

# Rice anthropologist identifies extinct antelope species in India

November 2 2015, by David Ruth

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August Costa

A Rice anthropologist has identified a new species of extinct antelope that once roamed what is present-day India during the late ice age 10,000 and 100,000 years ago.

August Costa, adjunct lecturer in anthropology and principal investigator of the study, and his colleagues at Yale University and the American Museum of Natural History discovered *Sivacobus sankaliai*, a member of an extinct family of Asian antelopes related to modern waterbucks. The finding was published in the June issue of the *Journal of Vertebrate Paleontology*.

The researchers found that antelope—whose fossils have never been unearthed in the area before—persisted for more than a million years than previously thought and were of an Asiatic variety, unlike waterbucks, which today are found only in Africa.

"The fossil postdates the last known waterbuck-like antelope in Asia by nearly a million years and demonstrates how little is known of late ice-age animal community in southern Asia," Costa said.

The antelope fossil was discovered by Costa's team after a large piece of boulder broke free from a cliff above Gopnath Beach and fell to the beach. A horn was protruding from the cement-like sediment, and Costa was struck by the uniqueness of such a find. This was unlike anything they had come across in the area.

"New species are often identified when various characteristics observed in a specimen are judged as unique," Costa said. "In this case, the anatomy of the skull we found was different from what had been found in much older fossils in northern India."

Time and space also play an inherent role in many species determinations within the field of paleontology, Costa said. "In this case, the skull was similar enough to be grouped within the known Indian genus *Sivacobus*, but different enough to designate a new species," he said.

While the discovery of a [new species](#) is exciting in its own right, the new fossils recovered at the seaside Gopnath site could also help reshape scientists' understanding on how humans first colonized South Asia.

"For a very long time, researchers have had one idea of how early modern humans dispersed, and this challenges that," Costa said. "This helps support the theory that ancient peoples used the coastline as a

highway to move rapidly across southern Asia."

Artifacts found at the site, including various animal bones, fossils and stone tools, help paint a very different picture of what the environment looked like thousands of years ago. Land that ancient people and animals would have traversed is now underwater, and the excavation area is now a desert region bordering the Gulf of Khambhat.

"The fossil comes from a unique site setting representing a lost world, now a mostly submerged landscape," Costa said. "It is correlated with stone artifacts, indicating human presence nearby."

Costa said this is significant because the fossil site has a high potential to yield early human remains, which would put him one step closer to his ultimate goal.

"This work will hopefully illuminate the origins of modern people in a nation, which constitutes a geographical missing link to the story of human evolution," he said. "If confirmed, this research would show that early humans settled India tens of thousands of years before their arrival in Europe and help support an emerging picture of the earliest settlement of Eurasia."

Provided by Rice University

Citation: Rice anthropologist identifies extinct antelope species in India (2015, November 2) retrieved 11 September 2024 from

<https://phys.org/news/2015-11-rice-anthropologist-extinct-antelope-species.html>

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