The aim of this work is to create an overview of current climate classifications and to demonstrate the dependence of these classifications on the type of dataset and on the studied period. In the first part resulting from the available information in the literature the standard division of climate classifications into effective and genetic has been kept. Nevertheless, the first outnumber branch has been divided further into four groups according to their main characters: classifications (i) thermic, (ii) determined by vegetation, meteorological and climatic elements, (iii) delimited by marginal values of created indexes and (iv) based on symbols of landscape. In the second part the influence of selected data (station vs. gridded) on the resulting representation of climate classification is demonstrated using the comparative method. On the basis of station data accessible online for the Czech Republic and Germany supplemented for earlier periods by material from printed publications, the dependence of the studied period on the final output of climate classification is demonstrated. In most cases, there was a change of "Dfb" - (cold climate without dry season with warm summer) - on "Cfb" - (temperate climate without dry season with warm summer). The complexity of the issue of creating climate classifications and their appropriate utilisation in the documenting of the development of the climate and its eventual prediction are shown.
Keywords: classification of climate, station data, gridded data, studied period