DETERMINING THE RELATIONS BETWEEN CANINE CROWN HEIGHT, CROWN AND ROOT BASAL DIAMETERS AND ROOT LENGTH: IMPLICATIONS FOR THE HOMININ FOSSIL RECORD

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ABSTRACT

Canine reduction in hominins is one of the original apomorphies to appear in hominin evolution. Canine crown size is sexually dimorphic in most primates, sexual dimorphism is linked strongly to sexual selection; therefore quantification of canines is necessary to reconstruct social behavior in any fossil taxon. Hominins also appear to reduce their crown size before their root size. This thesis has investigated the potential of predicting maxillary canine crown height from root length and crown and root basal dimensions. Mesiodistal dimensions of the crown and root were the best predictors of crown height. Root length is a very poor predictor. Crown height scales positively allometric in gorillas relative to root length. Chimpanzee canine crowns are taller and thinner compared to those of gorillas. Humans and chimpanzees have similar crown heights relative to root length. My results demonstrate important inter-and intra-specific variation in canine form among hominoids