

唐山地区晚更新世以来的孢粉组合特征及其与邻区的对比

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中文摘要:通过对唐山市复兴路十中旧址钻孔更新统上部 and 全新统部分的60 m岩芯的沉积物及92件孢粉样品的分析,建立了4个组合带,总结了唐山地区晚更新世以来的植被演替和气候变化:(1)孢粉带 I,以针阔混交林-草原为主,气候温暖湿润;(2)孢粉带 II,以疏林草原为主,气候寒冷干旱,为晚更新世以来环境最为恶劣的时期;(3)孢粉带 IIIa,植被为针阔混交林-草原,气候温暖湿润;(4)孢粉带 IIIb,发育暗针叶林-草原,气候寒冷湿润;(5)孢粉带 IIIc,植被为疏林草原,气候寒冷略干;(6)孢粉带 IV,发育针阔混交森林,气候温暖湿润,为晚更新世以来水热条件最佳的时期。通过与邻区及全球冰芯、深海沉积研究成果的对比分析,探讨了华北平原晚更新世以来的气候变化特点: MIS3的温湿条件显著优于MIS2和MIS4,达到间冰期气候,与MIS5相似,局部地区甚至超过MIS1; MIS2不是一个持续干冷的过程,而是一个由湿冷逐渐转向干冷的过程。此成果对探讨华北平原第四纪地层划分、对比和气候演化提供了科学依据。

中文关键词:孢粉组合 气候变化 晚更新世 唐山地区

Sporopollen Assemblages in Tangshan Area since Late Pleistocene with a Correlation to those in Adjacent Areas

Abstract:Based on a study of 92 samples collected from the 60-meter deep core of an Upper Pleistocene and Holocene deposit at the site of the former 10th Middle School on Fuxing Road of Tangshan City, the authors have established four sporo-pollen complex zones. Plant successions and climate changes in Tangshan area since Late Pleistocene are summarized as follows: (1) Along sporopollen zone I, the vegetation was mainly from mixed coniferous and broad-leaf forest to grassland, and the climate was warm and moist. (2) Along sporopollen zone II, sparse woods-grassland represented the vegetation at that time, the climate was cold and dry, and this stage was the most terrible period since Late Pleistocene. (3) Along sporopollen zone IIIa, it was warm and moist, and the vegetation was from mixed coniferous and broad-leaf forest to grassland. (4) Along sporopollen zone IIIb, dark coniferous forest and grassland were developed, and the climate was cold and moist. (5) Along sporopollen zone IIIc, the vegetation was sparse woods-grassland, and the climate was cold and somewhat dry. (6) Along sporopollen zone IV, mixed coniferous and broad-leaf forest was developed, the climate was warm and moist, and this stage was a period with the best hydrothermal condition since Late Pleistocene. A comparison is also made with the achievements obtained in adjacent areas, global ice cores and deep sea sediments so as to investigate the characteristics of climate change in North China plain since Late Pleistocene. The hydrothermal condition of MIS3 was much better than that of MIS2 and MIS4 and reached an interglacial climate similar to that of MIS5, with local areas even exceeding that of MIS1. The climate of MIS2 varied from cold-moist to cold-dry instead of being always cold and dry. The results obtained in this paper provide an important basis for the study of Quaternary stratigraphic division and correlation as well as climate changes in North China plain.


keywords:[sporo-pollen assemblages](#) [climate changes](#) [Late Pleistocene](#) [Tangshan area](#)

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