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Skull structure in *Catopsbaatar* and the zygomatic ridges in multituberculate mammals

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The late Campanian djadochtatherioid multituberculate *Catopsbaatar catopsaloides* was originally known from three skulls from Hermiin Tsav in the Gobi Desert (Mongolia). Three more skulls from Hermiin Tsav are now available, associated with parts of the previously unknown postcranial skeleton, which will be described separately. We describe herein the skull and dentition of *C. catopsaloides* , based on all available material, housed in PIN, PM, and ZPAL collections. The genera *Catopsbaatar, Djadochtatherium*, and *Kryptobaatar* share several characters, unknown in Tombaatar, such as very long postorbital processes directed postero-laterally and downwards, parietal ridges extending from the posterior margins of the postorbital processes postero-medially, and nuchal crests with prominent lateral wings, incurved anteriorly in the middle, so that the skull in dorsal view is shorter in the middle than laterally. *Catopsbaatar* shares with *Djadochtatherium* a very high and prominent anterior zygomatic ridge, and presence of the masseteric protuberance, but differs from it and from other djadochtatherioid genera in having the orbit situated more posteriorly, the intermediate zygomatic ridge adhering to the anterior ridge, and a smaller trapezoidal (rather than crescent-shaped) p4 without ridges; it differs from *Kryptobaatar* and *Djadochtatherium* in having three upper premolars (P2 being lost) and shares this last character with Tombaatar. *Catopsbaatar* is known not only from Hermiin Tsav, but also from Baruungoyot Formation of Khulsan, represented there by a single m2. We demonstrate that the separation of the masseter superficialis into two parts, the origins of which leave scars on the lateral wall of the zygomatic arch surrounded by zygomatic ridges, occurs in all the multituberculates (beginning with Paulchoffatiidae), and is regarded as a multituberculate autapomorphy.

Key words: Mammalia, Multituberculata, Djadochtatheriidae, Catopsbaatar, Djadochtatherium, Kryptobaatar, zygo– matic ridges, Cretaceous, Gobi Desert.

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