

## Late Cretaceous sharks *Cretoxyrhina* and *Cardabiodon* from Montana, USA

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The middle part of the Cretaceous represents a time of high diversity and rapid rates of dental evolution in lamniform sharks. Several species had a very wide spatial distribution with recorded occurrences in both hemispheres. We have examined isolated teeth of *Cretoxyrhina* and *Cardabiodon* from eastern Russia, Mangyshlak in Kazakhstan and the Western Interior of the USA. The material indicates that samples of isolated teeth of the two genera have high potential in intercontinental correlation of the upper Albian to mid-Turonian interval in mid-palaeolatitude deposits, poor in other age-diagnostic fossil groups. The utilization of these lamniforms in mid-Cretaceous biostratigraphy is currently hampered by the nearly total absence in the literature of well illustrated, well dated and sufficiently large samples of isolated teeth of the two genera. As a first step towards the establishment of an intercontinental elasmobranch zonation for mid-Cretaceous strata in temperate palaeo-regions, we describe and illustrate samples of teeth of *Cardabiodon venator* sp. nov. and *Cretoxyrhina mantelli* from the lower middle Turonian *Collignoniceras woollgari* regular Zone in the Fairport Member of the Carlile Shale in east-central Montana, USA. These samples could serve as reference points for future biostratigraphic studies of *Cretoxyrhina* and *Cardabiodon*. The extinction of *Cretoxyrhina* may be diachronous, as regional last appearance data range from the upper upper Santonian (*Marsupites testudinarius* Zone) in Western Australia to the uppermost lower Campanian (informal *Belemnelloccamax mammillatus* zone; a lateral equivalent to the German *Gonoteuthis quadrata gracilis*/*Belemnitella mucronata* Zone) in southern Sweden.

**Key words:** Cardabiodon, Cretoxyrhina, Lamniformes, sharks, biostratigraphy, Cretaceous.

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