NATURAL ENVIRONMENT RESEARCH COUNCIL

NERC will invest £2 million in the EFCHED programme between 2002 and 2006. To see which organisations are involved in the programme, visit www.nerc.ac.uk/funding/thematics/efched/index.shtml

Changing Climates Evolving Humans

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Further information
www.nerc.ac.uk/funding/thematics/efched/index.shtml

Other websites of interest
http://rapid.nerc.ac.uk

Environmental Factors in the Chronology of Human Evolution and Dispersal (EFCHED) research programme

Changing Climates, Evolving Humans

Was climate change responsible for human evolution? How do we explain our trademark big brains, feet made for walking and nimble hands for using tools?

Was it climate that pushed us into becoming the only global species? Today we live in every type of environment. But why would our ancestors swap a tropical beach for an icy tundra?

When did this happen – millions, or just thousands, of years ago? Tools must have played a part. So how did they develop?

Answering these questions will help us understand the importance of our evolutionary legacy. We will appreciate the pivotal role of the environment in making us who we are. We will value human diversity as the product of a very ancient, but common history.

Through the Natural Environment Research Council's research programme Environmental Factors in the Chronology of Human Evolution and Dispersal (EFCHED), scientists from many disciplines are investigating what made us human and when this happened.

A scientific fellowship

EFCHED brings together the sciences researching our evolution. These include the study of the hominid and human remains (Palaeoanthropology), the stone tools and traces of settlements (Archaeology) and the environments in which people lived (Palaeoecology). EFCHED will harness

- Scientific dating techniques such as accelerated mass spectrometry (AMS), radiocarbon and optically-stimulated luminescence to provide the breakthrough for better chronologies
- The power of computer modelling to 'forecast' past climate and assess its impact on where hominid populations could live and in what numbers
- Insights from evolutionary genetics to examine the early dispersals of hominids from Africa into the Old World and then into new worlds
- The analysis of stable isotopes from hominid skeletons to reveal what our ancestors ate as they evolved and expanded to populate the Earth.

Human evolution needs global data

EFCHED is casting its net wide. New data will come from field research in South America, Europe, Africa, the Middle East and southern Asia. Scientists will be finding out how during the ice ages we adapted to deserts, coasts, savannahs, rain forests, steppes and tundras. Their data will shed light on the fate of the Neanderthals and tell us more about the people who replaced them – ourselves. We will find out why hominids and Homo sapiens have been so restless, always on the move. And why, as they moved, they evolved into new species.

Related work elsewhere

EFCHED will contribute to international research on human evolution. In the UK the Leverhulme Trust funds the Ancient Human Occupation of Britain project based at the Natural History Museum and Royal Holloway, and the Centre for Human Evolutionary Studies at Cambridge. The Wellcome Trust funds the Ancient Biomolecules Centre at Oxford. The Arts and Humanities Research Board's Centre for the Evolutionary Analysis of Cultural Behaviour is based at University College London and the University of Southampton, while the Natural Environment Research Council (NERC) funds the AMS radiocarbon facilities at East Kilbride and Oxford and the £20 million RAPID climate change research programme. English Heritage, through the Aggregates Levy Sustainability Fund, has started major research projects on the ice age environments and early human occupation of Britain.

In Europe, funding for human evolution comes from many sources, including the Centre National de la Recherche Scientifique (France) and the Max Planck Institute (Germany), and involves work across the globe. The National Science Foundation (USA) is involved in a major programme of human evolutionary research, as are the research councils of Australia, South Africa, Japan and many other countries. UNESCO's World Heritage List has many hominid sites including Olduvai Gorge (Tanzania) and the cave art of the Dordogne (France).