



Natura 2000 Network and bryophyte conservation in Portugal

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The main aim of this presentation is to understand potential variations on the distribution patterns of selected bryophyte species in a climate change scenario, and the role of Natura 2000 areas in providing future protection for these species. Selected sites of the Natura 2000 were tested to evaluate their present and future role in bryophyte conservation. The species distribution patterns were based on confirmed presences. Maximum entropy modelling was used to calculate both present and future distribution patterns for the studied plants. Models obtained clearly show variations in the distribution patterns of the different species analyzed. These reflect the environmental heterogeneity of the country and primarily the ecological requirements of the plants, which correspond to a combination of biogeographic elements. The results suggest that there may be an increase in the distribution of some species in the future climate scenario, whereas for other taxa a significant reduction in their distribution is expected and some plants might be at risk of extinction. Despite the risk of extinction of some taxa, their highest probability of occurrence is within the Natura 2000 Network. Therefore, the selected areas seem to be effective in the preservation of the studied species. Some regions may even function as “Noah's arks” and the results highlight the importance of raising the protection status of Estrela Mountain. Our study also shows that there are areas outside or in close proximity of the present Natura 2000 Network which have a high importance and it will be important to extend the limits of those areas, particularly at higher altitude zones, and develop a network of Plant Micro-Reserves, with an effective supervision.

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