

bears a closer affinity to the modern lion than to the tiger and jaguar. However, unlike the analysis on cranial variables reported in this study, the species were not identified with 100% certainty in a subsequent Jack-knifed analysis. One specimen of *P. atrox* was misidentified as a lion, and seven lions were misidentified as *P. atrox*, all of which were large, older males. The single misidentified specimen of *P. atrox* was LACMHC 2900-6, which is the smallest included specimen. Additionally, nine lions and one jaguar were misidentified as tigers; and six tigers were misidentified as lions. Dental measurements taken were: P3: anteroposterior length of crown; anteroposterior length of paracone, metacone, and parastyle; lateromedial width of crown across the paracone and metacone. P4: anteroposterior length of crown; anteroposterior length of metastyle, paracone, and parastyle; anteroposterior extent of protocone along medial face of tooth; lateromedial width of crown across the protocone and paracone. Symbols: ■, *Panthera atrox*; □, lion (*Panthera leo*; ♂); ☒, lion (*Panthera leo*; ♀); ◇, jaguar (*Panthera onca*; ♂); ⋄, jaguar (*Panthera onca*; ♀); ○, tiger (*Panthera tigris*; ♂); ⊗, tiger (*Panthera tigris*; ♀).

Supplementary Table 1.

The first 10 unweighted ($\alpha=0$) relative warps from the Thin Plate Splines analysis on mandibular shape in *Panthera atrox*; *P. leo*; *P. onca*; and *P. tigris*. Shown below are corresponding singular values (eigenvalues of ordinary principal components), and percentage of variance explained by each successive relative warp.

Singular values and percent explained for relative warps:

Warp	SV	Variance	Cum. variance
1	0.21525	24.01%	24.01%
2	0.20439	21.65%	45.66%
3	0.17626	16.10%	61.76%
4	0.13046	8.82%	70.58%
5	0.10420	5.63%	76.21%
6	0.09818	5.00%	81.20%
7	0.09343	4.52%	85.72%
8	0.07071	2.59%	88.32%
9	0.06621	2.27%	90.59%
10	0.06312	2.06%	92.65%