

Redescription of neoceratopsian dinosaur *Archaeoceratops* and early evolution of Neoceratopsia

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Acta Palaeontologica Polonica 48 (2), 2003: 261-272

Archaeoceratops oshimai Dong and Azuma, 1997 is a basal neoceratopsian from the late Early Cretaceous of Mazongshan area, Gansu Province, northwest China. Here we provide a detailed description on *Archaeoceratops oshimai* based on both the holotype, which consists of a well preserved, nearly complete skull, partial vertebral column, and partial pelvis, and the paratype, which consists of a partial vertebral column including a nearly complete tail, a partial pelvis, fragmentary hind limb bones, and a complete pes. Cladistic analysis shows that *Archaeoceratops* is the sister group to all currently known Late Cretaceous Neoceratopsia, and Late Cretaceous Neoceratopsia diverged into two clades: the Asian Protoceratopsidae and the North American Ceratopsoidea, indicating a dual evolution for the two major groups of horned dinosaurs in two landmasses of Late Cretaceous. A suite of derived features characterizes Ceratopsoidea, such as a round-shaped external naris, a long caudolateral process of the rostral bone, and ventrally curved premaxillary ventral edge.

Key words: Dinosauria, Neoceratopsia, Cretaceous, China, Gansu Province, Mazongshan area.

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