

The systematics of Late Jurassic tyrannosauroid theropods from Europe and North America

Stephen L. Brusatte and Roger B.J. Benson *Acta Palaeontologica Polonica* 58 (1), 2013: 47-54 doi: http://dx.doi.org/10.4202/app.2011.0141

Recent discoveries of more than ten new species of tyrannosauroid theropods are helping to understand the origin and evolution of colossal body size and other characteristic features of *Tyrannosaurus rex* and its terminal Cretaceous relatives. Particularly important has been the discovery and reinterpretation of Late Jurassic tyrannosauroids from Europe and North America, which are intermediate in size and phylogenetic position between small basal tyrannosauroids and the largest Late Cretaceous species. The fragmentary nature of these Jurassic specimens, however, has frustrated attempts to understand their systematics and phylogeny. A new specimen from the Late Jurassic of England was recently named as a new species (*Stokesosaurus langhami*) of the genus *Stokesosaurus*, which is known from several fragmentary fossils from North America. We review the systematics and phylogeny of these European and North American specimens and show that there are no unequivocal synapomorphies uniting them. Furthermore, a revised phylogenetic analysis does not recover them as sister taxa. This necessitates a taxonomic revision of this material, and we name a new genus (*Juratyrant*) for the British specimen.

Key words: Dinosauria, Theropoda, Tyrannosauridae, *Tyrannosaurus*, anatomy, Jurassic, Europe, North America.

Stephen L. Brusatte [brusatte@gmail.com], Division of Paleontology, American Museum of Natural History, Central Park West at 79th St., New York, NY, 10024, USA and Department of Earth and Environmental Sciences, Columbia University, New York, NY, USA, current address: School of GeoSciences, The University of Edinburgh, Grant Institute, The King's Buildings, West Mains Road, Edinburgh EH9 3JW, UK; Roger B. J. Benson [rbb27@cam.ac.uk], Department of Earth Sciences, University of Cambridge, Downing Street, Cambridge, CB2 3EQ, UK and Department of Earth Sciences, University College London, Gower Street, London WC1E 6BT, UK; current address: Department of Earth Sciences, University of Oxford, South Parks Road, Oxford OX1 3AN, UK.

This is an open-access article distributed under the terms of the Creative Commons Attribution License (for details please see <u>creativecommons.org</u>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Full text (313.0 kB) |
Supplementary file (29.7 kB)