Steven Weber, Palaeoethnobotanist (1954-2020)

It is with profound sadness that I record the passing away earlier this year of Steve Weber (1954-2020), an archaeobotanist, a friend, a sometimes sparring partner (on issues archaeobotanical), a sometimes co-author, whose ideas and work greatly enriched my own. For most archaeobotanists, he is probably best known for his work on Harappan plant remains, from his book *Plants and Harappan Subsistence* (1991), to his co-edited volume on *Indus Ethnobiology: New Perspectives from the Field* (2003). Although his PhD (Univ. Pennsylvania, 1989) was on the Harappan site of Rojdi in Gujarat, India, he had previously worked in the American Southwest, especially in the Hopi region. After degrees at Northern Arizona State University and attending the first Ethnobiology meeting held in 1978 in Prescott Arizona, he helped to found the Society of Ethnobiology, with Steven Emslie, and he edited its *Journal of Ethnobiology* that launched in 1981 (recounted in Weber 1986). The first issue of that journal partly celebrated the ethnobiological work of the late Al Whiting, which Steve Weber helped to bring to publication as *Havasupai Habitat* (Whiting, Weber and Seaman 1985), which looked in detail on resource use and settlement system of a Native American group in part of the Grand Canyon region. Steve departed Arizona to take up his PhD work at Pennsylvania and to establish the first really large-scale machine flotation program of archaeobotany in the Indus valley region at the site of Rojdi with Prof. Gregory Possehl (1941-2011). He later took over the archaeobotany at the excavations at Harappa (Pakistan) throughout the 1990s.

[Photo]: Steve Weber in discussions at a conference on the archaeology of rice, Kyoto, 2009

He was professor in the Anthropology Department at Washington State University, where he taught from 1994 onwards. On his webpage there, he describes himself as an "archaeologist and archaeobotanist working throughout the world" and working on the themes of "how and why people adopt new subsistence strategies, and how change in subsistence systems relates to change in material culture and settlement systems." He was always quick to point out that he was a field archaeologist first, but he was also a knowledgable and enthusiastic botanist. He certainly did get around-- we had meetings and encounters in France, in London and Cambridge, in the Delhi airport, in Lucknow, in Zhejiang, in Kyoto and Tokyo, in San Francisco and Vancouver, Canada, and no doubt others I have forgotten. He was also intently engaging in conversations, full of ideas for further analysis, and extremely generous with his ideas, encouraging to students. Sometimes they were quite accidental. We met once in the Delhi airport, both transiting and tired from long flights from abroad, but over coffee we had a conversation about potentially fundamental differences between wheat and barley on the one hand and millets on the other, and whether or not there was something inherent in the productivity of the big-grained cereals that meant they were more likely to support urbanism. Ideas he later developed in his paper "Does size matter?" (Weber et al 2010a). In this article he suggests that large-seeded crops, like wheat or barley, rice or maize, have larger and deeper root systems, making them much more productive when soils are well-watered in contrast to the more conservative small-grained crops like millets, which only come into their own where poor water condition force productivity to be low. He suggested that is was the big-grained cereals and their productivity that were fundamental to supporting the rise of the first urban societies. While one can find exceptions, like northern Chinese urbanism based on millets, there does tend to be higher productivity in the larger grains cereals, allowing for the support of denser populations.

One time we arrived in Lucknow together, and Steve's luggage has been lost, so we spent the afternoon shopping for clothes for him. (He bought quite sensible clothes, while I opted for a rather louder shorts-- see below). Although we were both there for a conference on Lahuradewa and the origins of agriculture, and especially rice agriculture, our conversation

strayed, as it often did, the small millets that constitute so much agricultural diversity, not just in India, but around the world. Steve's take was that the great potential of small-scale sustainable millet agriculture was largely overlooked by modern scholarship, in part because of bias towards interest in those large-grained cereals, that were both more easy to find archaeologically and more likely to support urban elites. This resulted in our joint attempt to call attention to millets in worldwide agricultural and archaeobotanical studies (Weber and Fuller 2008), and his subsequent papers that drew attention to the importance of millets from the Indus Valley to Neolithic Thailand (Weber et al 2010b; Weber and Kashyap 2016).

Tragically over the past couple of years he suffered from a degenerative illness. Despite this he was still intent on numerous research issues and ongoing projects when I saw him at a party and conference session in his honour at the *Society of American Archaeologists* conference in Vancouver, marked in part by the retrospective on Steve Weber the visionary (D'Alpiom Gyuedes and Fuller 2018). Steve generously passed on his many archaeobotanical samples to Jade, and this continue to be analyzed at UC San Diego, and so the legacy of his research can be expected to continue to yield results for years to come.

One of my earlier interactions with Steve was when I had first started teaching in London and I had offered something of a critique to an article on "seeds of urbanism" that he published in Antiquity (Weber 1999). And while our published debate might have read somewhat acriminously, he was nothing but supportive and even enthusiastic about discussions with a younger scholar about the finer points of interpreting patterning in archaeobotanical data. He insisted that we should distribution together both his original article, my critique and his reply at the South Asia Archaeological conference in Paris in the summer of 2001. He was so focused on moving the field in the positive direction that he took criticism as a positive, as platform for improving the field, which lead onto useful reviews of the field and archaeobotanical formation processes (Penington and Weber 2004; Fuller and Weber 2005). He was humble in his knowledge and a gentleman scholar. His example of putting the pursuit of archaeological knowledge first, before his ego, is an example I will continue to strive for.

Dorian Q Fuller

[Photo: Archaeobotanists visiting excavations at Lahuradewa, India, 2006, left to right: K. S. Saraswat, Steve Weber, Dorian Fuller, Mukund Kajale]

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