

## Djadochtatheria - a new suborder of multituberculate mammals

Zofia Kielan-Jaworowska and Jørn H. Hurum *Acta Palaeontologica Polonica* 42 (2), 1997: 201-242

Mongolian Late Cretaceous multituberculates (except Buginbaatar) form a monophyletic group for which the suborder Djadochtatheria is proposed. Synapomorphies of Djadochtatheria are: large frontals pointed anteriorly and deeply inserted between the nasals, U shaped fronto parietal suture, no frontal maxilla contact, and edge between palatal and lateral walls of premaxilla. Large, rectangular facial surface of the lacrimal exposed on the dorsal side of the cranial roof is present in all djadochtatherians, but may be a plesiomorphic feature. It is also possible that in djadochtatherians the postglenoid part of the braincase is relatively longer than in other multituberculates. Djadochtatherians have an arcuate p4 (secondarily subtrapezoidal in *Catopsbaatar*) that does not protrude dorsally over the level of the molars (shared with Eucosmodontidae), I3 placed on the palatal part of the premaxilla (shared with the eucosmodontid Stygimys and the cimolomyid Meniscoessus). The small number of cusps on the upper and lower molars and no more than nine ridges on p4 are possibly plesiomorphies for Djadochtatheria. The djadochtatherian Nessovbaatar multicostatus gen. et sp. n., family incertae sedis from the Barun Goyot Formation is proposed. New specimens of the djadochtatherian genera Kryptobaatar, ?Djadochtatherium , and Kamptobaatar are described and revised diagnoses of these taxa and Sloanbaatar are given. A cladistic analysis of Mongolian Late Cretaceous multituberculates (MLCM), using Pee Wee and NONA programs and employing 43 dental and cranial characters, 11 MLCM taxa, five selected Late Cretaceous or Paleocene multituberculate genera from other regions, and a hypothetical ancestor based on the structure of Plagiaulacoidea, is performed. The Pee Wee program yielded two equally fit trees that confirm the monophyly of MLCM excluding Buginbaatar . Kryptobaatar, Djadochtatherium, Catopsbaatar, and Tombaatar form a clade, for which the family Djadochtatheriidae is proposed. Chulsanbaatar is the sister taxon of this clade. Bulganbaatar and Nemegtbaatar are the sister group of all other djadochtatherians. Kamptobaatar, Sloanbaatar , and *Nessovbaatar* form a separate clade in the Pee Wee tree. The NONA program yielded thirty equally parsimonious trees and a strict consensus tree with a poor resolution.

**Key words:** *Djadochtatherium, Kamptobaatar, Kryptobaatar, Nessovbaatar, Sloanbaatar,* Multituberculata, Late Cretaceous, Mongolia.

Zofia Kielan Jaworowska [<u>zkielan@twarda.pan.pl</u>], Instytut Paleobiologii PAN, ul. Twarda 51/55, PL 00 818 Warszawa, Poland. Jørn H. Hurum [j.h.hurum@toyen.uio.no], Paleontologisk Museum, Universitetet i Oslo, Sars gate 1, N 0562 Oslo, Norway. This is an open-access article distributed under the terms of the Creative Commons Attribution License (for details please see <u>creativecommons.org</u>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

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