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The phylogenetic position of the ornithischian dinosaur *Stenopelix valdensis* from the Lower Cretaceous of Germany: implications for the early fossil record of Pachycephalosauria

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The holotype of *Stenopelix valdensis* is the most completely known dinosaur specimen from the "Wealden" (Lower Cretaceous) of northwestern Germany, but its phylogenetic position has remained highly controversial. Most recent authors have suggested affinities with the ornithischian clade Marginocephalia, and most commonly to the marginocephalian subclade Pachycephalosauria. A pachycephalosaurian identity would make *Stenopelix* the only confirmed pre–Late Cretaceous member of this clade, breaking up an extensive ghost lineage which extends to the inferred origin of Pachycephalosauria in the Middle–Late Jurassic. Based upon re–examination of the holotype we here review the characters that have previously been used to assign *Stenopelix* to either Pachycephalosauria or Ceratopsia. All of these characters are problematic, being based upon inaccurate anatomical interpretations, or having more widespread distributions within Ornithischia than previously realised. We conclude that although the overall anatomy of *Stenopelix* is consistent with marginocephalian affinities, there is insufficient evidence to support referral to either Pachycephalosauria or Ceratopsia; we consider *Stenopelix* ?Marginocephalia. A brief review indicates that there is no compelling fossil evidence for pachycephalosaurs prior to the Late Cretaceous.

Key words: Ornithischia, Pachycephalosauria, Marginocephalia, *Stenopelix*, Cretaceous, Germany.

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