

EXTRALIMITAL SENEGALESE SPECIES DURING MARINE ISOTOPE STAGES 5.5 AND 11 IN THE CANARY ISLANDS (29° N): SEA SURFACE TEMPERATURE ESTIMATES

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Abstract

The presence of *Harpa doris* Röding, 1798 in marine deposits of the last interglacial period, ~130-120. ka (marine isotope stage or MIS 5.5) in the Canary Islands (Gran Canaria, Lanzarote and Fuerteventura) enabled us to compare this occurrence with its present habitat in the Gulf of Guinea and the Cape Verde Islands, well to the south. This comparison leads to the conclusion that sea surface temperatures (SSTs) in the waters around the Canary Islands during the last interglacial period were at least 3.3. °C higher than today. *H. doris* is found in association with the large gastropod *Persististrombus latus* (Gmelin, 1791) as well as the coral *Siderastrea radians* (Pallas, 1766). The presence of these extralimital southern, warm-water species in the Canary Islands during the last interglacial period also implies a northward expansion of plankton-feeding larvae in seawater with a high chlorophyll-a content. Such conditions would require a shortening of the southern arm of the cool Canary Current that dominates the waters around the Canary Islands at present. Marine deposits dating to ~ 400 ka (MIS 11) are also found on the Canary Islands. In these deposits, the presence of *Saccostrea cucullata* (Born, 1778) allows a comparison with its present habitat in the Gulf of Guinea. In this analysis, we conclude that SSTs in waters around the Canary Islands during this major interglacial period were at least 4.2 °C higher than today. Middle Pleistocene fossils of *S. cucullata* have also been found in the western Mediterranean Sea and Morocco, as well as the Cape Verde Islands. If these deposits also date to MIS 11, SST warming could have been a regional phenomenon, including much of the eastern Atlantic Ocean and Mediterranean Sea.