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Discovery of five-million-year-old honey badger relative in Langebaanweg signals rich biodiversity

New research led by palaeontologists from the University of Cape Town (UCT) in collaboration with Iziko Museum and the University of Zaragoza in Spain has discovered a relative of the living honey badger from the early Pliocene locality of Langebaanweg, West Coast Fossil Park.

Five million years ago dangerous carnivores such as giant wolverines and otters, bears, sabertooth cats, and large hyaenids prowled the West Coast. Among them fearlessly roamed a smaller relative of the living honey badger. UCT and Iziko Museum palaeontologists and study co-authors, Dr Alberto Valenciano Vaquero and Dr Romala Govender made the discovery.

Besides this honey-badger-like animal, this 5.2 million years locality has yielded one of the world's richest and best-preserved mammal assemblages of this time period, including saber-toothed cats, bears, hyaenas, jackals, mongoose, as well as relatives of the living giraffes, elephants, rhinoceroses, wild pigs, and a variety of birds, fishes and marine mammals.

The living honey badger, also known as ratel (*Mellivora capensis*) belong to the mustelid family which includes weasels, otters and badgers. They live in most of sub-Saharan Africa and East Asia including India. Despite its relatively small size (9-14 kg), honey badgers are one of the most aggressive and fierce animals in the world. "Even large carnivores, such as leopards, hyenas, and lions stay out of their way," said Valenciano.

Honey badgers are equipped with sharp teeth and long claws to help capture prey, but they also feed on berries, roots and bulbs, insects and small vertebrates.

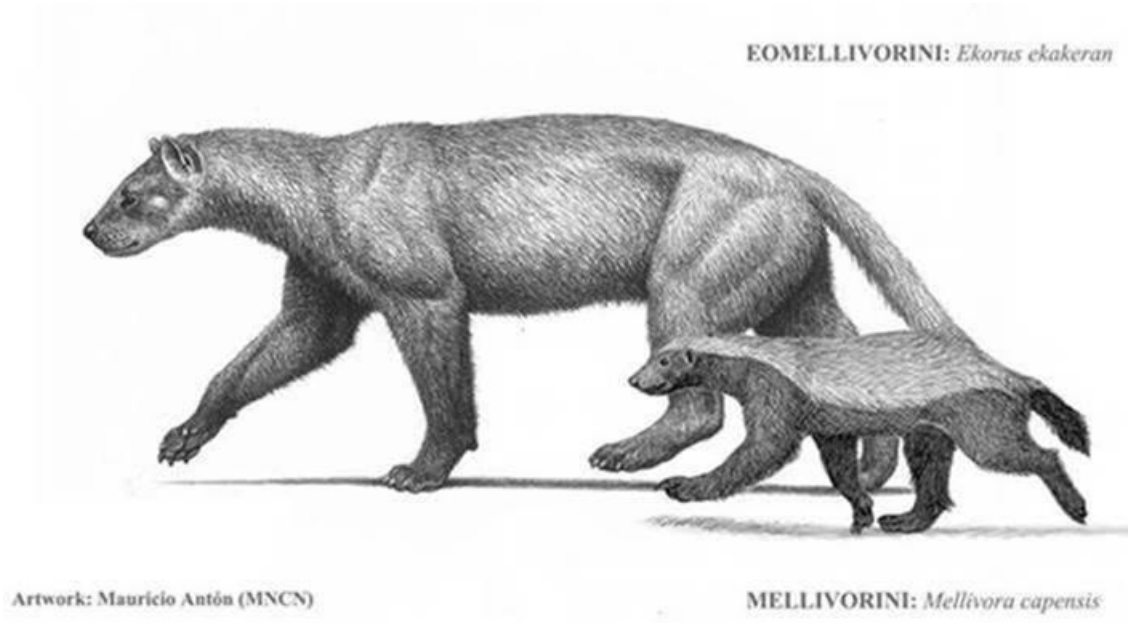
The extinct honey badger from Langebaanweg (*Mellivora benfieldi*) was originally described by Brett Hendey more than 40 years ago and was based on a few fragmented mandibles. "The new honey badger fossils we describe triple the number of known fossils and gives us a unique glimpse into its lifestyle and relationship to other similar mustelids. These new fossils demonstrate that this South African species is distinct from the late Miocene forms from Central Africa (*Howellictis*), and East Africa (*Erokomellivora*), as well as from the extant honey badger," said Valenciano.

This work deals with the evolution of this fascinating group of mustelids in Africa during the last seven million years and confirm the existence of a unique group named Eomellivorini. Although the ratel represents the single living member of its subfamily of mustelids, they were

much more diverse in the past. In fact, Valenciano and Govender suggest the existence of two distinct groups of mustelids: the mellivorini, comprising the living ratel, the one from Langebaanweg and several others ratel-like relatives, as well as the Eomellivorini which are characterised by gigantic proportions.

This research also shows that the Langebaanweg honey badger was slightly smaller than the ratel, but that like its modern relative, it was also an opportunistic carnivore with digging abilities. "The Langebaanweg fossils are at a crossroads of climate and environmental change giving us insight into how animals adapted to these changes as well as insight into carnivore evolution in southern Africa," Govender added.

Ongoing research in the other carnivore mammals from Langebaanweg will expand knowledge on these awesome extinct animals.



Life reconstruction of the Mellivorinae: on the left, the Kenyan leopard-size *Ekorus ekakeran*, and on the right the living honey badger (*Mellivora capensis*).

Photo: Mauricio Antón (MNCN)

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Picture of a honey badger (*Mellivora capensis*) in Botswana.

Photo: Derek Solomon

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