Over the Holocene, changes of up to 2°C in mean annual and mean summer temperatures, and of about 100 mm in annual rainfall are estimated for the Northern Iberian System, with a thermal maximum being reached about 6000 years BP (Peñalba et al., 1997). Given the current growth sensitivity shown by P. nigra to summer temperatures (Génova, 2000), this must have been the most critical period for this species. In other areas of the Iberian Peninsula formations of P. pinaster managed to survive in limiting climatic conditions until some catastrophic event led to the species’ collapse (Carrion et al., 2001). It is unlikely, however, that masses of P. nigra found themselves in such an unstable scenario during the Holocene; indeed, the species shows signs of enjoying vitality at this period (García Antón et al., 1995; Franco Múgica et al., 2001; Benito Garzón et al., 2007).

Paleontological evidence from the Quintanar de la Sierra (Peñalba et al., 1997), La Piedra (Ramil-Rego et al., 1998), Valle de la Nava (Menéndez Amor, 1968) and Espinosa de Cerrato (Franco Múgica et al., 2001) sites suggests that the landscape fell under anthropic control within the last 1000 years. Compared to other areas of the Iberian Peninsula (e.g., the Ebro Valley or the valleys facing the Cantabrian coast) where evidence of Neolithic culture goes back more than 3000 years, this anthropization is relatively late (Zihou, 1993; Iriarte, 2003). This reflects the expansion of resource use into climatically tougher (continental/mountainous) areas after the Castilian Reconquest (Rubiales et al., 2007). The use of fire to clear land for crops and stock raising, the great value of P. nigra for construction and as a fuel, and the poor rebound capacity of the species are the most likely reasons for its demise in favour of pasture, crops and broadleaved plants.

Key references
Franco Múgica, 2003
Rubiales et al., 2003
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