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Early hominins were variability avoiders and diversity seekers

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Climate influenced the evolution of hominins, though the mechanisms and scales are still not well understood. We know that long-term climatic variations, such as wet-dry climate cycles and sea-level change, can change landscapes dramatically. Changes in landscapes can drive early hominins to find different locations to settle, but what kind of environments did they prefer and what role did changing climates play in all this? To research this question, we modeled the climate of the past 3 million years using CESM, made a best estimate of the global biome landscape, and compared the results to an extensive archeological database of hominin findings.

This analysis shows us that early hominins living in Africa predominantly lived in open habitats. When hominins expanded northwards, they adapted to more forested landscapes. While they were able to adapt, most hominin locations were found in areas with less variability and higher local biome diversity, suggesting that hominins prefer stable environmental conditions with a variety of resources nearby. This preference for stability and a landscape that offers diverse biomes is seen for all hominins regardless of species.