

A new plesiosauroid from the Toarcian (Lower Jurassic) of Alhadas, Portugal

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A partial plesiosauroid skull from the São Gião Formation (Toarcian, Lower Jurassic) of Alhadas, Portugal is re-evaluated and described as a new taxon, *Lusonectes sauvagei* gen. et sp. nov. It has a single autapomorphy, a broad triangular parasphenoid cultriform process that is as long as the posterior interpterygoid vacuities, and also a unique character combination, including a jugal that contacts the orbital margin, a distinct parasphenoid–basisphenoid suture exposed between the posterior interpterygoid vacuities, lack of an anterior interpterygoid vacuity, and striations on the ventral surface of the pterygoids. Phylogenetic analysis of Jurassic plesiosauroids places *Lusonectes* as outgroup to "microcleidid elasmosaurs", equivalent to the clade Plesiosauridae. *Lusonectes sauvagei* is the only diagnostic plesiosaur from Portugal, and the westernmost occurrence of any plesiosaurian in Europe.

Key words: Elasmosauridae, Plesiosauridae, Plesiosauria, *Lusonectes sauvagei*, plesiosaur, Jurassic, Toarcian, Lusitanian basin, Portugal.

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