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The origin of African jackals revealed – new study



Living black-backed jackal from Etosha National Park (Namibia).

Photo Israel M. Sánchez

New research published in the [Zoological Journal of the Linnean Society](#) has found the origin of some of the most emblematic groups of African carnivorous mammals: jackals. The international group of researchers describe a new species of *canid* (current family that includes foxes, wolves, and jackals) named *Eucyon khoikhoi*, providing vital information about the origin of the group outside of North America – where the *canidae* family originated from more than 35 million years ago.

The name of the new species honours the heritage of the Khoikhoi (Khoekhoen) people, who lived in the Western Cape, where this species was discovered.

"*Eucyon khoikhoi* marks a critical moment in the evolution of African jackals five million years ago, the moment when they began to diversify outside North America, becoming more diverse and common later in the Pleistocene era, until they culminated in the four living species on the African continent: the side-striped jackal (*Schaeffia adusta*), the black-backed jackal (*Lupulella mesomelas*), the African golden wolf (*Canis lupaster*) and the Ethiopian wolf (*Canis simensis*)," shared lead author Dr Alberto Valenciano, a former researcher of the University of

Cape Town (UCT) and Iziko Museums of South Africa and currently a postdoctoral palaeontologist of the "Juan de la Cierva" Program at the University of Zaragoza in Spain.

Its morphological traits suggest a direct relationship with the side-striped jackal and confirms the presence of this group more than five million years ago.

"This study also has important implications for understanding the evolution of medium-large *canids* outside North America, and for fossils from the Iberian Peninsula, where the oldest *canid* was found outside of that continent – *Canis cipio* from 7.5 million years ago in the Spanish localities of Conclud and Cerro de la Garita. Later, it appeared along with *Eucyon debonisi* in the Spanish locality of Venta del Moro and *Eucyon intrepidus* in East Africa (Kenya and Ethiopia) six million years ago," shared Professor Jorge Morales from the National Museum of Natural Sciences (Spain) who co-authored the paper.

The study involved researchers from the Iziko Museums of South Africa, UCT, the University of Zaragoza (Spain), the National Museum of Natural Sciences (Spain), and the Institute for Research in Environmental Sciences of Aragon (Spain). It was made possible thanks to fossils from the early Pliocene (5.2 million years ago) locality of Langebaanweg on the West Coast of South Africa.

These fossils include a well preserved, nearly complete skull, several jaws, decidual teeth (also known as milk teeth), parts of the neck, forelegs and hindlegs. They represent the largest sample of *canids* in Africa to date beginning with its arrival on this continent seven million years ago until 2.58 million years ago (beginning of the Pleistocene).

Future findings and discoveries will add new information on these extinct carnivores from the West Coast of South Africa. "Langebaanweg continues to shed light on the evolution of various mammal groups in Africa and improves our knowledge of these various groups as they spread through Africa," added co-author Dr Romala Govender from UCT and the Iziko Museums of South Africa.

Access the paper: [Eucyon khoikhoi sp. nov. \(Carnivora, Canidae\) from Langebaanweg 'E' Quarry \(early Pliocene, South Africa\): the most complete African canini from the Mio-Pliocene](#) published in the *Zoological Journal of Linnean Society*.
DOI: 10.1093/zoolinnean/zlab022



Pristine skull of the new species *Eucyon khoikhoi* from Langebaanweg.
Photo: Alberto Valenciano



Reconstruction of the flora and fauna of Langebaanweg five million years ago.
Art: Maggie Newman



The co-authors of the work Dr Romala Govender and Dr Alberto Valenciano, digging in Langebaanweg in 2019.

Photo: Angus Rayners

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