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**The Sound of Bones**

**Proceedings of the  
8<sup>th</sup> Meeting of the ICAZ Worked Bone Research Group  
in Salzburg 2011**



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### **WBRG Publications**

1997 – 1<sup>st</sup> meeting – London (United Kingdom)

Riddler I. (ed.) 2003: *Materials of Manufacture: The Choice of Materials in the Working of Bone and Antler in Northern and Central Europe During the First Millennium AD*. British Archaeological Reports, International Series 1193. Oxford.

1999 – 2<sup>nd</sup> meeting – Budapest (Hungary)

Choyke A.M. / Bartosiewicz L. (eds.) 2001: *Crafting Bone: Skeletal Technologies through Time and Space – Proceedings of the 2<sup>nd</sup> meeting of the (ICAZ) Worked Bone Research Group Budapest, 31 August – 5 September 1999*. British Archaeological Reports, International Series 937. Oxford

2003 – 4<sup>th</sup> meeting – Tallinn (Estonia)

Luik H. / Choyke A.M. / Batey C. / Lougas L. (eds.) 2005: *From Hooves to Horns, from Mollusc to Mammoth – Manufacture and Use of Bone Artefacts from Prehistoric Times to the Present – Proceedings of the 4<sup>th</sup> Meeting of the ICAZ Worked Bone Research Group at Tallinn, 26<sup>th</sup>–31<sup>st</sup> of August 2003*. Muinasaja teadus 15. Tallinn

2007 – 6<sup>th</sup> meeting – Paris (France)

Legrand-Pineau A. / Sidéra I. / Buc N. / David E. / Scheinsohn V. (eds.) 2010: *Ancient and Modern Bone Artefacts from America to Russia. Cultural, technological and functional signature*. British Archaeological Reports, International Series 2136. Oxford

2003 – 7<sup>th</sup> meeting – Wrocław (Poland)

Baron J. / Kufel-Diakowska B. (eds.) 2011: *Written in Bones. Studies on technological and social context of past faunal skeletal remains*. Wrocław.



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Felix Lang

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