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Embracing the pitfalls and triumphs in interdisciplinary research.

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The *Astronomical Diaries and Related Texts from Babylonia* is a seven volume transliteration and translation of collected cuneiform texts, originally written on clay tablets, from Babylon (modern day Hillah in Iraq). For many centuries in the first millennium BCE, trained scribes positioned themselves night and day to watch and record the skies. It is the compilation of this work that embodies what are known today as the “astronomical diaries”. These texts provide a wealth of data ranging from sub-daily resolution to monthly summaries including: astronomical features and the movement of stars and planets; market prices for six commodities; river level heights for the Euphrates river; information regarding contemporary events; and meteorological data, which was systematically recorded using specific terminology for particular weather phenomena. So precise is this terminology that a few terms remain untranslated. To date, much work has been conducted on these diaries with the exception of the meteorological data. Doctoral research of the presenting author has involved extracting this into a large dataset to facilitate future analysis.

This research is conducted in an interdisciplinary context, within the wider Climates of Conflict in Ancient Babylonia project, where colleagues explore the potential impact of climate on conflict. The team is comprised of a climate historian with a background in geography, a historian, a geographer and a classicist, who interact with historical linguistic experts, climate modellers, climate scientists, and palaeoscientists. As in this project, the application of historical research is becoming increasingly prevalent in the geosciences. Historic texts have the potential to reveal implicit clues to climatic investigations. The *Astronomical Diaries and Related Texts from Babylonia* provide, for example, intriguing descriptions of events in which “*the disk of the sun looked like that of the moon*”, identified as volcanic dust veils and already utilised in updating ice-core chronologies of volcanic eruptions over the last 2,500 years.[1]

This paper will narrate the process of extracting climatic data from historical sources; highlight the pitfalls and triumphs in terms of the practicalities of this interdisciplinary research; and provide a volcanic impacts case study, continuing the scientific endeavour instigated by Babylonian scribes over 2,000 years ago.

[1] Sigl, M., M. Winstrup, J. R. McConnell, K. C. Welten, G. Plunkett, F. Ludlow, U. Büntgen, et al., ‘Timing and climate forcing of volcanic eruptions for the past 2,500 years’ in *Nature*, dxxiii, no. 7562 (2015), pp. 543–549.

