Public Abstract

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Title:Functional Morphology of the Anthropoid Talocrural Joint

The form and function of the talocrural joint (ankle) of anthropoids is frequently used to infer the movements of fossil monkeys and apes without clear and quantitative data to support these inferences. Specific features on the talus and calcaneus have been hypothesized to reflect a greater emphasis on vertical climbing in anthropoids. This research evaluated these features in living anthropoids, and compared them between pairs of taxa representing different emphases on climbing in their locomotor repertoires. Although taxa vary in these features, they do not do so in predicted ways. Results suggest that these aspects of ankle joint functional morphology are not associated with climbing in living anthropoids, and cannot be used in isolation to predict behavior of fossil taxa. Although this research has evaluated only broad, pairwise contrasts between diverse groups of extant taxa, variation identified here provides justification for a more in depth, detailed analysis of ankle functional morphology in monkeys and apes.