



This is a review of Cretaceous metatherian mammals, the group that includes marsupials and their closest relatives, which was one of the most dominant groups of mammals near the end of the Mesozoic.

Metatherians, the group of mammals most closely related to placental mammals, and which today is represented by marsupials, enjoyed a long and complex history during the Cretaceous. Metatherians differ from placental mammals in giving birth to extremely poorly-developed young followed by an extended period of suckling. This distinctive process is reflected in their dental formula and tooth replacement pattern. Metatherian mammals were present throughout the northern continents through the Cretaceous, but were especially abundant in the Late Cretaceous of western North America, where they are represented chiefly by fossil jaws and teeth. Here we provide a review of the phylogenetic relationships of metatherians with respect to other mammals, discuss the taxonomic definition and diagnosis of Metatheria, outline the Cretaceous history of major metatherian clades, describe the paleobiology, biogeography, and macroevolution of Cretaceous metatherians, and provide a physical and climatic background of Cretaceous metatherian faunas. During the Late Cretaceous, terrestrial ecosystems went through radical changes as flowering plants, the angiosperms, rapidly diversified. However, the pattern of metatherian diversity during this interval does not closely track that of angiosperms. Metatherians were diverse in the latest Cretaceous of North America, but underwent a profound extinction at the end of the Cretaceous. Only a few lineages of metatherians survived into the Paleogene.

THE ORIGIN AND EARLY EVOLUTION OF METATHERIAN MAMMALS: THE CRETACEOUS RECORD

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Asiatherium reshetovi Trofimov & Szalay, 1994

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