

Human Evolution and Behaviour at “The 75th Annual Meeting of the American Association of Physical Anthropology”, Anchorage, Alaska, 8th - 11th March 2006

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The 75th Annual Meeting of the American Association of Physical Anthropologists (AAPAs) was held this year in Anchorage, Alaska. The University of Alaska hosted the conference and the local committee was led by Lyle W. Konigsberg and Christine L. Hanson whose excellent organisation enabled a diverse mix of international delegates to attend this year's conference.

This annual meeting represents the biggest forum for international members of the field of physical anthropology and related disciplines to meet and present their work. The location and timing of this year's event, which was related to the *Iditarod* (the annual dog-sled race), meant that numbers were lower than in previous years but the conference was still extremely well-attended. These meetings always attract a diverse mix of academics and postgraduate students who are comprised for the main part of physical anthropologists but who also come from other related disciplines, such as archaeology, history and genetics.

A total of 32 separate sessions took place over three days covering a wide variety of topics from “Primate Evolution and Paleoanthropology” to “Genetic Perspectives on Human Evolution”. These sessions contained 563 podium and poster presentations with a total of over 1100 authors participating. As a result many of the sessions had to be run concurrently, in fact up to five at a time. This led to a lot of movement between presentations, especially if your interests spanned several chronological zones and/or subject areas. It also restricted many delegates to attending presentations related to their main research areas rather than exploring new subjects. The wide range of topics, however, acted as an important reminder of the diversity of biological anthropology as a discipline.

Most of the sessions were dominated by non-human primate evolution and behaviour, palaeoanthropology, human skeletal biology and anthropological genetics. Special symposia included “From the Arctic to Arizona: A Celebration of Charles F. Merbs's Contribution to Physical Anthropology”, “Pre-Contact Forager Adaptations to Northwest Coastal Alaska: The Bioarchaeology of Point Hope”, and “Is Adaptation Healthy? Contrasting Views on Growth Patterns in Adverse Environments”. All of these symposia appeared to have been inspired by the location of this year's conference, focusing on people living in extreme environments.

The session on “Paleoanthropology: Pleistocene *Homo*” was dominated by papers from graduate students and academic researchers working on Neanderthals and the *Homo heidelbergensis* remains from Sima de los Huesos, Atapuerca. The Neanderthal papers

focused on issues such as “Tooth Wear Patterns in Neanderthals and Early Modern Humans” given by the author, “The lumbar lordosis of *Homo neanderthalensis*” by E. Been and H. Pessah and “Paleopathology of the 1856 Neandertal: new data, new insights” by M.O. Smith, F.H. Smith and R.W. Schmitz. The latter paper discussed the new specimens discovered within the deposits from Feldehofer Cave, the type-site for the Neanderthals, revealing evidence for forearm trauma, chronic paranasal sinusitis and chronic dental disease in the form of periodontitis.

The site of Simo de los Huesos in Atapuerca, Spain has been the focus of intense research over the last two decades and has produced numerous papers at the AAPAs. This is because it contains the largest collection of fossil human remains in the world. The remains of at least 28 individuals have been discovered so far within the ‘pit-of-bones’ and have been designated to the species *Homo heidelbergensis*. This year the papers focused on: the reconstruction of one of the most complete pelvises and included both dry bone and soft tissue analysis; an analysis of 40 new temporal bone specimens; and a comparison of the ear bones with those of living great apes and fossil humans. This comparative analysis of the ear bones showed some similarities to Neanderthals but also to earlier humans such as *Australopithecus africanus* highlighting the important phylogenetic data contained in the ear bones.

One of the more controversial sessions was on “The Persistent Problem of Creationism”, a topic which was also the main theme of a session at the 72nd Annual Meeting of the American Association of Physical Anthropologists in 2003 (see Deter 2003). The current session consisted of a group of papers dealing with the problems of teaching evolution in North American schools and public perceptions on evolution including: “Anthropology Meets Creationism: Talking Primatology to School Kids” by B.Z. Freed and “Biological Anthropology, Evolution and Science: A New Perspective on Why the Theory of Evolution is not Resonating with the General Public” by C.B. Quintyn. As a British academic it was interesting, if not a little surprising, to see the limitations and prejudice that many of our North American colleagues have had to deal with when teaching human evolution. The latter paper discussed the results of a survey which asked the American public about their opinion on evolution versus creationism. Of those surveyed 47% believed that God created man in his own image within the last 10 000 years, 40% believed that man has developed over millions of years guided by God, and only 9% believed that man developed over millions of years unguided by God. The results of this survey as well as the other papers within the session highlight the need for greater interaction between all levels of education, including both scientists and citizens, to promote the teaching and understanding of human evolution as an alternative theory to creationism.

Two of the most interesting sessions were held on the last day of the conference. The first was a teaching outreach programme, which was intended for local area teachers but was also open to AAPA members. It consisted of four papers which focused on the teaching of some of the major issues associated with human evolution to high school students such as interpreting the fossil record, non-human primates and human variation. The second was the dental anthropology session, which contained a variety of

papers on the use of teeth for determining human behaviour, growth and development, and health and disease. A paper given by J.R. Lukacs, G.C. Nelson and C. Walker on the dentition of the so-called 'hobbit man', *Homo floresiensis*, attracted the largest audience of the conference. It was entitled "Anomalies of Dental Development in Modern Humans and *Homo floresiensis*" and discussed the occurrence of the rotation of the upper fourth premolar in *floresiensis* and other human groups. Although a specialist dental paper this new and controversial discovery has consistently attracted a lot of attention from palaeoanthropologists and the media, which was represented by its large audience.

Recent excavations on the island of Flores in eastern Indonesia have yielded evidence for a population of humans that appear distinct enough in their anatomy to be assigned to a new species, *Homo floresiensis* (Brown et al. 2004). These individuals, who would only have stood one metre tall, were present in this region between the interval of 95-74 000 to 12 000 years ago and therefore overlap significantly with *Homo sapiens* in this region but their levels of interaction are currently unknown (Morwood et al. 2005). These remains have become well known both for their unusual anatomy and for the battle over their ownership. The bones were 'borrowed' without permission from the Centre for Archaeology in Jakarta by an influential Indonesian scientist for further study at his own institution sparking outrage amongst most of the academic community (Powledge 2005; Culotta 2005). The remains were eventually returned but unfortunately the Indonesian and Australian team who originally discovered the remains claim that the bones have been damaged, destroying vital clues about their origins. Excavations still continue at the site and it is anticipated that further specimens will be discovered. Meanwhile the original specimens continue to challenge our understanding of human evolution and more specifically the diversity of the genus *Homo*.

It was a thoroughly interesting and well-organised conference in a fascinating part of North America and included a variety of organised and more spontaneous social events: a food and wine reception, whale-watching and an open-mic night where attendees of could showcase their musical talents. Despite the slightly lower turnout than previous years, a long list of eminent palaeoanthropologists was in attendance as well as a colourful mix of graduate students. One of the most important functions of this conference is to bring researchers together to discuss their ideas, both in a social and a more organised conference context.

Abstracts from the poster and paper sessions were published in the March 2007 edition of the American Journal of Physical Anthropology, Volume 129, Issue S42, pages 1-193. It is anticipated that some of the contributions will be published as full papers in the same journal at a later date. I look forward to next year's conference, which is being hosted by the University of Pennsylvania in Philadelphia from Wednesday 28th until Saturday 31st March 2007.

For further information on the American Association of Physical Anthropology and its conference series see: www.physanth.org/.

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