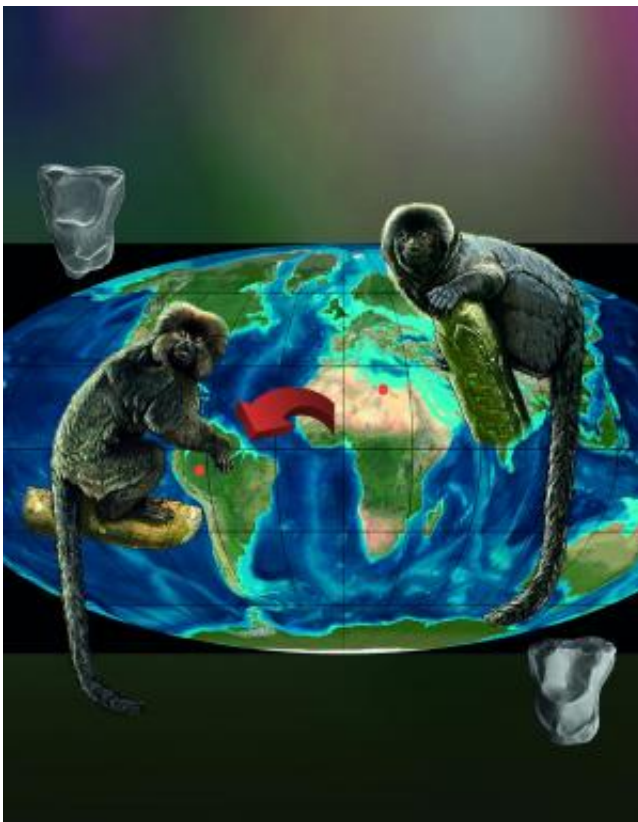


Fossils from heart of Amazon provide evidence that South American monkeys came from Africa

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Left upper molars (M1) and tentative reconstruction of the Peruvian Late Eocene *Perupithecus ucayalensis* and the African *Talahpithecus parvus* from the Eocene of Libya, showing the strong resemblance between both genus and supporting a strong the African/South America dispersal. The areas in which these two taxa were discovered are shown on a paleogeographic map of Africa and South America during the late Eocene (35 Ma.) Credit: Ron Blakey

For millions of years, South America was an island continent. Geographically isolated from Africa as a result of plate tectonics more than 65 million years ago, this continent witnessed the evolution of many unfamiliar groups of animals and plants. From time to time, animals more familiar to us today—monkeys and rodents among others—managed to arrive to this island landmass, their remains appearing abruptly in the fossil record. Yet, the earliest phases of the evolutionary history of monkeys in South America have remained cloaked in mystery. Long thought to have managed a long transatlantic journey from Africa, evidence for this hypothesis was difficult to support without fossil data.

A new discovery from the heart of the Peruvian Amazon now unveils a key chapter of the evolutionary saga of these animals. In a paper published February 4, 2015 in the scientific journal *Nature*, the discovery of three new extinct [monkeys](#) from eastern Peru hints strongly that South American monkeys have an African ancestry.

Co-author Dr. Ken Campbell, curator at the Natural History Museum of Los Angeles County (NHM), discovered the first of these fossils in 2010, but because it was so strange to South America, it took an additional two years to realize that it was from a primitive monkey.

Mounting evidence came as a result of further efforts to identify tiny fossils associated with the first find. For many years, Campbell has surveyed remote regions of the Amazon Basin of South America in search for clues to its ancient biological past. "Fossils are scarce and limited to only a few exposed banks along rivers during the dry seasons," said Campbell. "For much of the year high water levels make paleontological exploration impossible." In recent years, Campbell has focused his efforts on eastern Peru, working with a team of Argentinian paleontologists expert in the fossils of South America. His goal is to decipher the evolutionary origin of one of the most biologically diverse

regions in the world.



Artist rendering of what South America's oldest known monkey might have looked like. It was about the size of a squirrel, but with a longer tail, and probably weighed less than 250 grams (~0.5 lbs). Credit: Artist: Jorge González

The oldest fossil records of New World monkeys (monkeys found in South America and Central America) date back 26 million years. The new fossils indicate that monkeys first arrived in South America at least 36 million years ago. The discovery thus pushes back the colonization of South America by monkeys by approximately 10 million years, and the characteristics of the teeth of these early monkeys provide the first evidence that monkeys actually managed to cross the Atlantic Ocean from Africa.

More information: *Nature*, [DOI: 10.1038/nature14120](https://doi.org/10.1038/nature14120)"
target="_blank">nature.com/articles/[DOI: 10.1038/nature14120](https://doi.org/10.1038/nature14120)

Provided by Natural History Museum of Los Angeles County

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