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The climate in south-east Moravia, Czech Republic, 1803–1830, based on daily weather records kept by the Reverend Šimon Hausner

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Weather diaries constitute an important source of data for historical climatology, employed in the analysis of weather patterns for both the pre-instrumental and the early instrumental periods. Among the many weather diaries that exist in Europe, the daily records kept by the Reverend Šimon Hausner from Buchlovice in south-east Moravia (Czech Republic), covering the period from 1 January 1803 to 15 January 1831, are particularly useful. His qualitative daily weather descriptions enable the construction of series for temperature, precipitation, cloudiness, wind and other weather phenomena (particularly thunderstorms and fogs), supplemented by a number of phenological and agricultural work records (spring sowing of cereals, blossoming of cherry trees and grapevine, grain harvest). His data related to temperature and precipitation patterns were quantified into a series of weighted temperature and precipitation indices on 7-degree scales (-3 extremely cold/dry, -2 very cold/dry, -1 cold/dry, 0 normal, 1 warm/wet, 2 very warm/wet, 3 extremely warm/wet), which were subsequently compared with homogenised temperature and precipitation observations from the secular meteorological station in Brno. The cold period in 1812–1816 and the dry period of 1805–1811 are particularly worthy of note. This comparison indicates that Hausner's observations have great meteorological, climatological and phenological validity, significantly supplement the Czech database of historical-climatological data and extend knowledge of climatic variability of the first third of the 19th century in central Europe as well as a better understanding of the variability of the regional climate in Moravia. The study reveals the importance of weather-related documentary data in the overlap period with instrumental meteorological observations.