

# abstract

## British Plesiosaurs



Plesiosaurs were one of the most successful groups of aquatic tetrapods, they span 135 million years of the Jurassic and Cretaceous (199.6-65.5 Mya), and successfully adapted to life in the open ocean with a unique body plan.

Perhaps surprisingly, almost everything known of the first half (~55Ma) of plesiosaur evolution is known from numerous British fossils, mostly collected in the 19th century by collectors including Mary Anning and Thomas Hawkins. However, due to lack of research focus, our understanding of early plesiosaurian evolution is poor compared to that of other marine tetrapods such as ichthyosaurs and cetaceans.

New work on old fossils shows unexpectedly high diversity of plesiosaurs immediately following the end-Triassic extinction event. However, the range of body plans represented increased only gradually. This early stage of the group's history reflects lifting of constraints on body mass and proportions, giving rise to the characteristically long-necked form within 20 million years, and to giant taxa up to 12 metres long within 40 million years.

New technology allows us to look inside the skulls of plesiosaurs and reconstruct their sensory anatomy, demonstrating that the anatomy of the organ of balance was more similar among closely-related forms than among morphologically similar forms (those with similar proportional neck lengths). Vision and hearing are new avenues of enquiry for understanding the paleobiology of these exceptional extinct vertebrates.

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British Plesiosaurs:  
history (200 a),  
evolution (55 Ma)  
and new research.

an illustrated talk by Dr. Roger Benson



7.30 pm

March 15

Earth Sciences Department  
South Parks Road, Oxford.



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