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Bone histology of *Protoceratops andrewsi* from the Late Cretaceous of Mongolia and its biological implications

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Protoceratops andrewsi is one of the best known and abundant ornithischian dinosaurs from the Djadokhta Formation (Late Cretaceous, Mongolia) and a subject of many morphological studies. Here we present the first study of its bone tissue (from the long bones, frill, and rib), describing microstructure, extent of remodeling, and growth tempo changes in ontogeny. Several specimens representing juvenile, subadult, and adult age stages have been studied. In general, paleohistology of *Protoceratops* is quite uniform throughout ontogeny, showing basic fibrolamellar bone complex with prevalence of woven-fibered bone and scarce remodeling. In adults the parallel-fibered bone matrix forms distinct although irregular zonation in the cortex until dominating it. The bone displays noteworthy abundance of fossilized fibers (including Sharpey's fibers), which apparently strengthen the tissue and enhance its elasticity. Growth tempo increased in the studied femora of *Protoceratops* at the subadult stage, which suggests changes in bone proportions (i.e., elongation of the hind limbs) in a similar manner as it was observed in a more basal *Psittacosaurus*.

Key words: Dinosauria, Ornithischia, Ceratopsia, paleohistology, ontogeny, growth tempo, Cretaceous, Mongolia.

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