

Neoselachians from the Danian (early Paleocene) of Denmark

Jan S. Adolfssen and David J. Ward *Acta Palaeontologica Polonica* 60 (2), 2015: 313-338 doi: http://dx.doi.org/10.4202/app.2012.0123

A diverse elasmobranch fauna was collected from the early Danian Rødvig
Formation and the early to middle Danian Stevns Klint Formation at Stevns Klint
and from the middle Danian Faxe Formation at Faxe, Denmark. Teeth from 27
species of sharks are described including the earliest records of *Chlamydoselachus* and *Heptranchias howelli* from Europe. The fauna collected at the Faxe quarry is rich in large species of shark
including *Sphenodus lundgreni* and *Cretalamna appendiculata* and includes no fewer than four species of
Hexanchiformes. The species collected yield an interesting insight into shark diversity in the Boreal Sea
during the earliest Paleogene. The early Danian fauna recorded from the Cerithium Limestone represents
an impoverished Maastrichtian fauna, whereas the fauna found in the slightly younger bryozoan
limestone is representative of a pronounced cold water fauna. Several species that hitherto have only been
known from the Late Cretaceous have been identified, clearly indicating that the K–T boundary was not
the end of the Cretaceous fauna; it lingered and survived into the early Danian.

Key words: Chondrichthyes, Faxe Formation, *Cerithium* Limestone, Danian, Paleocene, Denmark.

Jan S. Adolfssen [janadolfssen@yahoo.com], Natural History Museum of Denmark, Østervoldgade 5-7, DK-1350 Copenhagen, Denmark; David. J. Ward [djw@nhm.ac.uk], Department of Earth Sciences, The Natural History Museum, London, SW7 5BD, United Kingdom.

This is an open-access article distributed under the terms of the Creative Commons Attribution License (for details please see <u>creativecommons.org</u>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.