

Abstract Submitted
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The forelimb of *Tyrannosaurus rex*: a pathetic vestigial organ or an integral part of a fearsome predator? S.A. LEE, University of Toledo — The function of the forelimb of *Tyrannosaurus rex* remains a controversial topic. It was too short to transfer food directly to the mouth. Since *Tyrannosaurus rex* was bipedal, the forelimb was not involved in locomotion. Suggestions for its possible use include providing an initial push for a laying animal to stand or to hold position during mating. We report numerical calculations performed to determine the moment of inertia of the forearm and the torques generated by the muscles of the arm, based on three-dimensional representations of the forelimb. Our results imply that the forelimb was capable of very high angular accelerations. We interpret this as being consistent with the hypothesis that the forelimb was used to control a struggling prey animal immediately before the death blow was delivered by the teeth of *Tyrannosaurus rex*.

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