

**Italian Society of Vegetation Science 56th Congress**  
**Next Challenges in Vegetation Science: Facing the Anthropocene**  
**Siena, 13-14 July 2023**



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**A RESAMPLING APPROACH FOR THE FLORISTIC CHARACTERIZATION OF  
ABANDONED FIELDS IN PIANOSA ISLAND (TUSCAN ARCHIPELAGO, ITALY)**

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The Island of Pianosa, part of the Tuscan Archipelago National Park, hosted intense human activity in the form of an agricultural penal colony until the end of the 1990s. After that time, agricultural actions ceased, and the abandonment of the land process began. The abandonment of agro-sylva pastoral practices is a process that has strong influences on vegetation dynamics. Studies of secondary succession in *old fields* are numerous but, for the Mediterranean basin area, have not yet allowed general conclusions to be drawn and effective models to be proposed. The ongoing colonisation of Mediterranean scrub species on the abandoned land on the island of Pianosa is visible, and its study can provide pivotal information for the conservation of Tuscan Archipelago habitats.

The vegetation characterising the *old fields* of Pianosa was described by Foggi et al. (2008), who individuated annual and perennial grasslands of the classes *Stipo capensis-Trachynietea distachyae*, *Stellarietea mediae*, and *Artemisietea vulgaris*. The same authors had already identified significant encroachment of the grasslands by typical shrub species of the Mediterranean maquis. However, since the aforementioned work and due to the strong vegetation dynamism taking place in these areas, the succession has continued, and, therefore, the vegetation has been interested in important changes in plant species composition. We, therefore, considered it necessary to survey and monitor the island's vegetation again to identify further changes.

We surveyed the herbaceous vegetation of *old fields* through quasi-permanent squared plots (2 m x 2 m) in two areas of the island and compared it with the old relevés surveyed by Foggi et al. (2008) in the same patches. The result was a vegetational and floristic characterization of the abandoned areas, detecting a change in composition and confirming the ongoing process of encroachment and describing slight variations in vegetation types depending on the past land uses (e.g., pastures, cultivated fields). Moreover, we recorded changes in the abundance of typical species of habitat Natura2000 coded as 6220 "Pseudo-steppe with grasses and annuals of the *Thero-Brachypodietea*", highlighting the need for intervention measures for the conservation of this semi-natural habitat.

1) Foggi B., Cartei L., Pignotti L., 2008. La vegetazione dell'Isola di Pianosa (Arcipelago Toscano, Livorno) BRAUN-BLANQUETIA: Vol 43, p. 3-41.