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中国科学院南京地理与湖泊研究所, 中国科学院南京地理与湖泊研究所, 中国科学院南京地理与湖泊研究所, 中国科学院南京地理与湖泊研究所, 中国科学院盐湖研究所 210008, 210008中国科学院研究生院, 北京, 100039, 210008, 210008, 西宁, 810008

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摘要:

本文通过系统分析青海茶卡盐湖CKL-2004孔盐类矿物、碳酸盐矿物、碎屑岩矿物以及碎屑岩中的总有机碳(TOC)和总氮(TN),揭示了该湖16000a以来的演化过程。结果表明:16000~11700cal. aBP期间,茶卡湖为一淡水湖,其间记录了Bolling-Allerd暖期(13900~12400cal. aBP)和Younger Dryas冷期(12400~11700cal. aBP);11700~5900cal. aBP期间,湖泊萎缩、咸化;5900~5250cal. aBP期间,茶卡盐湖经历了一个明显的短暂淡化期;5250cal. aBP(?)以后,特别是2300cal. aBP(?)以来,湖泊极度萎缩、咸化。总体而言,相对于晚冰期,茶卡盐湖盐类矿物的出现是在全新世增温的背景条件下逐步萎缩形成的,表明全新世温度的增高引起的蒸发量的增加,远远大于东亚季风增强所带来的降水量的增加。

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Evolution of Chaka Salt Lake during the Last 16000 Years and Its Response to Climatic Change [Download Fulltext](#)

[LIU Xingqi](#) [WANG Yongbo](#) [SHEN Ji](#) [WANG Sumin](#) [YANG Bo](#)

1 Nanjing Institute of Geography and Limnology, Chinese Academy of Sciences, Nanjing, Jiangsu, 210008 ;2 Graduate School, Chinese Academy of Sciences, Beijing , 100039; 3 Institute of Salt Lakes, Chinese Academy of Sciences, Xining, Qinghai, 810008

Fund Project:

Abstract:

Evaporate minerals, carbonate, detrital minerals, and total organic carbon (TOC) and total nitrogen (TN) in detrital sediments from core CKL-2004 in Chaka salt lake, are used to reconstruct the evolution of the lake during the last 16000 years. The lakewater was fresh between 16000 and 11700 cal. a BP. The Bolling-Allerd warm event and Younger Dryas cold event respectively between 13900 and 12400 cal. a BP, and between 12400 and 11700 cal. a BP, were recorded. The lake began to shrink between 11700 and 5900 cal. a BP. A short and obvious desal period occurred between 5900 and 5250 cal. a BP. The lake shrank fast after 5250 cal. a BP(?), especially after 2300 cal. a BP(?). In general, evaporate minerals appeared just at the beginning of the Holocene when temperature increased relative to the late glacial, indicating that increase of evaporation proceeding more quickly at higher temperature in the Holocene is far larger than increase of Asian monsoon precipitation.

Keywords:[Chaka Salt Lake](#) [mineral composition](#) [climatic change](#) [Tibet](#)

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