

Abstract Submitted  
for the MAR15 Meeting of  
The American Physical Society

**Feeding strategies as revealed by the section moduli of the humerus bones in bipedal theropod dinosaurs** SCOTT LEE, ZACHARY RICHARDS, University of Toledo — The section modulus of a bone is a measure of its ability to resist bending torques. Carnivorous dinosaurs presumably had strong arm bones to hold struggling prey during hunting. Some theropods are believed to have become herbivorous and such animals would not have needed such strong arms. In this work, the section moduli of the humerus bones of bipedal theropod dinosaurs (from *Microvenator celer* to *Tyrannosaurus rex*) are studied to determine the maximum bending loads their arms could withstand. The results show that bending strength is not of uniform importance to these magnificent animals. The predatory theropods had strong arms for use in hunting. In contrast, the herbivorous dinosaurs had weaker arms.

Scott Lee  
University of Toledo

Date submitted: 13 Oct 2014

Electronic form version 1.4