

Litter burning does not equally affect seedling emergence of native and alien species of the Mediterranean-type Chilean matorral

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Central Chile differs from other areas with Mediterranean-type climate by the scarcity of natural wildfires. The Chilean matorral is highly invaded by alien plant species from other Mediterranean zones of the world, where natural, recurrent wildfires have been one of their ecological features at least since the Pliocene. This suggests that anthropogenic fires in Chile might favour alien plant recruitment, increasing the invasive process. We assessed the effect of litter burning on the emergence of alien and native species from the soil seedbank of a matorral of central Chile. Soil samples were taken from three types of microhabitats: (i) closed matorral; (ii) beneath the canopy of shrubs and trees from an open matorral; (iii) grassland. Each sample was split in two subsamples. One subsample was exposed to fire by burning the litter taken from its corresponding microhabitat, and the other subsample was left unburned and used as a control. Fire intensity, determined by the fuel type, aff