Proceedings

We are Losing Unknown Diversity: Case Studies from Lichens †

Paolo Giordani *, Renato Benesperi, Juri Nascimbene

* Correspondence: giordani@difar.unige.it

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Abstract: Lichens are poikilohydric organisms resulting from the symbiosis between a fungus and a population of green algae and/or cyanobacteria. Their vital functions strictly depend both on exchanges with the atmosphere and on the chemical and physical characteristics of their substrate. Because of the fragile balance to which they are subjected, many species have suffered a considerable decline in their abundance and distribution in recent decades. Moreover, most models predict a worsening of their declines as a direct and indirect consequence of global change. In the face of this worrying picture, lichen conservation policies and actions are still largely insufficient to mitigate lichen biodiversity loss in the near future. In this presentation, we will review some of the key issues in this regard, including: (i) the insufficient level of knowledge of the distribution of most species, due to the lack of large-scale surveys, the difficulty of taxonomic identification and the poor detectability of many groups with small thalli an (ii) The almost total lack of consideration of lichen species in national and international legislation on the conservation of biodiversity. Perspective for more effective conservation will also be outlined on the basis of specific studies, aimed at finding some operational tools to counteract the loss of lichen biodiversity before knowing it.

Keywords: lichen; biodiversity; conservation