

EGU2020-17417

<https://doi.org/10.5194/egusphere-egu2020-17417>

EGU General Assembly 2020

© Author(s) 2020. This work is distributed under the Creative Commons Attribution 4.0 License.



Reconstructing the climate of Ancient Babylonia

Rhonda McGovern, Conor Kostick, Laura Farrelly, and Francis Ludlow

Trinity College Dublin, Trinity Centre for Environmental Humanities, History, Ireland (mcgoverh@tcd.ie)

Ancient Babylonia is a kingdom / province in the Fertile Crescent in south-central Mesopotamia (modern day Iraq). It has a rich textual and archaeological history and is the origin of many scientific and cultural advances, such as the definition of the seven-day week, the invention of zero, and many legal principles still underlying modern contract, tort, criminal, property, and family law.

The Irish Research Council-funded “Climates of Conflict in Ancient Babylonia” (CLICAB) project aims to investigate climatic changes in Babylonia during the final eight centuries BCE and assess for linkages to patterns of violence and conflict, through the application of methods from historical climatology to the wealth of data available. Although there are gaps in the recorded observations, and potentially more tablets yet to be found and translated, the 209 precisely dated, transliterated and translated tablets presently available will provide for many years a sub-daily window into the weather, and therefore the climate of this key historical region. This is a far greater resolution than is currently available for any region or period in the Ancient world, and indeed unprecedented in the world of historical climatology before the Early Modern Period.

Key to the project’s broader aims is the reconstruction of the climate for the region based on the information held in the Babylonian Astronomical Diaries. This paper thus examines the process of mining information from the detailed record maintained by Ancient Babylonian scribes in the Astronomical Diaries and presents an overview of the findings. These diaries are a collection of cuneiform tablets spanning 652-61BC, housed in the British Museum. They are rich in systematic weather observations (even down to an hourly resolution), astronomical phenomena, price data, and river heights for the Euphrates. Much work has been undertaken to examine the economic, astronomical and fluvial data, but until now the weather observations have remained relatively untouched, despite their unparalleled temporal resolution for this period, the systematic methodology applied in their recording, and the sheer breadth of information provided. This ranges from wind direction and intensity, to the level of cloud cover and references to atmospheric clarity (clear vs. dusty skies), to the general conditions (temperature and precipitation), for all seasons. This project will see the reconstruction of the climate for the region of Babylonia, and therefore provide one of the oldest weather records in the world. This paper presents high-resolution weather data from the Astronomical Diaries. Specifically, the authors will present the frequency of meteorological extremes over the period, alongside a discussion into the mitigation methods the Babylonians employed to reduce their vulnerability to these extremes.

KEYWORDS: Ancient Babylonia, Climate, Conflict