ACTA PALAEONTOLOGICA POLONICA

Growth and life habits of the Triassic cynodont *Trirachodon*, inferred from bone histology

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Acta Palaeontologica Polonica 49 (4), 2004: 619-627

Growth pattern and lifestyle habits of the Triassic non-mammalian cynodont *Trirachodon* are deduced from bone histology and cross-sectional geometry. Several skeletal elements of *Trirachodon* were examined in order to document histological changes during ontogeny, as well as histovariability in the skeleton. The bone histology of all the elements consists of a moderately vascularized, periodically interrupted, fibro-lamellar bone tissue. This suggests that the overall growth of *Trirachodon* was probably rapid during the favourable season, but decreased or ceased during the unfavourable season. As the environment is thought to have been semi-arid with seasonal rainfall, it is possible that Trirachodon was sensitive to such environmental fluctuations. Some inter-elemental histovariability was noted where the number and prominence of growth rings varied. Limb bone cross-sectional geometry revealed a relatively thick bone wall and supports earlier proposals that *Trirachodon* was fossorial.

Key words: Cynodonts, Trirachodon, lifestyles, bone histology, growth patterns.

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