

Professor Emeritus Bartsiokas Antonis

Department of History & Ethnology, Democritus University of Thrace

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Professor Bartsiokas is a paleoanthropologist specializing in paleopathology, paleophysiology, microanalysis of fossil hominins and paleohistology. His broader research interests include primate and human evolution; human origins; evolutionary theory; geochronology; speleology, behavior and the environment.

Awards:

(Plato's) Academy of Athens award for my work on the hibernation of half a million years old hominins from Spain (2022).

Participation in a TRISH project of NASA concerning the hibernation of astronauts (2021) and a similar Villum project from Denmark.

Platinum award from Mensa (1996) for $IQ \geq 155$.

Academic Education

B.Sc. in Biology, University of Athens (1976).

M.Sc. in Biological Oceanography, University of Athens (1980).

Ph.D. in Anatomy & Paleoanthropology, University of London, United Medical and Dental Schools of Guy's and St. Thomas's Hospitals (UMDS), Division of Anatomy (1989).

Postdoctoral research at the Human Origins Group, The Natural History Museum of London (1989-1991) and at the Hominid Paleontology Research Group, Department of Human Anatomy and Cell Biology, Medical School, University of Liverpool (1991- 1993).

Comparative Anatomy and evolution of Primates (Certificat d'Université de Primatologie, Strasbourg, Alsace, 1994).

Fundamental Aspects of Recombinant DNA Technology at Sheffield Hallam University (1992).

Academic Positions

Present position: Professor Emeritus of Physical Anthropology & Paleoanthropology (2019).

Associate Professor of Anthropology, Department of History & Ethnology, Democritus University of Thrace, Greece (2005).

Director of the Laboratory of Physical Anthropology & Paleoanthropology, Department of History & Ethnology, Democritus University of Thrace (2011-2019).

Director of the Anaximandrian Institute for Human Evolution, Athens (1998-2011).

Assistant Professor of Anthropology at the Democritus University of Thrace, Department of History and Ethnology (1994).

Summary

Professor Bartsiokas has directed fieldwork in Greece and participated in excavations in England, France, and Spain. His work has been published in *Science*, *Science Advances*, *PNAS*, *L'anthropologie*, *The Anatomical Record*, *Proceedings of the Royal Society*, *Journal of Archaeological Science*, *Quaternary Science Reviews*, *Journal of Human Evolution*, *L'Anthropologie*, *Journal of Field Archaeology* and other peer-reviewed international journals. His early research was on the non-destructive microanalytical methods on fossilized human bones such as energy dispersive X-ray microanalysis. He has discovered a method of measuring the degree of fossilization based on X-ray diffraction. By using X-ray microanalysis, he was able to show that the Femur I of Java man – part of the type specimens of *Homo erectus*

- belongs to *H. sapiens* while the human cranium of the Java man and femora II-V belong to *H. erectus*. He has dated the Neanderthals of the Apidima Cave from Greece, the Wajak man from Java, and the Omo Kibish 1 skull from Ethiopia. He has invented the correct formula for calculating the tooth enamel thickness. His best contribution to science is in Paleopathology. He is the one who identified the lame leg of King Philip II - the father of Alexander the Great - in Tomb I in Vergina, Greece, based on his pathology mentioned in the ancient sources. The work has been widely reported e.g., in *The New York Times* (25-4-2000 & 20-7-2015 <http://www.nytimes.com/2015/07/21/science/new-tomb-for-father-of-alexander-the-great.html>), *New Scientist* (29-4-2000), *National Geographic* (21 July 2015), *Archaeology* (20-4-2000 <http://archive.archaeology.org/online/features/macedon/>), and in documentaries by *The Open University* entitled "Health and Wellbeing in the Ancient World" and by the German Television Channel ZDF in the History Chanel entitled "Crime Scene Antiquity". As consequence of his studies concerning Vergina, he has also discovered the sacred Persian chiton, *sarapis*, of Alexander the Great. He also discovered that the 300 thousand years old Kabwe or Broken Hill man suffered from lead poisoning (reported in *The Times* of London on 1/1/94). By far his most important discovery was the hibernation of the Atapuerca hominins from Spain which is a quantum leap in the physiology of hominins reported in countless media such as the BBC, *The Guardian* <https://www.theguardian.com/science/2020/dec/20/early-humans-may-have-survived-the-harsh-winters-by-hibernating> and *Big Think* <https://bigthink.com/surprising-science/humans- hibernation?rebellitem=2#rebellitem2>. Due to this work, he is now participating in a TRISH project of NASA concerning the hibernation of astronauts and the Villum project of Denmark.

Selected Publications

2024. Bartsiokas, A. The Identification of the Sacred "Chiton" (*Sarapis*) of Pharaoh Alexander the Great in Tomb II at Vergina, Macedonia, Greece. *Journal of Field Archaeology*, 50(3), 226–238.

2023. Bartsiokas, A., Arsuaga, J. L., & Brandmeir, N. The identification of the Royal Tombs in the Great Tumulus at Vergina, Macedonia, Greece: A comprehensive review. *Journal of Archaeological Science: Reports*, 52, 104279.

2023. Siarabi, S., Kostopoulos, D. S., Bartsiokas, A., & Rozzi, R. Insular aurochs (Mammalia, Bovidae) from the Pleistocene of Kythera Island, Greece. *Quaternary Science Reviews*, 319, 108342.

2022. Balzeau, A., ... A. Bartsiokas ... & L.T. Buck. Frontal sinuses and human evolution. *Science Advances*, 8(42), eabp9767.

2020. Bartsiokas, A. and Arsuaga, J.L., Hibernation in hominins from Atapuerca, Spain half a million years ago. *L'Anthropologie*, 124(5), p.102797.

2020. Varvounis M.G., A. Bartsiokas, & N. Macha-Bizoumi, (Eds.) *The Pomaks of Thrace*. K. & M. Stamoulis Publications, 1-608. Thessaloniki. Democritus University of Thrace. Proceedings of the International Meeting on Pomaks held in Komotini, Greece, 17-19 March 2017.

2018. Lazaridis, G., Tsoukala, E., Rae, T.C., Gómez-Olivencia, A., Nagel, D. and Bartsiokas, A., *Mesopithecus pentelicus* from the Turolian locality of Kryopigi (Kassandra, Chalkidiki,

Greece). *Journal of human evolution*, 121, pp.128-146.

2017. Bartsiokas A., J.-L. Arsuaga, M. Aubert, R. Grün. U-series dating and classification of the Apidima 2 hominin from Mani Peninsula, Southern Greece, *Journal of Human Evolution* 109:22-29.

2015. Bartsiokas A., J.-L. Arsuaga, E. Santos, M. Algaba, and A. Gómez-Olivencia. The lameness of King Philip II and Royal Tomb I at Vergina, Macedonia, *PNAS (Proceedings of the National Academy of Sciences)*, 112:9844-48.

2013. P. Storm, R. Wood, C. Stringer, A. Bartsiokas, J. de Vos, M. Aubert, L. Kinsley, R. Grün. U-series and radiocarbon analyses of human and faunal remains from Wajak, Indonesia Original Research Article. *Journal of Human Evolution*, 64(5): 356-365.2013.

2012. Aubert M., A.W.G. Pike, C. Stringer, A. Bartsiokas, L. Kinsley, S. Eggins, M. Day, R. Grün. Confirmation of a late middle Pleistocene age for the Omo Kibish 1 cranium by direct uranium-series dating. *Journal of Human Evolution*, 63(5):704-710.

2008. Bartsiokas A. & E. Carney. The Royal skeletal remains from Tomb I at Vergina. *Deltos Journal of the History of Hellenic Medicine*, 36: 15-19.

2008. Bartsiokas A. A gross error in estimating average enamel thickness: implications for the hominoid evolution. *Research and Reviews in BioSciences*, 2:2-6.

2008. Tsoukala E. & Bartsiokas A. New *Mesopithecus pentelicus* specimens from Kryopigi, Macedonia, Greece. *Journal of Human Evolution* 54: 448-451.

2006. Tsoukala E., Bartsiokas A., Chatzopoulou K. & Lazaridis G. Quaternary mammalian remains from the Kitseli pothole (Alea, Nemea, Peloponnese). *Scientific Annals, School of Geology, Aristotle University of Thessaloniki (AUTH)*, 98: 273-284.

2004. Bartsiokas A. Shanidar Cave, Iraq: Archaeology. In: Gunn J. (Ed.) *Encyclopedia of Caves and Karst Science*, 642-643. Fitzroy Dearborn: New York. ISBN1-57958-339-7.

2004. Bartsiokas A. Europe, Mediterranean: Archaeological and Paleontological Caves. In: Gunn J. (Ed.) *Encyclopedia of Caves and Karst Science*, p.339-340. Fitzroy Dearborn: New York. ISBN 1-57958-339-7.

2003. Bartsiokas A. & Fox S. Two “recent” human skeletons from Kythera island. In: Glykofrydi-Leontsini A. (Ed.) *Kythera: Myth and Reality*. Vol. 3: 37-49. Free Open University of Kythera. ISBN 960-87742-0-9.

2003. Bartsiokas A. Venus: Mythology and Geological reality. In: Glykofrydi-Leontsini A. (Ed.) *Kythera: Myth and Reality*. Vol. 5: 235-243. Free Open University of Kythera. ISBN 960-87742-0-9.

2002. Bartsiokas A. Hunter-Schreger bands and pits in the teeth of *Graecopithecus freybergi* using macrophotography. *Annales Géologiques des Pays Helléniques* 39 (Fasc. A.): 363-368.

2002. Bartsiokas A. Hominid cranial bone structure: a histological study of Omo 1 specimens

from Ethiopia using different microscopic techniques. *The Anatomical Record* 267: 52-59.

2001. Bartsiokas A. Peristeri I, a New Palaeolithic Cave in Epirus: Palaeoanthropological and Geophysical Investigations. In: Bassiakos Y. Aloupi E. & Facorellis Y. (Eds.) *Archaeometry issues in Greek Prehistory and Antiquity*. Athens: Hellenic Society of Archaeometry and the Society of the Messenian Archaeological Studies, pp.95-102.

2000. Bartsiokas A. The eye injury of King Philip II and the skeletal evidence from the Royal Tomb II at Vergina. *Science* 288: 511-514.

2000. Bartsiokas A. The Franklin expedition and lead poisoning. *European Journal of Oral Science* 108: 78-79.

1997. Papamarinopoulos St., Papaioannou, Stefanopoulos P. & Bartsiokas A. Geophysical studies within a cave at Kouklesi village in Northern Greece. In: Marinos P.G. et al (Eds.) *Engineering Geology and the Environment*. Balkelma, Rotterdam, ISBN 9054108770.

1994. Bartsiokas A. Observations on Speleogenesis and Taphonomy of hominid bone accumulations in "Cueva Mayor", Sierra de Atapuerca, Spain. *Bulletin de la Societe Speleologique de Grece*, 21: 538-546.

1993. Bartsiokas A. & Day M.H. Electron probe energy dispersive X-Ray microanalysis (EDXA) in the investigation of fossil bone: the case of Java man. *Proceedings of the Royal Society, Series: B, London* 252: 115-123.

1993. Bartsiokas A. & Day M.H. Lead poisoning and dental caries in the Broken Hill hominid. *Journal of Human Evolution* 24: 243-249.

1992. Bartsiokas A. DNA fluorescent staining in fossil human bones and confocal laser scanning microscopy. *Ancient DNA Newsletter* 1(2): 13-14.

1992. Hall L.M., Ashworth C. Bartsiokas A. & Jones D.S. Experiments on inhibition problems in old tissues. *Ancient DNA Newsletter* 1(2): 9-10.

1992. Bartsiokas A. & Middleton A.P. Characterization and dating of recent and fossil bone by X-ray diffraction. *Journal of Archaeological Science* 19: 63-72.

1982. Bartsiokas A., Merdenisianos K., & Zafeiratos K. The anthropological finds of Kapsia cave and their history (Τα ανθρωπολογικά ευρήματα του σπηλαιίου Κάψιας Τριπόλεως και η ιστορία τους). *Bulletin de la Societe Speleologique de Grece*, 18: 157-168.