

A dental microwear texture analysis of the Mio–Pliocene hyaenids from Langebaanweg, South Africa

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Hyaenids reached their peak diversity during the Mio–Pliocene, when an array of carnivorous species emerged alongside dwindling civet–like and mongoose–like insectivorous/omnivorous taxa. Significantly, bone–cracking morphological adaptations were poorly developed in these newly–emerged species. This, their general canid–like morphology, and the absence/rarity of canids in Eurasia and Africa at the time, has led researchers to hypothesise that these carnivorous Mio–Pliocene hyaenas were ecological vicars to modern canids. To shed further light on their diets and foraging strategies, we examine and compare the dental microwear textures of *Hyaenictitherium namaquensis*, *Ikelohyaena abronia*, *Chasmaporthetes australis*, and *Hyaenictis hendeyi* from the South African Mio–Pliocene site of Langebaanweg with those of the extant feliforms *Crocota crocuta*, *Acinonyx jubatus*, and *Panthera leo* (caniforms are not included because homologous wear facets are not directly comparable between the suborders). Sample sizes for individual fossil species are small, which limits confidence in assessments of variation between the extinct taxa; however, these Mio–Pliocene hyaenas exhibit surface complexity and textural fill volume values that are considerably lower than those exhibited by the living hyaena, *Crocota crocuta*. Dental microwear texture analysis thus supports interpretations of craniodental evidence suggesting low bone consumption in carnivorous Mio–Pliocene hyaenas.

Key words: Mammalia, Hyaenidae, durophagy, dental microwear textures, Mio–Pliocene, South Africa.

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