

# The cryptic African wolf: *Canis aureus lupaster* is not a golden jackal

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New molecular evidence reveals a new species of grey wolf living in Africa. Formerly confused with golden jackals, and thought to be an Egyptian subspecies of jackal, the new African wolf shows that members of the grey wolf lineage reached Africa about 3 million years ago, before they spread throughout the northern hemisphere.

As long ago as 1880 the great evolutionary biologist Thomas Huxley commented that Egyptian golden jackals – then as now regarded as a [subspecies](#) of the golden jackal – looked suspiciously like grey wolves. The same observation was made by several 20th Century biologists studying skulls. Nonetheless, the conventional taxonomy has not been changed. A new study, involving a collaboration of biologists from the University of Oslo, Oxford University's Wildlife Conservation Research Unit (WildCRU) and Addis Ababa University, has uncovered genetic evidence that unambiguously places the Egyptian jackal within the grey [wolf](#) species complex. It is not a jackal, but a wolf, taxonomically grouped with the Holarctic grey wolf, the Indian wolf and the Himalayan wolf. Dr Eli Rueness, the first author of the paper, states that "We could hardly believe our own eyes when we found wolf DNA that did not match anything in GenBank."

The genetic data indicate that the Indian and Himalayan wolves evolved as separate taxa within the modern wolf cluster even before the grey wolf radiated throughout the northern hemisphere. Furthermore, not only did these two types of wolves originate before grey wolves radiated in northern latitudes, but the wolfish colonization of Africa took place

before the grey wolf radiation as well. The colonization of Africa by the ancestral stock of grey wolves took place about 3 million years ago and is today embodied by the animal that has hitherto been called the Egyptian jackal. Professor Claudio Sillero, of the WildCRU and current Chairman of the IUCN's Canid Specialist Group, added that "Ethiopian wolves split off from the grey wolf complex even earlier than the newly discovered African wolf."

The Oslo/WildCRU/Addis Ababa team also found genetically very similar specimens 2,500 km from Egypt, in the highlands of Ethiopia. Golden jackals are regarded by the IUCN (International Union for Conservation of Nature) as not endangered – a "species of least concern" – but the newly discovered African wolf may be much rarer. Certainly, it is a priority for both conservation and science to discover its whereabouts and numbers. Professor David Macdonald, an author of the paper and Director of Oxford's WildCRU, remarks that "A wolf in Africa is not only important conservation news, but raises fascinating biological questions about how the new African wolf evolved and lived alongside not only the real golden jackals but also the vanishingly rare Ethiopian wolf, which is a very different species with which the new discovery should not be confused." It seems that the Egyptian jackal is urgently set for a name-change, and its unique status as the only member of the grey wolf complex in Africa destines it to be re-named the African wolf.

According to Professor Nils Chr. Stenseth, an author of the paper and the Chair of the Centre for Ecological and Evolutionary Synthesis (CEES), "This study shows the strengths of modern genetic techniques: old puzzles can be solved." "This shows how genetic techniques may expose hidden biodiversity in a relatively unexplored country like Ethiopia," concludes Professor Afework Bekele at Addis Ababa University.

**More information:** Rueness EK, Asmyhr MG, Sillero-Zubiri C, Macdonald DW, Bekele A, et al. (2011) The Cryptic African Wolf: *Canis aureus lupaster* Is Not a Golden Jackal and Is Not Endemic to Egypt. PLoS ONE 6(1): e16385. [doi:10.1371/journal.pone.0016385](https://doi.org/10.1371/journal.pone.0016385)

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