preservation, Fossillagerstätten.

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