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Effect of fire on the composition of flowering plants and the abundance of pollinators in a Mediterranean ecosystem

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Abstract

Flowering plants and pollinators were surveyed along the perimeter of a burned area resulting from a fire that occurred in august 2018, and which affected approximately 3270 ha in the municipalities of Gandía, Llutxent, Pinet, Ador, Barx, and Quatretonda (Valencia). Three different sites were surveyed, two were located in the municipality of Pinet, and one was located at the border between the municipalities of Barx and Quatretonda. Plants and pollinators were surveyed approximately 50-100 m along the fire perimeter, and up to approximately 100 m from the fire perimeter into burned and unburned areas. Here we present a subset of the data collected during surveys conducted from October 2018 to December 2020. There were significant differences in the species composition of flowering plants as well as in the abundance of pollinators between burned and unburned areas. In unburned areas, the most attractive flowering plants to pollinators were nanophanerophytes in the families Lamiaceae and Ericaceae, while in burned areas, the most-visited plants by pollinators were hemicryptophytes and terophytes, such as some species in the families Apiaceae and Resedaceae. The most common pollinator was the honey bee, *Apis mellifera* L.

Keywords: Floral visitors, flowers, insect pollinators, wildfire

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