

Supplementary information

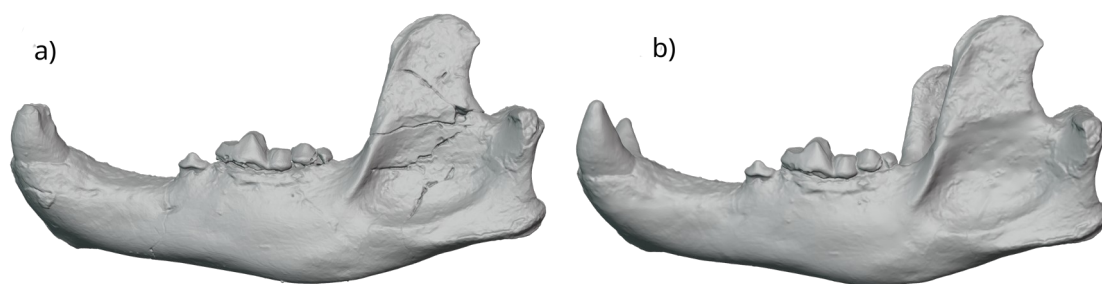


Fig. S1 3D models of the hemi-mandible of *Magericyon anceps* (BAT-1'07 E4-64) from the Cerro de los Batallones locality. Renderings of the **a.** original specimen; and the **b.** digitally restored model used in the analyses.



Fig. S2 Muscle reconstruction of *Canis lupus* in lateral view. Colors: yellow: temporalis, orange: masseter, green: pterygoideus.

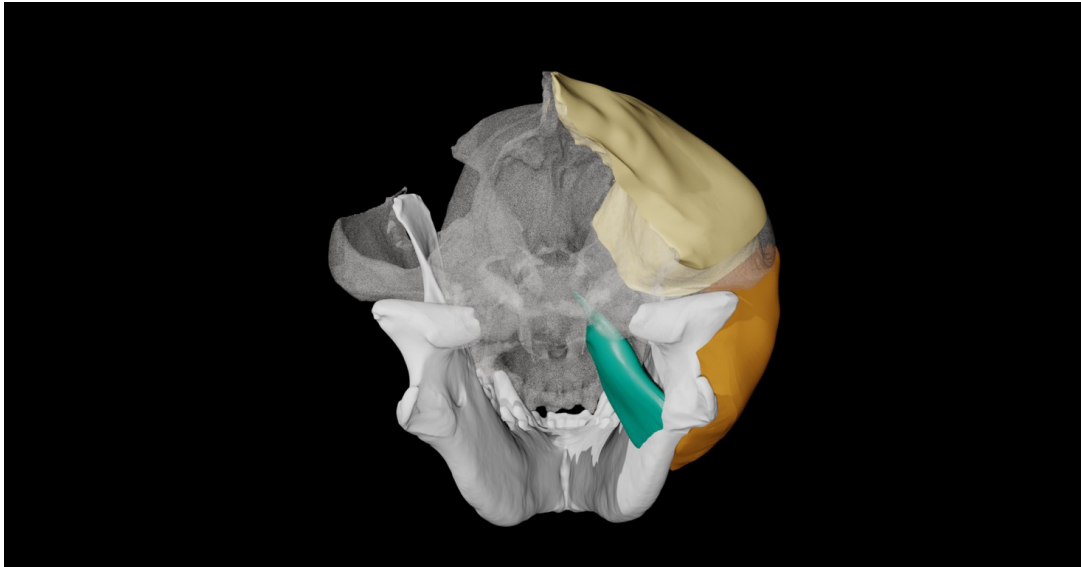


Fig. S3 Muscle reconstruction of *Canis lupus* in posterior view. Colors: yellow: temporalis, orange: masseter, green: pterygoideus.



Fig. S4 Muscle's attachment sites for *Canis lupus*. Colors: yellow: temporalis, orange: masseter, green: pterygoideus.

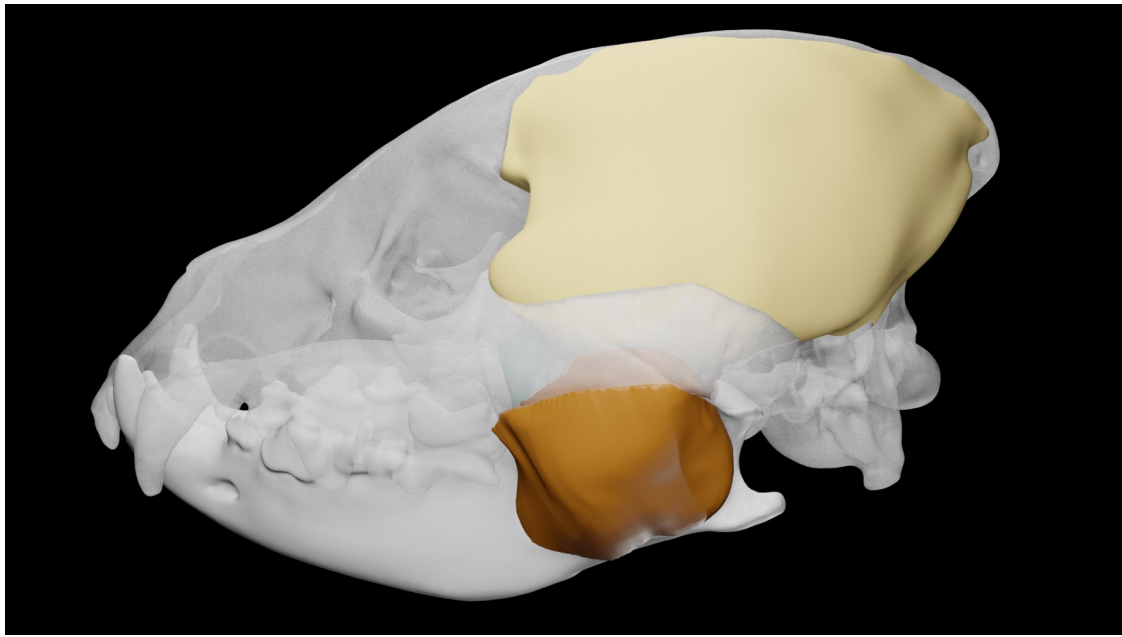


Fig. S5 Muscle reconstruction of *Crocuta crocuta* in lateral view. Colors: yellow: temporalis, orange: masseter, green: pterygoideus.

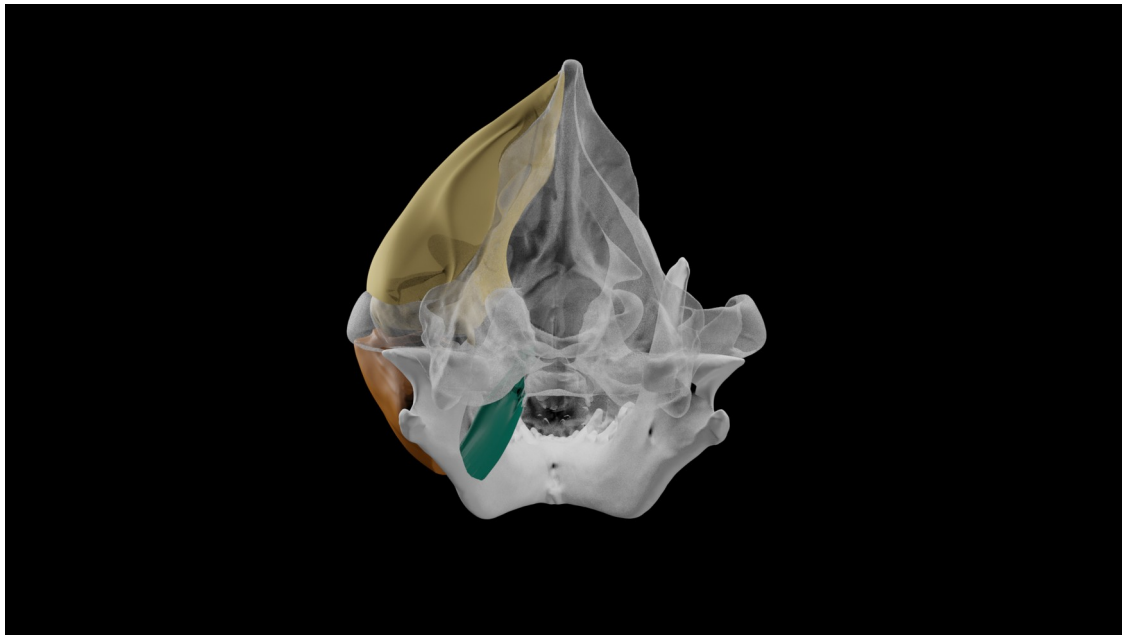


Fig. S6 Muscle reconstruction of *Crocuta crocuta* in posterior view. Colors: yellow: temporalis, orange: masseter, green: pterygoideus.

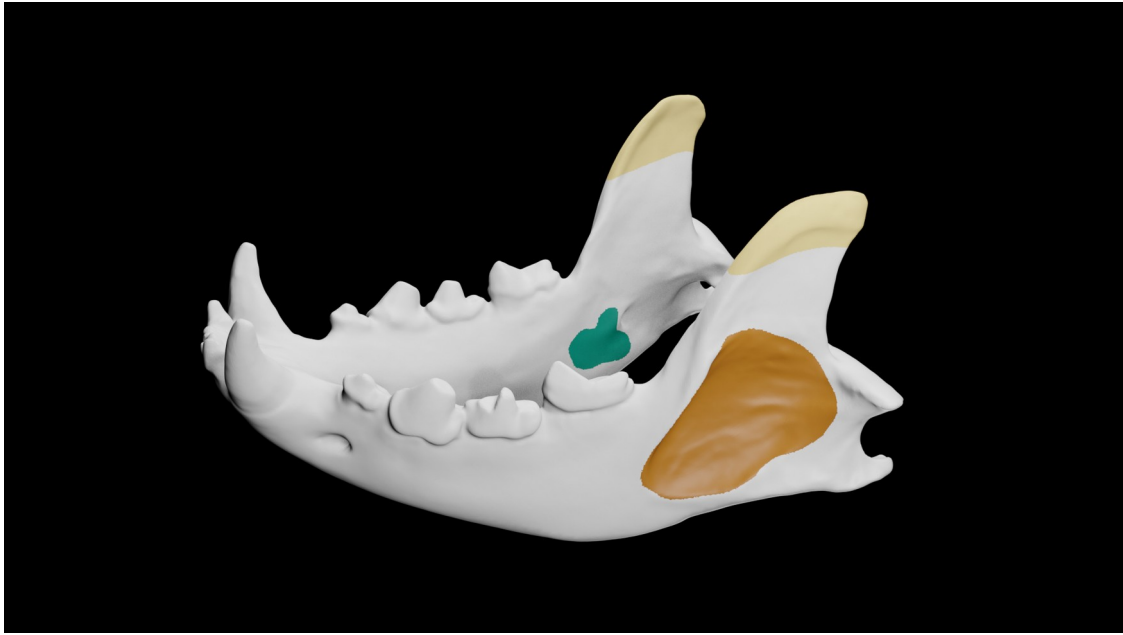


Fig. S7 Muscle's attachment sites for *Crocuta crocuta*. Colors: yellow: temporalis, orange: masseter, green: pterygoideus.

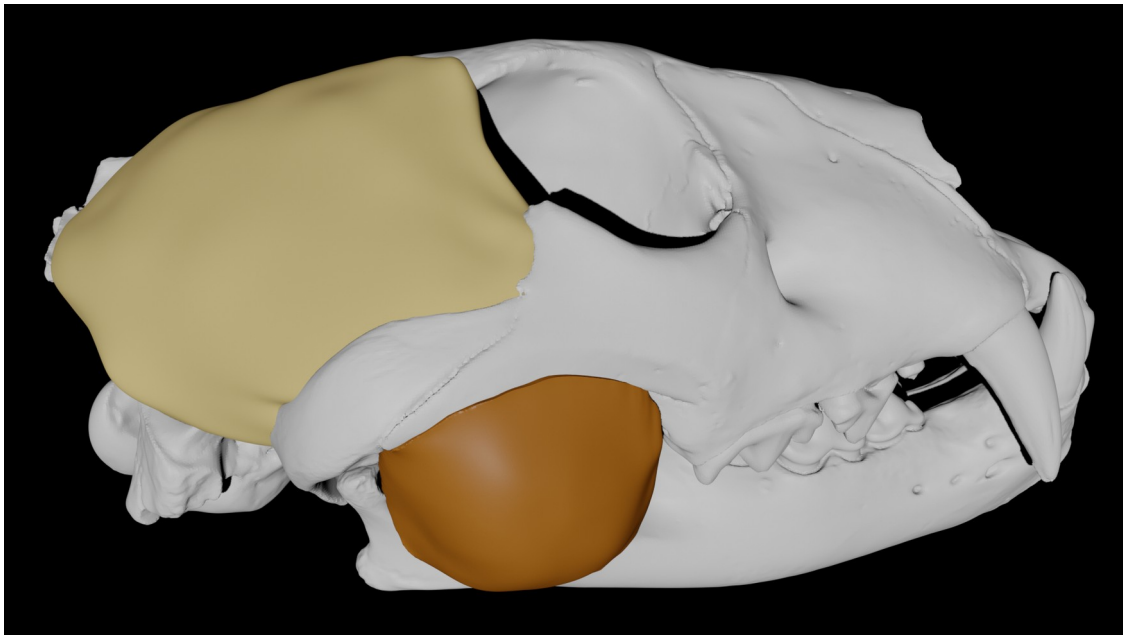


Fig. S8 Muscle reconstruction of *Panthera leo* in lateral view. Colors: yellow: temporalis, orange: masseter, green: pterygoideus.

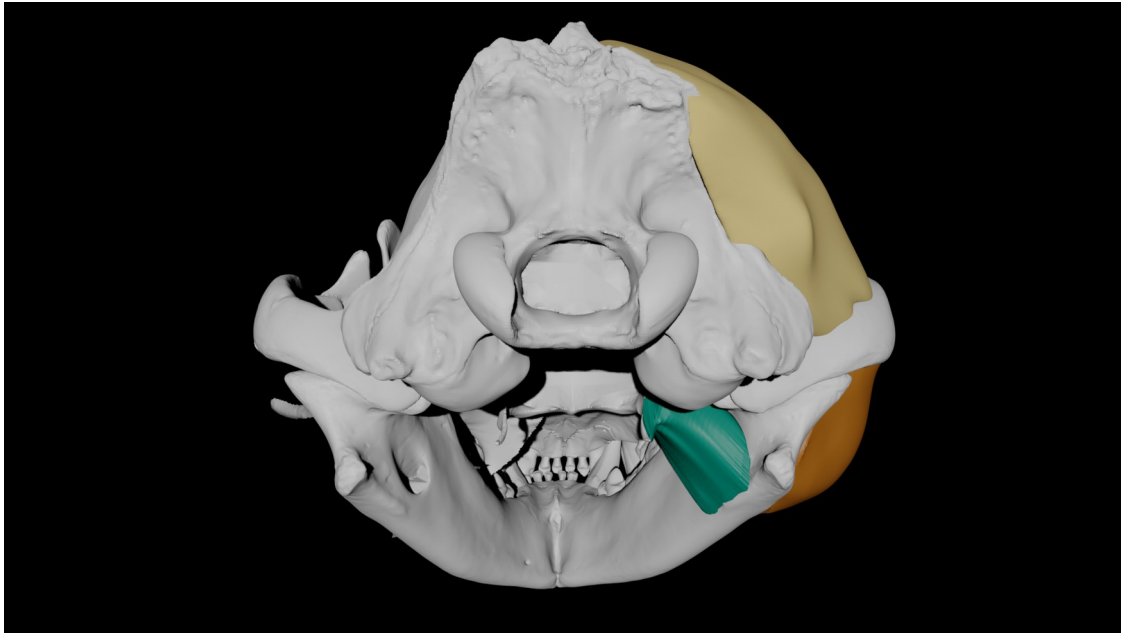


Fig. S9 Muscle reconstruction of *Panthera leo* in posterior view. Colors: yellow: temporalis, orange: masseter, green: pterygoideus.

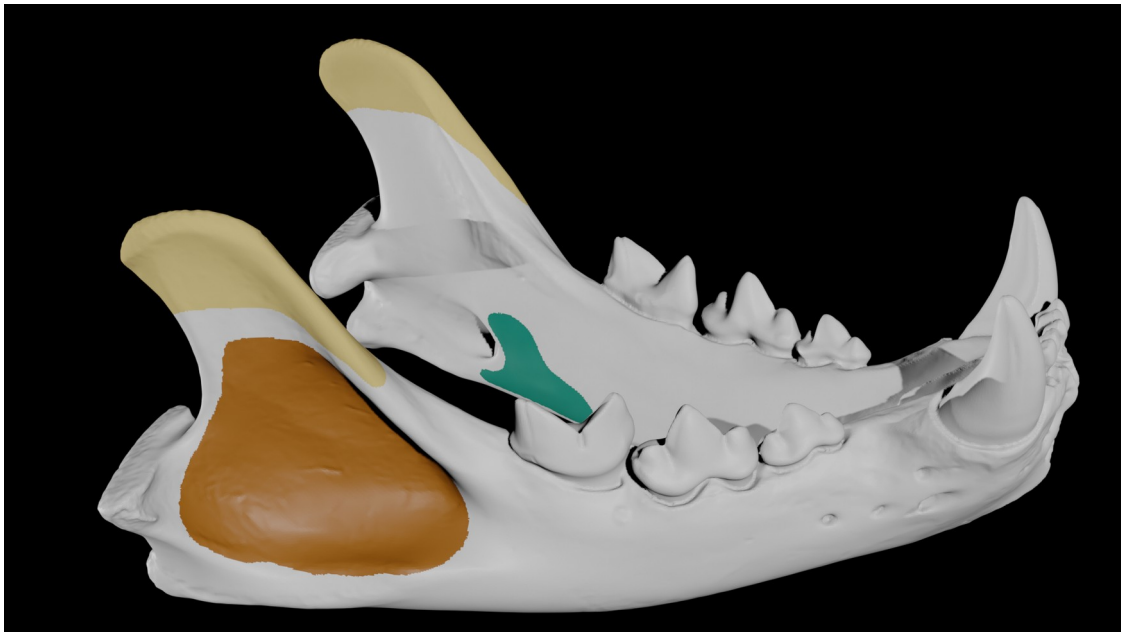


Fig. S10 Muscle's attachment sites for *Panthera leo*. Colors: yellow: temporalis, orange: masseter, green: pterygoideus.

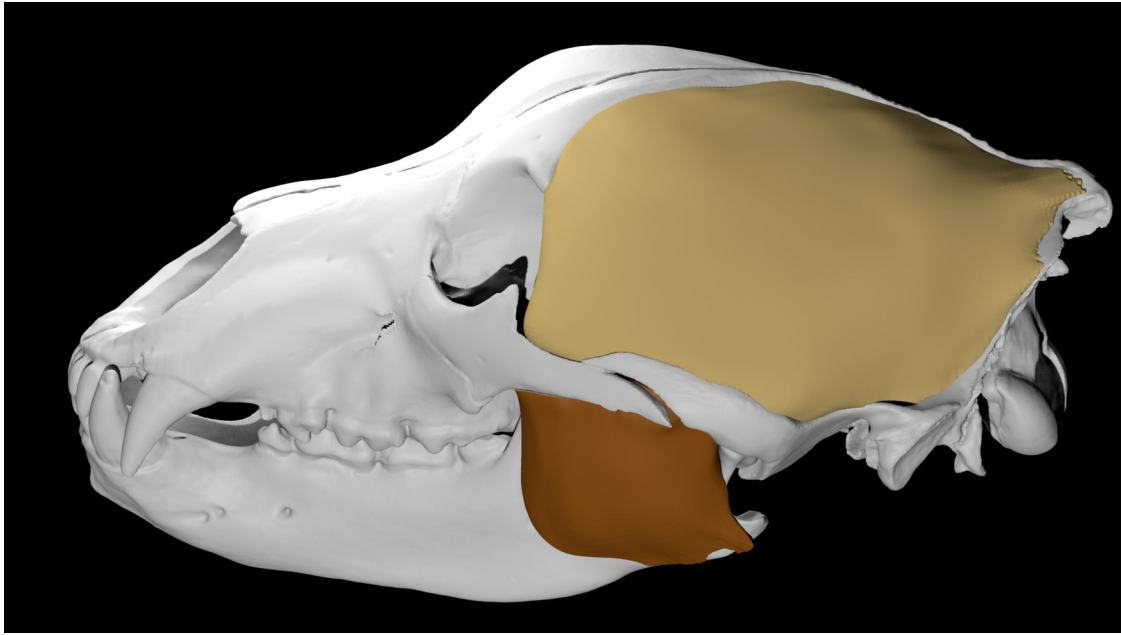


Fig. S11 Muscle reconstruction of *Ursus arctos* in lateral view. Colors: yellow: temporalis, orange: masseter, green: pterygoideus.

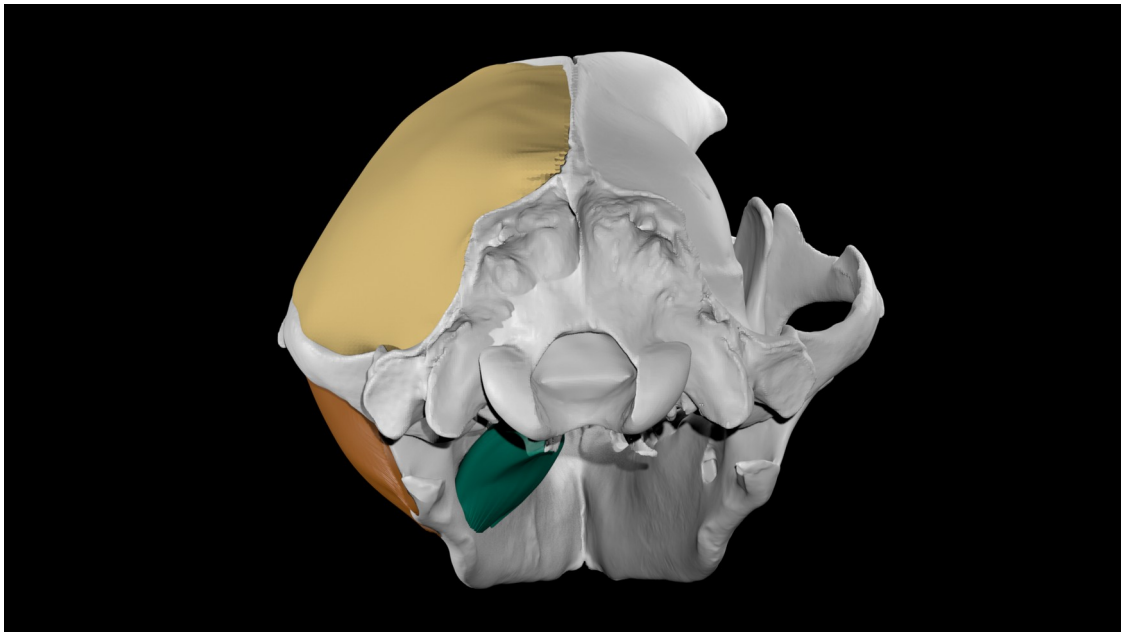


Fig. S12 Muscle reconstruction of *Ursus arctos* in posterior view. Colors: yellow: temporalis, orange: masseter, green: pterygoideus.

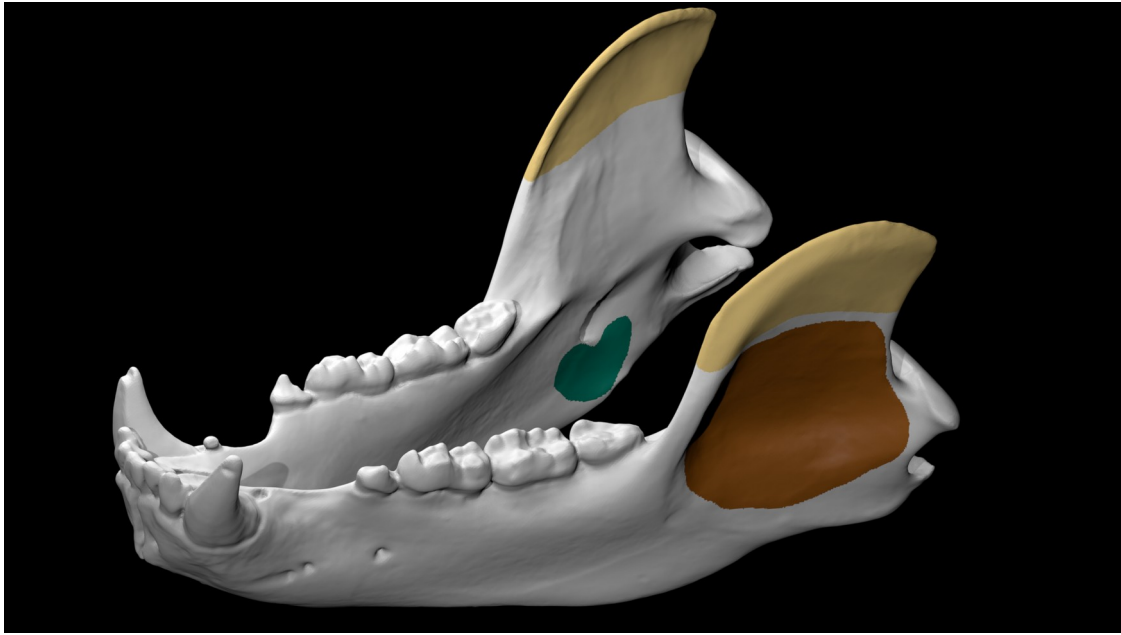


Fig. S13 Muscle's attachment sites for *Ursus arctos*. Colors: yellow: temporalis, orange: masseter, green: pterygoideus.

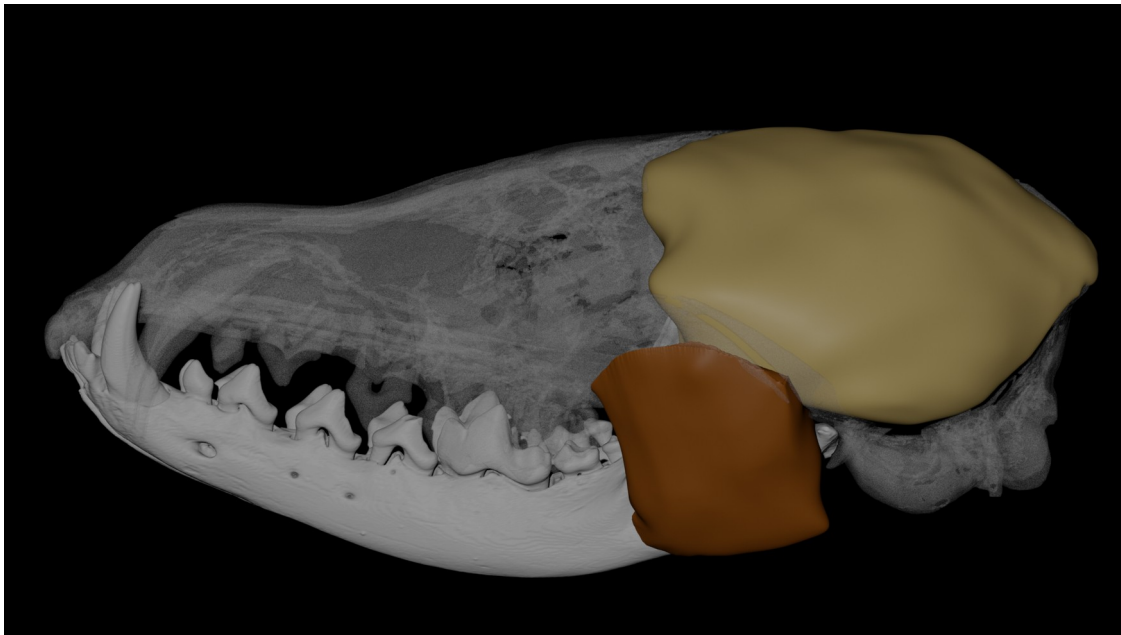


Fig. S14 Muscle reconstruction of *Vulpes vulpes* in lateral view. Colors: yellow: temporalis, orange: masseter, green: pterygoideus.

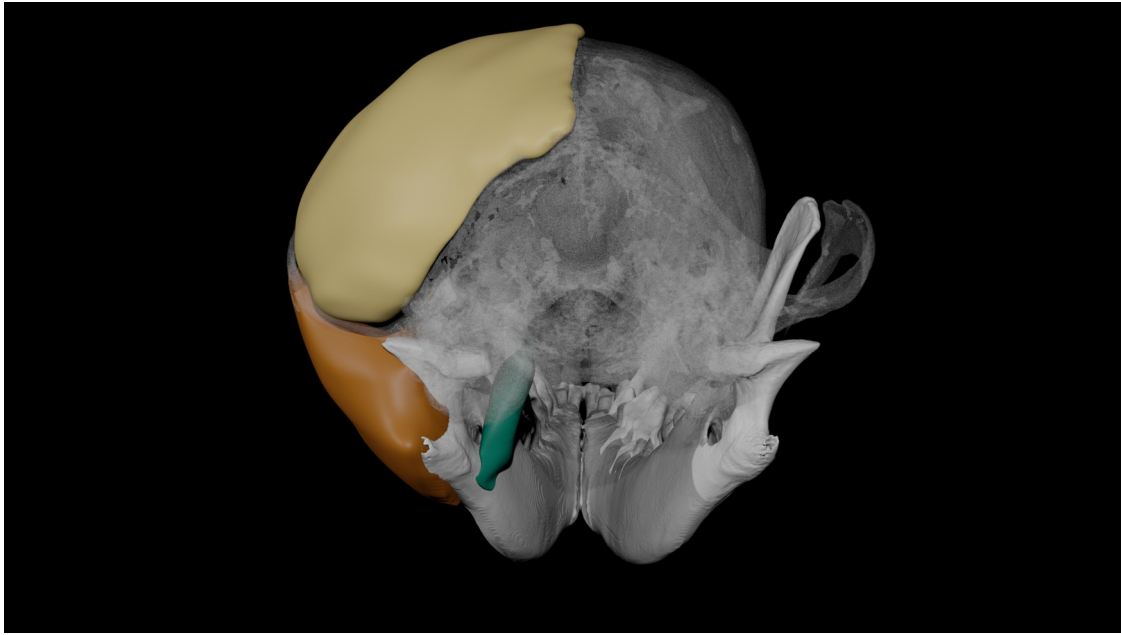


Fig. S15 Muscle reconstruction of *Vulpes vulpes* in posterior view. Colors: yellow: temporalis, orange: masseter, green: pterygoideus.

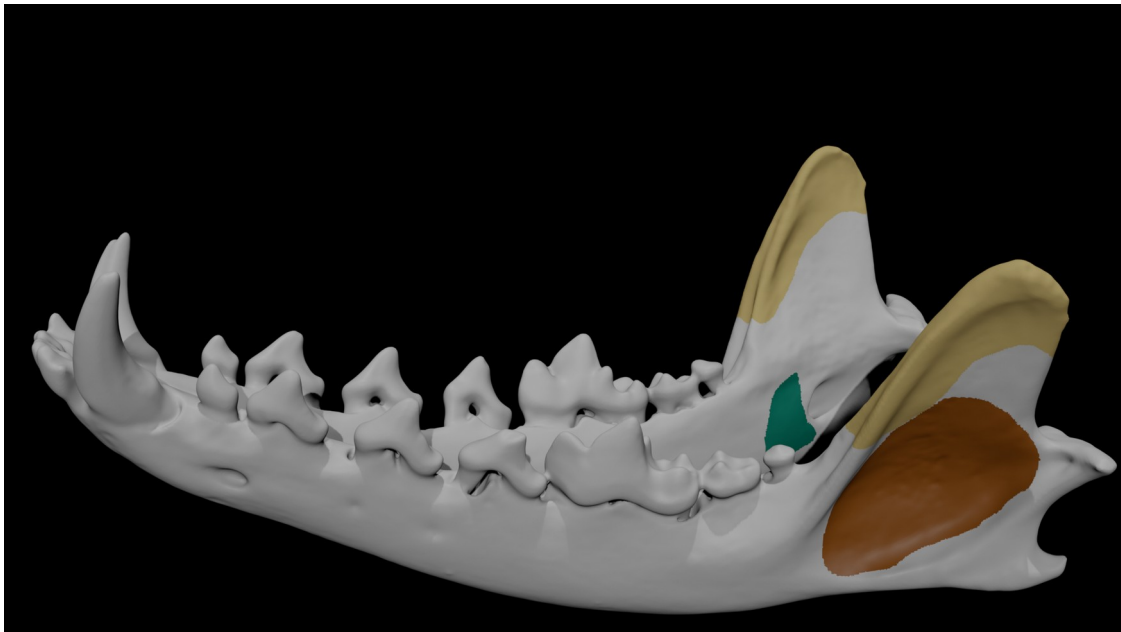


Fig. S16 Muscle's attachment sites for *Vulpes vulpes*. Colors: yellow: temporalis, orange: masseter, green: pterygoideus.

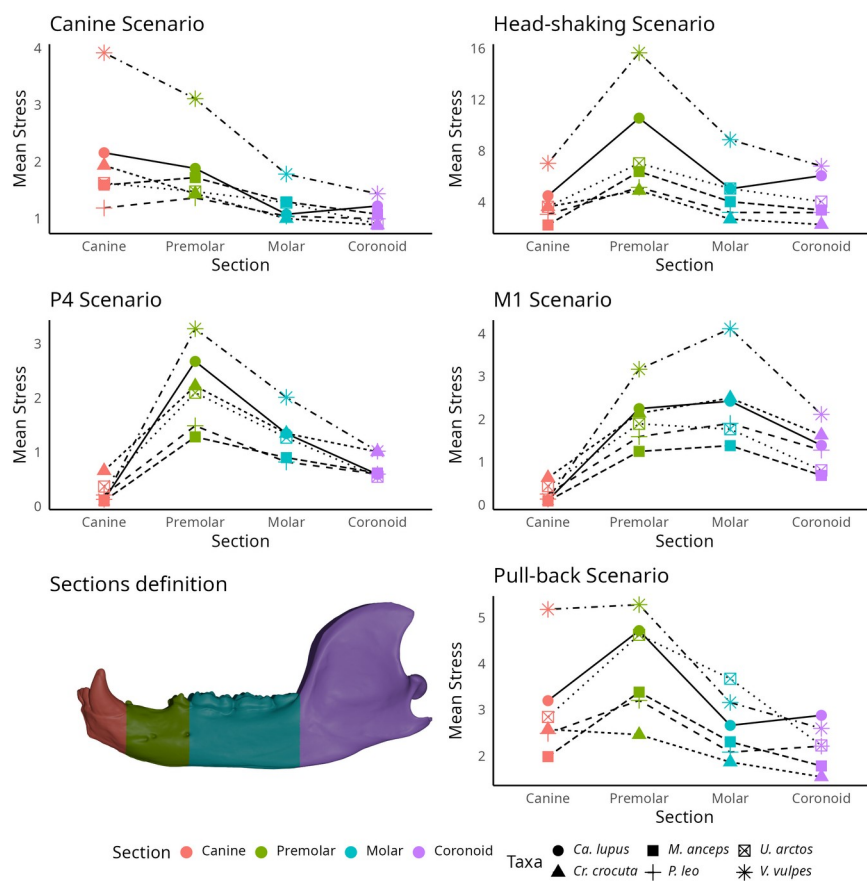


Fig. S17 Mean stress distribution for different sections of the mandible across scenarios.