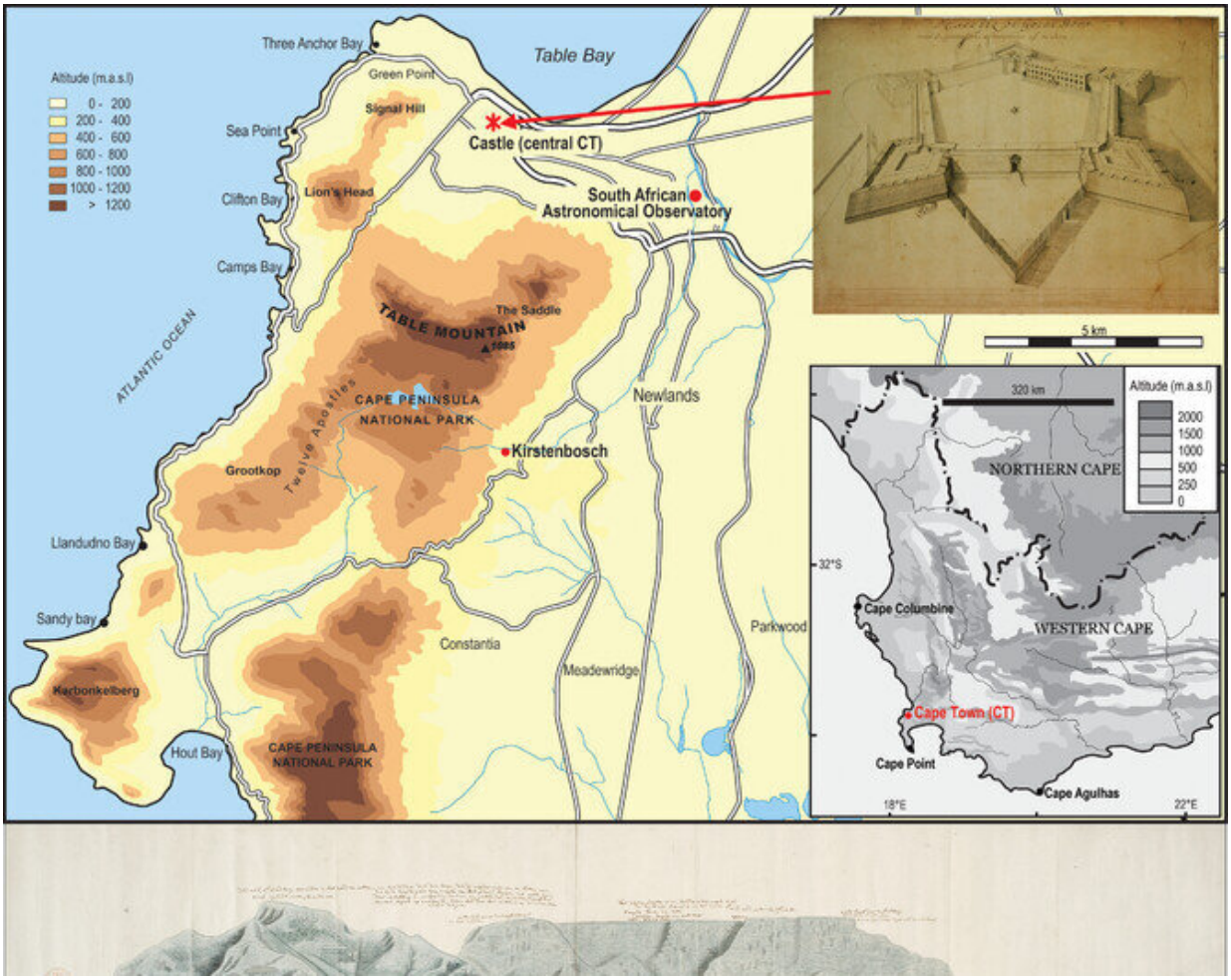
Study reveals past climate of Cape Town

September 22 2022



(top left) Location of Cape Town and the Castle (where weather observations were made for the day registers). (top right) A “Perspective of the Castle of Good Hope, as seen from the Waterfront” by Jan Wittebol, ~1680 (source: Comprehensive Atlas, p. 26: Nationaal Archief, 4 VEL Record No. 830). (middel) A panorama of Cape Town and its surroundings as seen from the sea (by Robert Jacob Gordon, 1778; source: Rijksmuseum online digital resource

library). (bottom) A plan view dated to ~1760–89 (cartographer unknown; source: Comprehensive Atlas, p. 103. Nationaal Archief, 4, TOPO 15.72). Credit: *Bulletin of the American Meteorological Society* (2022). DOI: 10.1175/BAMS-D-21-0127.1

New insights into the history of South Africa's climate have been revealed.

In a project that spanned seven years, the Tracing History Trust, with support from Cardiff University and Wits University, has digitized and transcribed the Dutch East India Company's day registers which were written between 1652 to 1791.

In the their first paper studying these records, published in the *Bulletin of the American Meteorological Society*, authors reveal how people were affected by weather and climate between 1773 and 1791.

The findings show there were, on average, more rainy days in this period than at any time since then. The records also reinforce what scientists already know about increasing temperatures over recent centuries.

Dr. Mark Williams, based at the School of History, Archaeology and Religion at Cardiff University, says that "while we know a lot about the historical climate of the Northern Hemisphere, much less has been studied on the Southern Hemisphere. That's why the records from the Dutch East India Company are so invaluable and merit further investigation."

"The quotidian data present in the day registers allows for a deeper analysis of the everyday lives of people in the Cape, and also the machinations of the colonial system. Often, what is included in the

canons of 'history' are major political events and other flashpoints, but through the lens of the every day, over time we can see broader trends that have major environmental and social implications."

"We can also see how weather and economic systems across geographies were interconnected. For instance, major volcanic eruptions affected the weather and climate in the Cape. And if there were monsoons in the Indian Ocean, or frozen conditions in the Atlantic Ocean, then trade was affected too."

"Obviously, these detailed weather records were also a way for the colonial empires to have control over the movement of ships and thus the colonies as a whole."

Professor Stefan Grab in the School of Geography, Archaeology & Environmental Studies at Wits University, says that "the day registers are an unprecedented record of South African history which spans many subjects such as daily weather conditions, economics, trade, and religion. In particular, the daily weather record is the most comprehensive of data, with no other forms of weather records (gleaned from organic matter for example) able to reveal such detailed information."

"Back then the weather wouldn't have been impacted as much by humans. We see that global warming has increased since the industrial revolution, and our research adds detail on how local weather and climate have changed in response to such warming."

The publication of the paper coincides with the completion of the transcription of the day registers, covering almost 140 years. These have been transferred to The Hague and will soon be available online.

More information: Stefan Grab et al, The Late-Eighteenth-Century Climate of Cape Town, South Africa, Based on the Dutch East India

Company "Day Registers" (1773–91), *Bulletin of the American Meteorological Society* (2022). DOI: 10.1175/BAMS-D-21-0127.1