



## RECOMMENDATION

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## A recommendation of: The last surviving Thalassocheyleidia—A new turtle cranium from the Early Cretaceous of the Purbeck Group (Dorset, UK)

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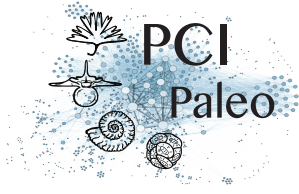
### A recommendation of

Anquetin J and André C (2020). The last surviving Thalassocheyleidia—A new turtle cranium from the Early Cretaceous of the Purbeck Group (Dorset, UK). *PaleorXiv*, 7pa5c, version 3, peer-reviewed by PCI Paleo. DOI: 10.31233/osf.io/7pa5c

Stem- and crown-group turtles have a rich and varied fossil record dating back to the Triassic Period. By far the most common remains of these peculiar reptiles are their bony shells and fragments of shells. Furthermore, if historical specimens preserved skulls the preparation techniques at that time were inadequate for elucidating details of the cranial structure. Thus, it comes as no surprise that most of the early research on turtles focused on the structure of the shell with little attention paid to other parts of the skeleton. Starting in the 1960s, this changed as researchers realized that there is considerable variation in the structure of turtle shells even within species and that new methods of fossil preparation, especially chemical methods, could reveal a wealth of phylogenetically important features in the structure of the skulls of turtles. The principal worker was Eugene S. Gaffney of the American Museum of Natural History (New York) who in a series of exquisitely illustrated monographs revolutionized our understanding of turtle osteology and phylogeny.

Over the last decade or so, a new generation of researchers has further refined the phylogenetic framework for turtles and continued the work by Gaffney. One of the specialists from this new generation is Jérémy Anquetin who, with a number of colleagues, has revised many of the Jurassic-age stem-turtles that existed in coastal marine settings in what is now Europe. Collections in France, Germany, Switzerland, and the UK house numerous specimens of these forms, which attracted the interest of researchers as early as the first decades of the nineteenth century. Despite this long history, however, the diversity and interrelationships of these marine taxa remained poorly understood.

In the present study, Anquetin and his colleague Charlotte André extend the fossil record of these stem-turtles, recently hypothesized as a clade Thalassocheyleidia, into the Early Cretaceous (Anquetin



and André, 2020). They present an excellent anatomical account on a well-preserved cranium from the Purbeck Formation of Dorset (England) that can be referred to Thalassochelydia and augments our knowledge of the cranial morphology of this clade. Anquetin and André (2020) make a good case that this specimen belongs to the same taxon as shell material long ago described as *Hylaeochelys belli*.

## References

Anquetin J and André C (2020). The last surviving Thalassochelydia—A new turtle cranium from the Early Cretaceous of the Purbeck Group (Dorset, UK). *PaleorXiv*, 7pa5c, version 3, peer-reviewed by PCI Paleo. doi: 10.31233/osf.io/7pa5c.

## Appendix

Reviews by Igor Danilov and Serjoscha Evers, DOI: 10.24072/pci.paleo.100005.