

Abstract Submitted
for the OSF16 Meeting of
The American Physical Society

Forelimbs of theropod dinosaurs on the basis of humeral bone strength. SCOTT LEE, ZACHARY RICHARDS, SIMIAO YE, YINGYING LIU, RONG LIU, DONALD WHITE, University of Toledo — The humeral section modulus is evaluated for members of Ceratosauria, Carnosauria, Tyrannosauroidae, Compsognathidae, Ornithomimosauria, Therizinosauria, Oviraptorosauria, Avialae, Troodontidae, and Dromaeosauridae to determine the strength of their forelimbs. The effects of scaling are evident. The strength of humeri shorter than 20 cm show no dependence on taxon. In contrast, the strength of humeri longer than 20 cm do show a dependence on taxon. Ceratosaurs, carnosaur, tyrannosaurs, and therizinosaurians have very strong humeri. Ornithomimosaurians are observed to have humeri that are weaker than the humeri of ceratosaurs, carnosaur, and tyrannosaurs. The humeri of the herbivorous therizinosaurians are observed to have the same strength as the humeri of ceratosaurs, carnosaur, and tyrannosaurs.

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Date submitted: 07 Sep 2016

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