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BOTANICUS
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Conservation studies on Mediterranean threatened flora and vegetation

X INTERNATIONAL MEETING BIODIVERSITY CONSERVATION AND MANAGEMENT

Sardinia, 13-18 June 2016

Book of Abstracts

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Invasive Alien Plants in the Tuscan Archipelago: threats to Nature2000 habitats and impacts on native vegetation

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Biological invasions represent one of major threats to habitat and species conservation worldwide; furthermore, they are expected to have even more dramatic effects on islands due to their peculiar biota (Whittaker *et al.*, 2007). Islands host poor and disharmonious species assemblages, generally rich in endemics that may be particularly susceptible to plant invasions, with possible changes in species composition and loss of endemics (Vilà *et al*., 2014). Accordingly, the study of alien species on island should focus on the identification of those areas that are more prone to be invaded, especially in case they contain habitats and species worthy of conservation, and on the constant monitoring of possible impacts in susceptible context.
We present an overview of a comprehensive and multi-approach studies of plant invasions in a Mediterranean island context such us the Tuscan Archipelago (Central Mediterranean, Italy). We used Suitability Habitat Modelling (SHM) to produce a map of risk of invasion of the Island of Elba based on both the threat of invasion by invasive plants and the distribution of Nature2000 habitats. We subsequently provide data regarding the impacts of the most invasive alien species (such as *Acacia dealbata*, *A. pycnantha* and *Carpobrotus* spp.) in different contexts across the Archipelago.
The habitats most at risk are those closer to anthropized areas, being more likely to be colonized by invasive species. We identified some rare habitats, which are strongly endangered, highlighting that around 20% of the surface of the Island is exposed to some level of risk of invasion.The data from the monitoring of invaded habitats, highlighted an important decrease in species richness and diversity in the invaded sites in all the contexts analyzed. The sites invaded by the nitrogen-fixing acacias, are undergoing important ecological processes such us nitrification, functional shift in species composition and loss of native species.

Keywords: ecological processes, Mediterranean islands, risk assessment, species loss, Suitability Habitat Models.

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