

# BOOK OF ABSTRACTS



VALENCIA (SPAIN) | 23-27 OCTOBER | 2023  
*Plant Conservation and Ecosystem Restoration  
in the Mediterranean*



**4th Mediterranean Plant  
Conservation Week**

VALENCIA | 23-27 OCTOBER | 2023

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## Sporadic tree species as a key element for the restoration of Mediterranean forests

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The importance of sporadic tree species for biodiversity conservation in woodlands is since long time recognized. Conversely, centuries of human exploitation of Mediterranean forests have not only deeply simplified their structural complexity but also significantly altered their species composition. The most common consequence has been the strong reduction in the abundance and cover of the woody species considered unprofitable from an economic point of view and the concomitant increase of some target tree species (e.g., holm oak for charcoal production). Although the recent guidelines of sustainable forest management emphasize the importance of fostering rare woody species, sufficient time has not elapsed for significant results to be observed yet. In our research, we assessed the abundance and cover of sporadic tree species, including *Prunus mahaleb*, *Malus sylvestris* and *Sorbus torminalis*, in different Sicilian woods (southern Italy) occurring under different bioclimatic and management conditions. We carried out field surveys and used data from the phytosociological surveys performed on the island. We found that most of the studied woods hosted a few (or even none) sporadic tree species, while a higher presence was detected in woods withdrawn from management for decades and approaching old-growth conditions. Such evidence would suggest that the rarity of these species, which is partly related to peculiar ecological requirements, has been also strongly affected by past management and selective cutting. Therefore, when dealing with the restoration of Mediterranean forests, the reintroduction of these valuable tree taxa should be carefully considered. However, this need is seriously constrained by seedling availability in the forest nurseries, where they are generally lacking. Hence, to restart the propagation of these species, seed collected from the nearest woods should be used, thus ensuring the conservation of germplasm adapted to local conditions and increasing plant establishment success.

**Keywords:** biodiversity-informed forest management, nursery, plant propagation, woody species