

Serial homology: the crests and cusps of mammalian teeth

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Acta Palaeontologica Polonica 38 (3-4), 1993: 145-158

I discuss the nature of serial homology. Mammalian teeth have a relatively dense fossil record, which permits an often close reconstruction of the evolution of patterns of serial homology. I identify the main crests of mammalian teeth, summarize their evolution, and provide new names where necessary. Serial homologies can change in evolution, originate, and disappear. They can be partial, unlike historical homologies. Teeth exemplify these phenomena, and their patterns can be viewed topologically as well as in other ways. Some, but not all, crests and cusps of upper teeth appear to be homologous to structures of lower teeth. The pure morphology of Goethe is a living science.

Key words: serial homology, teeth, crests, cusps.

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