Fossil unveils new mammalian lineage

Four years ago, while searching for fish fossils on Madagascar, paleontologists came upon what proved to be a well-preserved cranium of a mammal that lived about 66 million to 70 million years ago, in the closing epoch of the mighty dinosaurs.

Such a discovery, expected to provide new and important insights into early mammalian evolution, is rare anywhere in the Southern Hemisphere. The fossil record of primitive mammals there is frustratingly thin. Only two other mammal skulls — both from Argentina and not as large — have been found from the age of dinosaurs in the entire Southern Hemisphere.

In a <u>report</u> published Wednesday in the journal Nature, <u>David W. Krause</u>, a paleontologist at Stony Brook University on Long Island and leader of the research team, announced that the fossil mammal is a distinct new genus and species, Vintana sertichi. Vintana means luck, which was smiling on Joseph Sertich, then a graduate student of Dr. Krause's and now a curator at the Denver Museum of Nature and Science, in finding the slab of sandstone that held the skull.

Though the researchers sometimes described the specimen as groundhog-like, Dr. Krause said Vintana belonged to a lineage without any known living descendants. "It's an entirely extinct lineage, an early experiment in mammals that didn't make it," he said in an interview. "And I doubt Vintana was any better at predicting seasonal weather change than Punxsutawney Phil in Pennsylvania."

The researchers determined that Vintana belonged to a group of early mammals known as gondwanatherians, the only previous evidence for which were a few teeth and jaw fragments.

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