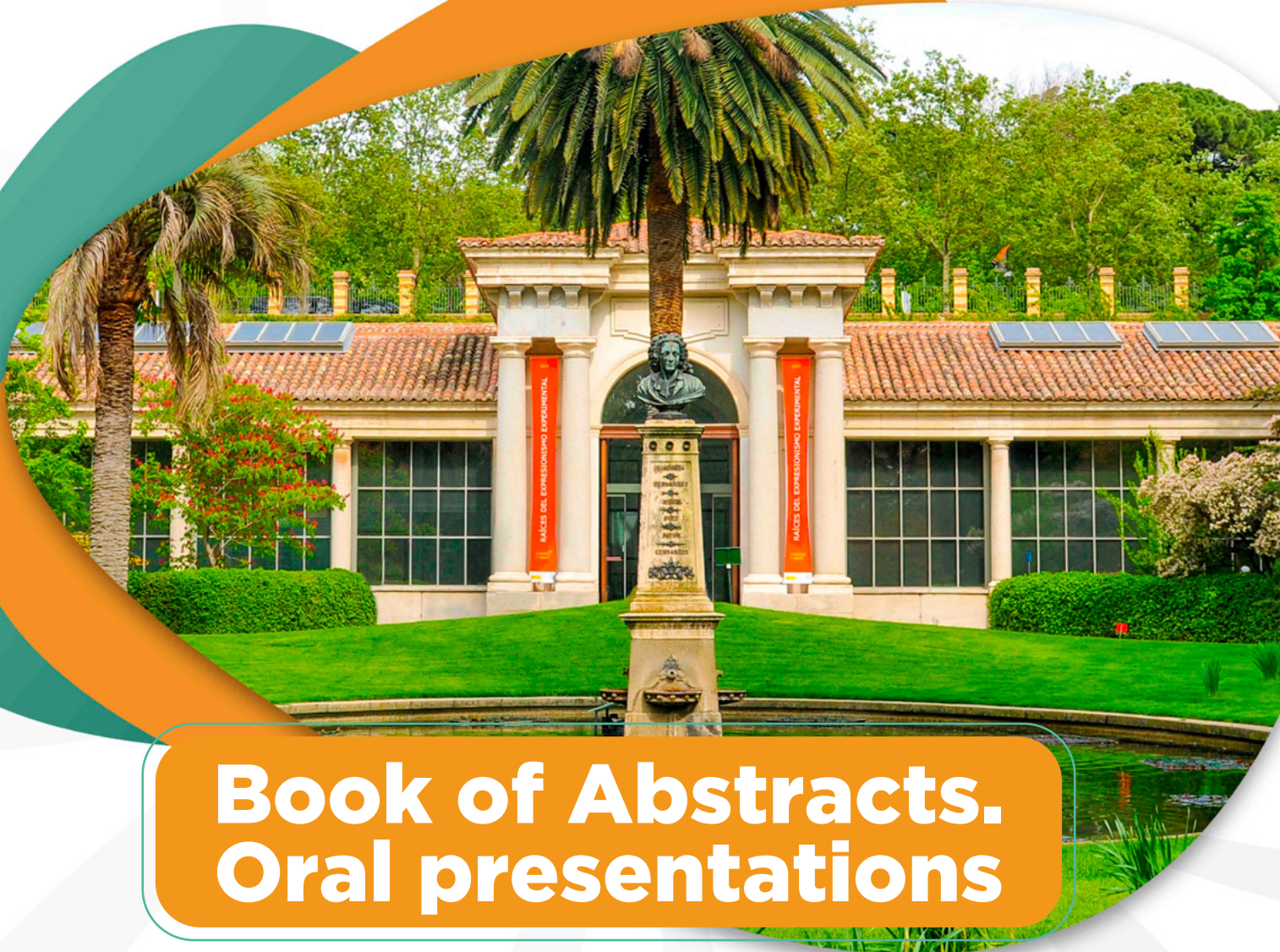




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## **Book of Abstracts. Oral presentations**

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current with the transcriptional regulation of chromatin modifier genes, suggesting robust epigenomic regulation of TEs in the mangrove genome under osmotic stress. We then performed a reciprocal transplant of mangrove propagules between sites to investigate if and for how long the trees “remember” their parental environmental conditions at the transcriptomic and epigenomic level. Following whole genome methylation and transcriptome analysis, our results provide evidence for the transient persistence of DNA methylation and gene expression pattern for several weeks after transplantation. These results provide a first glimpse into the mechanisms underlying wild trees’ adaptive capacities under novel stress conditions, which may be critical for understanding their responses to climate change more generally.

### S.102.3 Responses of southern European forest understorey species to macro and microclimatic variations

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Forests can mitigate climate change effects on understorey plants by maintaining microclimatic conditions which create local refugia for many species under ongoing climate warming. However, these microrefugia are today reduced and threatened by increasing forest fragmentation, land use change and anthropogenic or natural modification of the canopy cover, reducing the temperature buffering capacity of forests and exacerbating the negative effects of climate change on plants. Especially for species with a narrow ecological niche, such as forest specialist plants, their ability to respond to climate change through habitat tracking remains questionable, particularly in highly fragmented forest landscapes. Here, we assessed the functional trait responses of eight understorey plant species from southern Europe through a multi-factorial experiment performed in two deciduous forest types (thermophilous and mesophilous forests in Italy and Belgium, respectively) and along macro and microclimatic gradi-

ents (in open vs dense forests and at the forest edge vs forest interior). A total of 576 individuals were transplanted within their range (Italy) and beyond their northern range limit (Belgium): 288 individuals derived from lowland forests and 288 from highland forests. Individuals of all species were sourced from Italian forest sites as seedlings, bulbs or rhizomes collected from local native populations and grown in nurseries for one year. Specifically, during two growing seasons, we investigated the individual responses in terms of survival, number of flowers, ground cover percentage, number of leaves, plant height, SLA and LMA. This allowed us to estimate intraspecific trait plasticity for all species along the experimental gradients. Preliminary results showed strong effects of forest structure and edge vs interior position on plant growth and performance with significant interactions between the two regions for most species, i.e., in contrasting ways depending on macroclimate.

### S.102.4 Regeneration response of *Vepris dainellii*, an endemic species of Ethiopia to disturbance in moist forest ecosystem

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Examining the regeneration response of species is one of the key ecological analyses vital to understanding and predicting the spatial structure of plant populations and designing specific management plans in the face of anthropogenic and climate change factors. Despite the ecological and traditional importance of *Vepris dainellii* species, little is known about the effects of anthropogenic disturbances on its natural regeneration patterns and recruitment structure. This study investigates the regeneration and recruitment response of *V. dainellii* and its correlation to disturbance particularly clear-cut in Sirso moist evergreen Afromontane forest, Ethiopia. By employing transect sampling technique, fifty sample plots (20 m×20 m size) were laid in five transect lines for exploring *V. dainellii* species in Sirso moist evergreen Afromontane forest. In plots, where *V. dainellii* were found, vegetation data and stumped individuals (timber pieces resulting from the illegal cutting of trees) were recorded. Regeneration was recorded using sub-plots. *Vepris dainellii* is the first ranked woody species by recorded a higher number of bowdlerized stems. The regeneration of *V. dainellii*