



# Max Planck Institute for Evolutionary Anthropology

## **PRESS RELEASE**

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### **Bone knife from Morocco: oldest specialized bone tool associated with Aterian culture**

**New find indicates the appearance of a unique technological complex in North Africa around 90,000 years ago**

**A single bone artefact found in a Moroccan cave is the oldest well-dated specialized bone tool associated with the Aterian culture of the Middle Stone Age, according to a study led by Abdeljalil Bouzouggar of the Institut National des Sciences de l'Archéologie et du Patrimoine in Rabat, Morocco, and associated researcher at the Max Planck Institute for Evolutionary Anthropology in Leipzig, Germany. The make and manufacture of the tool are distinct from similarly-aged sub-Saharan artefacts, suggesting a unique technological industry in North Africa.**



The tool was recovered in 2012 from Dar-es Soltan 1 cave, located about 260 m inland from the Atlantic coast of Morocco. Upon close examination, Bouzouggar and colleagues were able to identify the origins of the bone as a large mammal rib with evidence of having been shaped and sharpened into a 122 millimeter-long knife through a complex series of modifications. The layer containing the bone knife has been dated to approximately 90,000 years ago, approximately 55,000 years after the first appearance of the Aterian culture.

This tool and the technology used to create it are distinct from bone tools of a similar age in southern Africa but similar to two tools known from the El Mnasra cave site in Morocco which is also of similar age, suggesting a unique North African Aterian bone technology. Specialized bone



tools are considered a sign of cognitive complexity but have been poorly understood within the Aterian technological complex, so this finding represents a new insight into the development of modern human cognition. The authors also suggest that this new technology may have come about in response to changing resources around 90,000 years ago but note that more study will be required to support this.

[AB/SJ]

Original publication:

Abdeljalil Bouzouggar, Louise T. Humphrey, Nick Barton, Simon A. Parfitt, Laine Clark Balzan, Jean-Luc Schwenninger, Mohammed Abdeljalil El Hajraoui, Roland Nespoulet, Silvia M. Bello **90,000 year-old specialised bone technology in the Aterian Middle Stone Age of North Africa** PLOS ONE, 03 October 2018, DOI: 10.1371/journal.pone.0202021

Images:

Page 1: Dar es-Soltan 1 Cave, © INSAP/Oxford University

Page 2: Dar es-Soltan 1 Bone tool (knife), © Mohammed Kamal

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