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When the Sea Saved Humanity - By Prof. Curtis Marean

Shortly after *Homo sapiens* arose harsh climate conditions nearly extinguished our species. Recent finds suggest that the small population that gave rise to all humans alive today survived by exploiting a unique combination of resources along the southern coast of Africa

With the global population of humans currently approaching seven billion, it is difficult to imagine that *Homo sapiens* was once an endangered species. Yet studies of the DNA of modern-day people indicate that, once upon a time, our ancestors did in fact undergo a dramatic population decline. Although scientists lack a precise timeline for the origin and near extinction of our species, we can surmise from the fossil record that our forebears arose throughout Africa shortly before 195,000 years ago. Back then the climate was mild and food was plentiful, life was good. But around 195,000 years ago, conditions began to deteriorate. The planet entered a long global stage known as Marine Isotope Stage 6 (MIS6) that lasted until roughly 123,000 years ago.

A detailed record of Africa's environmental conditions during glacial stage 6 does not exist, but based on more recent, better-known glacial stages, climatologists surmise that it was almost certainly cool and arid and that its deserts were probably significantly expanded relative to their modern extents. Much of the landmass would have been uninhabitable. While the planet was in the grip of this icy regime, the number of people plummeted in previously - from more than 10,000 breeding individuals to just hundreds. Estimates of exactly when this bottleneck occurred and how small the population became vary among genetic studies, but all of them indicate that everyone alive today is descended from a small population that lived in one region

of Africa sometime during this global cooling phase.