ACTA PALAEONTOLOGICA POLONICA

Dinosaurs, mammals, and Mesozoic taphonomy

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Acta Palaeontologica Polonica 28 (1-2), 1983: 209-213

Predation is an important mode by which animals enter the fossil record. Reptilian and amphibian digestive systems decalcify prey, whereas those of small mammalian predators do not. The origin of endothermy in the fossil record
should be marked by abundant, undecalcifled coprocoenoses. If predacious dinosaurs were endothermic, microvertebrate coprocoenoses produced by them should reflect this. Ectothermic warm-bloodedness in dinosaurs could have resulted from high ambient temperatures, at least during the Cretaceous. An eleva ted body temperature in reptiles may be more important for digestion than for levels of activity. A short-term lowering of temperatures at the end of the Cretaceous could have induced digestive failure in reptiles, without affecting other physiological activities. A trend toward giantism in herbivores may be a means of processing forage high in cellulose.

Key words: taphonomy, dinosaurs, mammals, digestion, Mesozoic.

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