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Western equatorial African forest-savanna mosaics: a legacy of late Holocene climatic change?

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Abstract. Past vegetation and climate changes reconstructed using two pollen records from Lakes Maridor and Nguène, located in the coastal savannas and inland rainforest of Gabon, respectively, provide new insights into the environmental history of western equatorial African rainforests during the last 4500 cal yr BP. These pollen records indicate that the coastal savannas of western equatorial Africa did not exist during the mid-Holocene and instead the region was covered by evergreen rainforests. From ca. 4000 cal yr BP a progressive decline of inland evergreen rainforest, accompanied by the expansion of semi-deciduous rainforest, occurred synchronously with grassland colonisation in the coastal region of Gabon. The contraction of moist evergreen rainforest and the establishment of coastal savannas in Gabon suggest decreasing humidity from ca. 4000 cal yr BP. The marked reduction in evergreen rainforest and subsequent savanna expansion was followed from 2700 cal yr BP by the colonization of secondary forests dominated by the palm, *Elaeis guineensis*, and the shrub, *Alchornea cordifolia* (Euphorbiaceae). A return to wetter climatic conditions from about 1400 cal yr BP led to the renewed spread of evergreen rainforest inland, whereas a forest-savanna mosaic still persists in the coastal region. There is no evidence to suggest that the major environmental changes observed were driven by human impact.

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