



University of Genova

Department of Earth, Environmental
and Life Sciences

Doctorate Course in Earth and
Environmental Science and
Technology

Università degli Studi di Genova



Dottorato in Scienze e Tecnologie
per l'Ambiente e il Territorio

Curriculum in biology applied to agriculture and the environment

Research Theme n. 2

<p>Titolo (Italiano) Come il buffering geologico e climatico ha modellato la diversità vegetale negli hotspot di biodiversità</p> <p>Title (inglese) How geological and climatic buffering shaped plant diversity in hotspots of biodiversity</p>
<p>Tutor (name and email) and eventual co-tutor: Gabriele Casazza, gabriele.casazza@unige.it</p>
<p>Program description including the formation program abroad (Inglese)</p> <p>Old, climatically buffered, and infertile landscapes (OCBILs) theory aims to elucidate the origins of high species richness and endemism on relatively subdued terrains. It also provides an explanatory framework to account for the extraordinary adaptations and life histories of sedentary organisms in these areas. Moreover, it also provides a conceptual framework for improving conservation efforts. In particular, OCBILs are expected to: (1) reduced dispersibility, increasing endemism and prevalent rarity; (2) favouring persistence of old lineages; (3) favouring heterozygosity; and (4) selecting for nutritional and other biological specialization. OCBILs are most abundant in the Southern Hemisphere where have been recently investigated. However, very few studies aimed at testing OCIBIL theory in North hemisphere. Consequently, much has to be learnt about the relevance and applicability of OCIBIL theory to conserving biodiversity at global scale. For this reason, this project aims at testing OCBILs predictions in the Mediterranean Basin.</p>
<p>Financial support</p>
<p>Tutor's publications (max 3)</p> <ol style="list-style-type: none">1. CASAZZA G., GUERRINA M, DAGNINO D, MINUTO L. 2023. Will natura 2000 european network of protected areas support conservation of Southwestern Alps endemic flora under future climate? <i>Biodiversity and Conservation</i> 32: 1353–1367. https://doi.org/10.1007/s10531-023-02556-42. GUERRINA M, THEODORIDIS S, MINUTO L, CONTI E, CASAZZA G. 2022. First evidence of post-glacial contraction of Alpine endemics: Insights from <i>Berardia subacaulis</i> in the European Alps. <i>Journal of Biogeography</i>, 49, 79–93. https://doi.org/10.1111/jbi.142823. CASAZZA G., ABELI T, BACCHETTA G, DAGNINO D, FENU G, GARGANO D, MINUTO L, MONTAGNANI C, ORSENIGO S, PERUZZI L, VARALDO L, ROSSI G. 2021. Combining conservation status and species distribution models for planning assisted colonisation under climate change. <i>Journal of Ecology</i> 109: 2284-2295. DOI: 10.1111/1365-2745.13606