

NEW UNIQUE MUSCLE OF THE ELBOW JOINT IN HOWLER MONKEY (ALOUATTA SENICULUS)

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In this study, we are investigating the group of muscles located on the preaxial aspect of a forearm in howler monkey (*Alouatta seniculus*). All primates, including humans, usually have three muscles in this area: m. supinator, m. brachioradialis, m. extensor carpi radialis longus and m. extensor carpi radialis brevis. However, some mammals do not have m. brachioradialis and have mm. extensores carpi radiales joined in one. During dissection of a young specimen of the howler monkey, we discovered a supernumerary muscle. This muscle originates at the condylar ridge of humerus distally of the m. brachioradialis, runs medial to it and inserts on the proximal part of the radius. To our knowledge, in the literature there are no references to such a muscle either in howler monkey, or in other monkey species. On the other hand, in human surgery there are reports on the reduplication, anomalous structure and topography of the four typical preaxial muscles of the forearm occurring at high frequency (up to 50%). A research of such anomalous muscles is very important for the use of their tendons in 'hand surgery'. To determine the homology of the unusual muscle that we found, we compared it with the known abnormal and extra muscles of the preaxial aspect of forearm in humans and other primates, as well as some other mammals and reptiles. In this area of forearm, in some lower tetrapods there is a fifth muscle called m. tractor radii, which is most similar in its position to the supernumerary muscle of the howler monkey, but differs from it, as well as from all the other muscles considered, by its innervation. Since the unique muscle that we describe here in howler monkey does not have any clear homology with the known forearm muscles, we suggest calling it the m. contrahens cubiti. This term corresponds to its function as it decreases the angle in the elbow.

Key words: *primates, forearm, extensors, anomaly*

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CARNIVORES FROM THE LATE MIOCENE LOCALITY OF HAYRANLI (HAYRANLI, SIVAS, TURKEY)

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The locality of Hayranlı-Sivas is one of the few known late Miocene localities in Turkey with the presence of large mammals. Thus, the study of Hayranlı is very important to understand the mammal evolution in Turkey. The locality is situated in the central Anatolian plateau (Sivas, Turkey) and includes many fossil remains including carnivores. Aim of this study is contribute to carnivore evolution in Turkey based on the fossil findings in Hayranlı-Sivas. The study findings indicate the presence of the following taxa: *Hyaenictitherium wongii*, *Ictitherium intuberculatum*, *Lycyaena dubia*, and *Machairodus giganteus*. *L. dubia* is the first record from the Anatolia. The material of each taxon was described and determined by comparing with other materials from various Eurasian localities. During Early or Middle Turolian 9-7 Ma. (MN 11-12), shrubland and open savanna grassland landlife might contribute to rich faunal diversity in Hayranlı location. Moreover, carnivores of area represented by four taxa bio-chronologically, have been adapted to this ecology during the evolutionary processes. *M. giganteus* in closed ecosystem locality HAY-91 and *H. wongii*, *I. intuberculatum*, and *L. dubia* in open ecosystem locality HAY-2 are probably the most dominant carnivores of the survey area.

Key words: *carnivore, fossil, evolution, Sivas, Turkey*

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