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Giovanni Rivieccio e Simonetta Bagella

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Different communities hosting *Ionopsidium savianum* (Caruel) Arcang. in Tuscany: a trait perspective

M. Mugnai[1], E. Corti[1], L. Lazzaro[1], A. Coppi[1], **D. Viciani**[1]

[1]Università di Firenze, Dipartimento di Biologia

email: daniele.viciani@unifi.it

Ionopsidium savianum (Caruel) Arcang. (Brassicaceae) is as *near threatened* species included in the IUCN (Gigante et al. 2014). It is considered as subendemic for Italy, recorded for Latium, Umbria and Tuscany, in different ecological conditions. As for the conservation of *I. savianum*, a comprehensive knowledge of natural contexts where the species is found is fundamental. Although environmental parameters and vegetation of such communities have been deeply studied, a functional characterization still lacks. The aim of this study is to elucidate functional aspects of different communities hosting *I. savianum*, and particular to assess their adaptive strategies. We chose two populations from Tuscany characterized by geological differences: serpentine substrate at Monte Pelato and calcareous soils at Monte Calvi.

According to Grime's CSR theory the selective pressures to which plants are subjected induce adaptive responses that follow three main directional lines (Competitive, Stress tolerant and Ruderal). Recently, Pierce et al. (2017) showed that the position of individuals in the CSR framework can be reasonably deduced via the measurement of only three specific functional traits: leaf area (LA), leaf dry matter content (LDMC) and specific leaf area (SLA). We hypothesized that the two communities considered may differ in adaptive strategies due to environmental differences.

The present study aimed to verify whether communities hosting *I. savianum* in serpentine and calcareous soils differ in the CSR coordinates. Community-weighted mean of functional traits was identified through the measurement of LA, SLA and LDMC for species representing the 80% of vegetation coverage. Our results showed differences in species and functional composition between the two communities. These results suggest the presence of different adaptive responses in the two environments.

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