Harold L. Dibble (1951–2018)

Archaeologist who transformed our understanding of Neanderthals.

Harold Dibble, a passionate advocate of science, a dedicated and tireless fieldworker, and a leading figure in the fields of palaeoanthropology and archaeology, died unexpectedly in June. Harold made substantial contributions to our understanding of human evolutionary adaptations through his focus on Neanderthal stone tool technology, use of fire and burial practices.

Born in California in 1951, Harold received both his BA (1971) and PhD (1981) from the University of Arizona where Art Jelinek supervised him. He took up a lecturer position at the University of Pennsylvania in 1982 and became full professor there in 1996. Early on in his career, his interest in Neanderthal stone tool variability resulted in significant insights into the textbook debate between two other giants of the field, François Bordes and Lewis Binford, over whether culture or function best explained different Neanderthal tool ‘types’. Harold’s answer was “neither”. Rather, his Scraper Reduction Model, for which he is best known, argued that the different ‘types’ of stone tools were mainly just different stages in the use-life of a tool (H. Dibble, *Am. Antiquity* 52, 109–117; 1987). This challenged the definition of the very units of the debate and forced a lasting appreciation for the dynamic nature of stone tool production and discard.

Harold spent four decades excavating sites in France and Morocco and conducting surveys in the Egyptian desert. His work at many of the best-known French sites (including La Quina, Combe-Capelle Bas, Cagny l’Épinette, Fontéchevade, Pech de l’Azé IV, Roc de Marsal, La Gane and La Ferrassie) allowed him to investigate several controversial questions about Neanderthal behaviour and exercise his inherent scepticism. The intermittent presence of fire evidence in several sites led him to challenge the assumption that all Neanderthals could make fire (H. Dibble et al., *Curr. Anthropol.* 58, S16; 2017). This highly controversial position was entirely based on empirical observations and generated considerable debate. Similarly, another seminal paper (P. G. Chase & H. L. Dibble, *J. Anthropol. Archaeol.* 6, 263–296; 1987) challenged claims for Neanderthal symbolic behaviour and ritual. Based on his excavation of two famous sites in the debate about Neanderthal burial practices, he called into

serious question the evidence used to argue for intentional burial (D. M. Sandgathe et al., *J. Hum. Evol.* 61, 243–253; 2011). This work, like much of his earlier research, resulted in a re-examination of some long-held assumptions about Palaeolithic behaviour and the nature of the evidence used to reconstruct it. He had very little patience for the long-standing tendency to reduce the study of Neanderthals to a ‘they were either just like us or were dumb brutes’ debate. He argued instead that they should be understood in their own right, as a unique hominin lineage, with a long and successful adaptation that was fundamentally different from our own.

Harold was also well known for how he did archaeological excavation and experimentation. His frustration with our limited understanding of stone tool manufacture led him to found the Laboratory for the Study of Ancient Technology at the University of Pennsylvania, where he built a machine for controlled flintknapping experiments to better understand the very basics of flake formation. This tendency to approach the big questions about past hominin behaviour by developing ways to properly understand the most basic data and address the simpler questions first was typical of Harold and what distinguishes his work as a scientist.

Harold was notable in the community for how much he excavated (he undertook a total of 57 field seasons at ten different archaeological sites) as well as his innovative methods. His lasting fieldwork contributions stemmed from two important realizations. First, he took to heart the responsibility that

comes with removing archaeological sites through excavation. He invested significant thought and effort into how to excavate and curate archaeological finds; he took equally seriously the management of the resulting databases and collections, and had a strong conviction for freely sharing the resulting data. Second, he focused on data quality. To this end, he pioneered the use of modern technology in archaeological research. He wrote software that let archaeologists easily use survey equipment to rapidly and accurately collect and process contextual data, and he wrote software specifically for the spatial analysis of these data. Harold pioneered open science in archaeology, freely sharing this software and data on the Internet. Because of this and the hundreds of students on his excavations, a significant number of researchers around the world today employ technology and methods he developed over the past 30 years.

Perhaps more important than contributions on any one issue were Harold’s broader impacts in the field of archaeology. He was committed to ensuring that archaeological research followed the scientific method of hypothesis formation and testing. Harold argued strongly for the importance of the quality of evidence and logical argumentation and reasoned against interpretation by authority or perceived wisdom.

Harold’s most lasting legacy, however, will be the personal relationships he developed with all the researchers who benefited so much from his collaboration, supervision, advice, dedication and friendship. He also fed them well: Harold loved food, cooking and eating, preferably for and with friends and his family: his wife Lee, and his sons Chip and Flint. He also loved France and over the 40 years he worked there he forged many long and close relationships. Several years ago, he and Lee bought the house that Harold had been using for almost 20 years for fieldwork. He had planned to spend more and more of his time there.

Harold will be remembered for his truly unique personality, which was, in a word, ‘big’. While he certainly could at times be stubborn, scientists with contra-views need to be. On the other hand, he was also optimistic, gregarious, generous with his time and resources, not overly fond of formality, direct, and above all, honest. He had an unstoppable and infectious sense of humour that included a playful streak.

He loved to laugh and it was impossible not to laugh with him. Harold worked hard at contributing to our understanding of the human journey (no small thing), but while he was at it, he laughed a lot while surrounded by people who felt the same way.

Dennis Sandgathe^{1*}, Shannon McPherron², Paul Goldberg³ and Vera Aldeias⁴

¹Simon Fraser University, Burnaby, Canada.

²Max Planck Institute, Leipzig, Germany. ³Boston University, Boston, USA. ⁴Universidade do Algarve, Faro, Portugal. *The authors worked closely with Harold as friends and colleagues for several decades.*

As a team they excavated a number of sites in France and Morocco and published numerous papers together.

**e-mail: dms@sfu.ca*

Published online: 10 September 2018
<https://doi.org/10.1038/s41559-018-0665-5>