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Comparative studies of Danxia landforms in China

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Danxia geomorphology originates from China. This paper studies the spatial distribution and differences in characteristics of Danxia landforms. Based on relevant research and investigations, three congregated areas of Danxia landform in China are discussed in this paper. They are the southeast area (including Jiangxi, Fujian, Zhejiang, Hunan and Guangxi provinces), the southwest area (the transitional zone of Yunnan-Guizhou Plateau and Sichuan Basin) and the northwest area (including Longshan mountain and along the banks of the Huanghe River and its anabranches). Not only the conditions of geology and geography of the three areas but also the differences of Danxia landforms of the three areas are analyzed. The Danxia landscape, characterized by upright-shaped peaks, Danxia mesa, stone wall, cave and vertical cave, "Danxia natural bridge", "a narrow strip of sky" and so on, often presents in the southeast area. The landscape of southwest area is characterized by Danxia escarpment faces and waterfalls. In the northwest area, the Danxia landscape has the traits of arid areas simultaneously, for example, mud-coating type, columniation type, board type, moreover, it is greatly different between these environmental factors such as the microclimate, water, wind, and the loess cover. Finally it explores the causes which lead differences in landform and also explains the landform formation process and its mechanism with reference to the rates of crustal uplift, the tectonic red-basin, and the external processes including working of running water, weathering, biogenic, gravity in each area of Danxia Landforms in China.

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