

**The Bosten Hu (Xinjiang, northwestern China):
Palaeoecological and Palaeoclimatic Studies on an Extant
Ancient Freshwater Lake in a Desert Environment**

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The Bosten Lake is located between the Tarim and the Junggar basin at the southeastern vicinity of the Tien Shan mountains. The lake represents the largest extant freshwater body in the Central Asian deserts ("Gobi"), has a tectonic origin and can be classified as ancient. Its main catchment lies in the glaciated Tien Shan mountains; the outflowing river supplies the Lop Nur lake in the Tarim basin.

Data on the current situation of the Bosten lake are presented, which focus on the systematics and ecology of the extant fauna (i.e. molluscs, ostracodes) and flora (i.e. charophytes, diatoms), geomorphology, sedimentation regime and hydrology (including stable isotopes).

The dynamic of the system is evaluated by geological and palaeontological investigations of Pleistocene and Holocene sediments from outcrops and deep drilling.

In a multidisciplinary approach the history of Bosten Hu has been preliminary reconstructed within its palaeobiogeographic and geodynamic context. The data are compared with results obtained from drilled lake sediments of northern China (Inner Mongolia) and implications for the Quaternary "evolution" of Central Asia are discussed with emphasis on climate and desertification.