

55<sup>th</sup> SISV International Congress --Vegetation science and global changes: scenarios, challenges and innovation -  
L'Aquila, June 16 – 17 2022



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### **Effect of spatial scale on taxonomic and functional components of beta diversity in grassland habitats**

Mugnai M.<sup>1</sup>, Kindermann E.<sup>2</sup>, Chelli S.<sup>3</sup>, Wellstein C.<sup>2</sup>, Viciani D.<sup>1</sup>, Rota F.<sup>2</sup>, Misuri A.<sup>1</sup>, Brillì L.<sup>1</sup>, Di Nuzzo L.<sup>1</sup>, Lazzaro L.<sup>1</sup>

1 Department of Biology, University of Florence, Florence, Italy

2 Faculty of Science and Technology, Free University of Bozen-Bolzano, Bozen, Italy

3 School of Biosciences and Veterinary Medicine, University of Camerino, Camerino, Italy

Beta diversity refers to the heterogeneity in the distribution of biological entities across space, time or any other gradient of variation and nowadays is one of the most pervasive concepts in ecology and biogeography. Recently the consideration of the functional dimension on beta diversity has gained importance, with an increase in the informativity provided by multifaceted studies on biodiversity, together with the approaches of partitioning beta diversity in nestedness and turnover components. These approaches are pivotal in revealing the contribution of different mechanisms that drive the taxonomic and functional diversity of communities. Within this study, we aimed to investigate how the beta diversity components varied in a calcareous semi-natural grassland habitat (i) along a latitudinal gradient and (ii) across multiple spatial scales. We found that the nestedness component of beta diversity is higher in the taxonomic facet than in the functional one, while the turnover component tends to increase with scale for both facets of diversity. Moreover, we found no clear pattern of beta diversity along the latitudinal gradient considered, underlining the evidence that for this grassland habitat environmental variables, such as climate or edaphic characteristics, are more important as drivers for biodiversity.