The first skeletal remains of *Phoebodus politus*
Newberry 1889 (Chondrichthyes: Elasmobranchii) and its ecology

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*Phoebodus* is a chondrichthyan, which was widely distributed during the Devonian. It includes around 13 species that are largely based on their characteristic tricuspid teeth so far (Ginter et al. 2010). Teeth associated to remains of skulls and a few axial skeletons were recently found in Famennian (Late Devonian) outcrops of the eastern Anti-Atlas of Morocco. The skulls are often three-dimensionally preserved enabling CT-scanning and subsequent reconstruction of brain endocasts, branchial arches, orbits and jaws. The teeth of these specimens show some important characteristics of *Phoebodus politus* that was found in the Cleveland Shales of Ohio before (Newberry, 1889). First examinations on the remains show affinities to hybodontiform sharks and to the Carboniferous *Thrinacoselache gracia* Grogan & Lund, 2007 that already was suggested to be closely related to *Phoebodus* (by, e.g., Ginter et al. 2010). Moreover, morphological similarities to the modern, only distantly related, thrilled sharks (*Chlamydoselache*) such as the tooth morphology and the elongated body indicate similar functional morphology of the jaws and dentition.

The here described remains of *Phoebodus politus* are associated with skeletons of cladoselachian and ctenacanthid chondrichthyans, several placoderm species (*Dunkleosteus*, ?*Driscollaspis*, undescribed placoderm taxon) sarcopterygians, and possibly acanthodians. Phyllocarid crustaceans occur also in great abundance and likely were an important food source for the chondrichthyans. The body sizes and the massive fin spines of some chondrichthyans in combination with their abundance show that they likely competed with giant armored fish during the Late Devonian.

REFERENCES