



The 25,000 year old
Lagar Velho child
skeleton

João Zilhão



Neandertal body
ornaments from
the Grotte du Renne



ARCHAEOLOGY

The Neandertals have turned out to be related to us, after all

FOR A LONG TIME THE NEANDERTALS HAVE BEEN TREATED AS A DIFFERENT SPECIES FROM HOMO SAPIENS. HOWEVER, BOTH POPULATIONS SEEM TO HAVE MIXED AND PRODUCED COMMON OFFSPRING

By João Zilhão

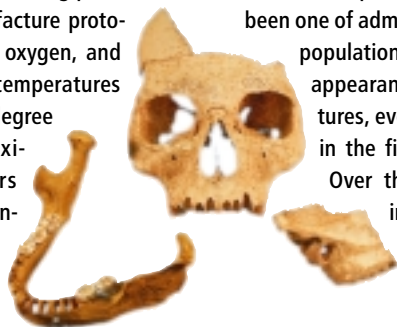
Genetic studies of present populations and fossil specimens carried out since the late 1980s claimed that Neandertals were a side branch of humanity, both distinct from and inferior to sapiens people. The level of genetic separation suggested a difference at species level, today's humans descending entirely from an Out-of-Africa dispersal of early Homo sapiens, approximately 60,000 years ago.

Research carried out over the past ten years, particularly in Germany, has revealed the sophistication of the Neandertals' material culture. The shape and manufacture technique of the 400,000 year old wooden javelins from Schöningen imply a command of the basic laws of ballistics. The organic residue on a flint flake from Neumark-Nord, more than 100,000 years old, is an extract of oak bark macerated in water, of a kind used until the ethnographic present in the tanning of hides for the manufacture of water-proof clothing and footwear. Two fragments of birch bark pitch used for stone tool hafting found at Königsau were produced through a smoldering process requiring a strict manufacture protocol (under exclusion of oxygen, and at tightly controlled temperatures between 340 and 400 degree celsius); dated to approximately 45,000 years ago, this pitch is Human-kind's first artificial raw-material.

The site of Ilsehöhle, near Ranis, yielded bone awls from the time of the latest Neandertals, approximately 40,000 years ago; together with the evidence from Neumark-Nord, these awls suggest a long tradition of hide-working for the manufacture of clothes and other equipment, as one would expect, given that Neandertals settled central Europe at times when average winter temperatures were between -20 and -30 degree celsius. A contemporary French site – the Grotte du Renne at Arcy-sur-Cure – yielded similar bone awls featuring regular, geometric decorative patterns, associated with body ornaments; at slightly earlier Pech de l'Azé, also in France, manganese pencils were used for body painting.

Biologically, the gap between Neandertals and sapiens may also not have been as large as suggested by genetics. Two recent sapiens finds from the time of contact between the two groups – the five year old child from Lagar Velho, Portugal, and the three individuals from Oase, Romania – feature Neandertal characteristics, suggesting interbreeding. Thus, the fate of European Neandertals seems to have been one of admixture with immigrant sapiens populations, followed by eventual disappearance of their distinctive features, even if these could still be found in the first generations after mixing. Over the last decade, I have been involved in the formulation of this alternative view of European Neandertals and of

the process through which they were eventually replaced by sapiens people. The Forschungspreis granted by the Humboldt Foundation provided the opportunity – through the generous hosting of the Institut für Ur- und Frühgeschichte, Universität Köln, and the friendly collaboration and support of other research institutions such as the Neandertal Museum, the Landesmuseum für Vorgeschichte in Halle and the Universitäten of Tübingen and Erlangen-Nürnberg – to become acquainted with the major advances made in this field of research in the Neandertals' own "homeland". And, through the Humboldt's programme to promote the learning of German, I was able to acquire the basic linguistic skills necessary to access the fundamental scientific literature on these issues accumulated over the last 150 years in both Germany and the countries of the former Austro-Hungarian Empire. This award could not have arrived at a better time in my career. ◀



Professor Dr. João Zilhão
Fachgebiet: Prähistorische Archäologie
Förderprogramm:
Humboldt-Forschungspreis
Gastinstitution: Universität Köln
Institut für Ur- und Frühgeschichte
Forschungsstelle Altsteinzeit
Heimatinstitution: Universidade de Lisboa
Faculdade de Letras
Departamento de História
Lissabon/Portugal