Cooler climate helped evolution of penguins

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Penguins (Manchots royaux) gather on Possession island (Crozet archipelago), part of the French Southern and Antartic Lands on August 30, 2012

Penguins waddled into the book of life around 20 million years ago and diversified thanks to global cooling which opened up Antarctica for habitation, a study said on Wednesday.

Scientists led by Sankar Subramanian of Griffith University in Australia sequenced telltale signatures of DNA from the genome of 11 penguin species that are alive today.

They compared these stretches to make a "molecular clock"—a way of calculating how species evolve on the basis of regular mutations in DNA.

By this yardstick, the forerunner of all penguins lived 20.4 million years ago, according to the paper, published in the British journal *Biology Letters*.

If so, penguins showed up more recently than thought. Previous estimates put their emergence at 41-51 million years ago.

Penguins then diversified around 11 to 16 million years ago to form most of the species that are around today, according to the study.

"This overlaps with the sharp decline in Antarctic temperatures that began approximately 12 million years ago, suggesting a possible relationship between climate change and penguin evolution."

More information: Paper: rsbl.royalsocietypublishing.or … .1098/rsbl.2013.0748