

The anatomy of the Late Miocene baleen whale *Cetotherium riabinini* from Ukraine

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We re-describe *Cetotherium riabinini*, a little-known baleen whale from the Late Miocene of the Eastern Paratethys represented by an exceptionally well-preserved skull and partial skeleton. *C. riabinini* is shown to be closely related to *C. rathkii*, the only other member of the genus. Cetotheriids from the Eastern Paratethys are remarkable for their pachyosteosclerotic postcranial skeleton, and are among the youngest known cetaceans displaying this morphology. *C. riabinini* likely followed a generalised feeding strategy combining herpetocetine-like continuous suction feeding, as seen in the mallard *Anas platyrhynchos*, and eschrichtiid-like intermittent suction feeding. This hypothesis may explain the mechanism and function of cranial kinesis in baleen whales. Many characteristics of the mysticete skull likely evolved as a result of cranial kinesis, thus leading to multiple instances of morphological convergence across different phylogenetic lineages.

Key words: Cetacea, Mysticeti, Cetotheriidae, pachyosteosclerosis, suction feeding, cranial kinesis, Miocene, Paratethys, Ukraine.

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