Institutional Abbreviations.—AMNH, American Museum of Natural History, New York, New York; BHI, Black Hills Institute of Geological Research, Hill City, South Dakota; BMNH, Natural History Museum, London, United Kingdom; CM, Carnegie Museum of Natural History, Pittsburgh, Pennsylvania; FMNH, Field Museum of Natural History, Chicago, Illinois; NCSM, North Carolina State Museum, Raleigh, North Carolina; SGM, Ministe´re de l'Energie et des Mines, Rabat, Morocco; UCMP, Museum of Paleontology, University of California at Berkeley, Berkeley, California; UMNH, Utah Museum of Natural History, Salt Lake City, Utah; USNM, National Museum of Natural History, Washington, D.C.; YPM, Peabody Museum of Natural History, Yale University, New Haven, Connecticut.

Table S2. General measurements for ziphodont specimens of *Varanus komodoensis* and theropods. SL = skull length; BL= body length; N = the number of crowns analyzed per specimen. All lengths are in meters. Data is taken directly from published sources (Therrien and Henderson 2007[1]; Paul 1988[2]; Seebacher 2003[3]; Brochu 2003[4]; Currie and Carpenter 2000[5]).

Genus	Specimen	SL	BL	N
Varanus	AMNH 37908	0.15	1.76	28
Varanus	AMNH 37909	0.24	3.09	16
Varanus	AMNH 37910	0.18	2.25	14
Varanus	AMNH 37911	0.22	2.77	21
Varanus	AMNH 37912	0.21	2.63	21
Varanus	AMNH 37913	0.21	2.68	12
Varanus	AMNH 74606	0.21	2.67	25
Varanus	AMNH 109498	0.21	2.70	20
Varanus	FMNH 22200	0.18	2.16	22
Acrocanthosaurus	NCSM 14345	1.23[1]	11.00[5]	26
Allosaurus	YPM 1930	0.68[1]	7.40[2]	3
Baryonyx	BMNH R9951	0.91[1]	9.50[2]	8
Carcharodontosaurus	SGM Din 1	1.60[1]	13.28[1]	6
Ceratosaurus	USNM 4735	0.63[2]	5.90[1]	4
Deinonychus	YPM 5232	0.33[1]	3.43[1]	11
Dilophosaurus	UCMP 37302	0.52[2]	6.03[2]	4
Dromaeosaurus	AMNH 5356	0.23[2]	2.61[1]	11
Tyrannosaurus	AMNH 5027	1.36[1]	11.49[1]	10
Tyrannosaurus	CM 9380	1.36[2]	12.00[3]	12
Tyrannosaurus	FMNH PR2081	1.39[1]	12.00[4]	17
Tyrannosaurus	UCMP 118742	1.75[2]	13.60[2]	5
Veloceraptor	AMNH 6515	0.19[1]	2.14[1]	7