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Paleoclimatic changes in the Aral Sea Basin during the past 1900 years: the vegetation pattern and moisture conditions.

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Paleoenvironmental data from Central Asia are of major importance for global paleoclimatic studies and biome reconstruction. From a core retrieved at Chernyshov Bay in the NW Large Aral Sea (Kazakhstan) we present palynological analysis performed on pollen grains with a sampling resolution of about 50 years. At most core levels samples are rich in pollen grains and species diversity is quite high (total diversity: 29 species). The dominant herb taxa belong to Amaranthaceae/Chenopodicaeae and the steppic genus *Artemisia* that reflect rather dry and cool conditions. Conversely, tree species are mostly represented by pollen grains of Taxodiaceae, e.g. *Taxodium*-type, which implicate warmer and wetter conditions. The data are thereby used to reconstruct the vegetation in the Aral Sea Basin and to infer moisture variability during the past 1900 years. Pollen assemblages document cooler conditions from approximatively AD 100-500 and from the AD 16^{th} to the 19^{th} centuries. On the other hand, increasing abundances of tree taxa reflect warmer and more humid conditions from approximatively AD 800-1300. These results are consistent with other reports from Central Asia, including the Caspian Sea region and the Far East.