

Interactive comment on “Changing climatic and anthropogenic influences on the Bermejo wetland, through archival documents – Mendoza, Argentina, 16th–20th centuries” by M. R. Prieto and F. Rojas

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Dear Dr. Christie We're uploading a new version of the paper. Shortly reply comments and suggestions and detail of the changes. Your sincerely, R. Prieto and F. Rojas

Interactive comment on Clim. Past Discuss., 7, 3775, 2011.

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Discussion Paper



CHANGING CLIMATIC AND ANTHROPOGENIC INFLUENCES ON THE BERMEJO WETLAND, THROUGH ARCHIVAL DOCUMENTS. MENDOZA, ARGENTINA 16TH-20TH CENTURIES

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Abstract

This paper examines the processes underlying changes to the once-extensive Bermejo wetland, east of the city of Mendoza, Argentina (32°55'S, 68°51'W). Historical documents and maps from the 16th to 20th century are used to reconstruct environmental shifts. Historical documents indicate periods of increased snowfall in the adjacent Andes mountains, as well as high flow volumes in the Mendoza River. Data from georeferenced maps, the first from 1802 and the last from 1903, reflect the changes in the surface area of the wetland. The combined data sets show pulses of growth and retraction, in which major expansions coincided with more intense snowstorms and increased flow in the Mendoza River, which in turn influenced socio-economic activities. The wetland became progressively drier during the 19th century, before drying up completely around 1930, due in part to the construction of drainages and channels.

KEYWORDS: WETLANDS, HISTORIC DOCUMENTS, OLD MAPS, BERMEJO WETLAND, MENDOZA

Introduction

Wetlands are areas of land whose soil is either permanently or seasonally saturated with moisture (Miller, 2002). Such areas may also be covered partially or completely by shallow pools of water. Historically, wetlands, including swamps, marshes and bogs, have been subject to large-scale drainage. In light of a better understanding of the important environmental role of wetlands, increasing focus has been given to wetland preservation since the 1970s. In many locations, e.g. United States and Canada, wetlands are the subject of conservation projects and Biodiversity Action Plans (Mortsch, 1998, Conly and Van der Kamp, 2001, Carter Johnson et al 2005).

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Fig. 1.

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MENDOZA

Fig. 2.

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