

Are primate nails an adaptation for infant carrying?

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During the course of evolution from a generalized arboreal Archontan mammal to a more modern Euprimate, primates developed dentition for specialized frugivory, improved grasping, stereoscopic vision, and leaping capabilities. Thumb nails, arguably the most uniquely derived trait of primates, evolved early in this process, purportedly as part of improved feeding efficiency during quadrupedal grasping locomotion on terminal branches of angiosperm flora, which were concurrently emerging in the late Cretaceous. Here I present a related yet alternative theory for the origins of primate nails centering on the similarly unique primate behavior of infant carrying. Using a simple phylogenetically controlled statistical test of data collected from only two different recent studies, I reveal a significant coevolutionary relationship (PGLM; $p < .001$) between infant “riding” and the number of nails (vs claws) on the hands of 50 primate species. The timing of the early emergence, exceptions (Callitrichiaes) and other possible ecological pressures (predation & canopy formation) are discussed.