Plant reintroductions in a changing world

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Résumé

Plant species reintroductions are a key component in ecosystem restoration, in order to restore ecological functions and habitat for a wide array of organisms. However, many ecosystems have been heavily modified through time due to human activities and global change. Therefore, they may not be suitable anymore for the long-term viability of a reintroduced population due to various factors. Indeed, it has been previously reported that one of the most common reason for failure in reintroductions was due to unsuitable habitat choice, often with no further investigation to understand why, followed closely by changing habitat. This make it even more sensitive for rare species, where the number of seeds is generally limited and therefore failed trials can have important consequences. In order to investigate which factors at the level of habitat quality impact the success of translocations, we revisited successful and unsuccessful old plant reintroductions in different biogeographical regions. We compared a range of abiotic factors present on site with those known as optimum values for the reintroduced species. We conducted analyses to describe the relative importance of these different factors linked to habitat quality for success and long-term population viability. Understanding the importance of various habitat characteristics for different plant species exhibiting various life history traits has the potential to help further reintroductions planning, with growing importance in a changing world. With our research, we hope to contribute to better understanding of required ecological conditions and improve translocation planning for better chances of success.

Mots-Clés: reintroduction, plant translocation, ecosystem restoration, long term success, population viability

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