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Elementi climatici e successione degli eventi meteorologici e idrologici del territorio di Carmagnola dall'anno 1601

ABSTRACT - *Climate elements and succession of meteorological and hydrological events in the Carmagnola area (NW Italy) from the year 1601.*

Chiaffredo Cornaglia carried out a decades-long, patient work of reorganizing and studying the documents kept in the Historical Archive of the City of Carmagnola. In the course of this activity he summarized all the misfortunes and calamities of various kinds (plagues, wars, lootings, popular riots, extreme weather events, etc.) occurred in the territory of Carmagnola in the seventeenth, eighteenth, nineteenth and early twentieth centuries, corresponding to a series of observations of 336 years starting from 1601. The fruit of his work as a synthesis is the unpublished manuscript “*Notiziario carmagnolese*” still preserved in the same archive.

In the present work descriptions of meteorological and hydrological events (drought, hail, heavy rain, floods and land disruptions) have been considered, and faithfully reported, omitting all the other events falling outside of these natural atmospheric phenomena. Whenever possible, the weather events contained in the Cornaglia's manuscript were compared with information derived from the longest series of climate data available in Piedmont, starting in the second half of the eighteenth century, stored at the Turin Meteorological Station. Apart from the undoubted historical interest of the *Notiziario Carmagnolese*, some general considerations on climate can be highlighted. Carmagnola (240 m above sea level), placed in the Western Piedmont plain, is characterized by a climate similar to that of Turin, temperate, without a dry season and with hot summer. This can be defined as ‘Humid subtropical’, and occurs in the entire Po plain. In the past centuries the phenomena of hydrogeological instability (essentially floods) have al-

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