

Establishing the National Seed Bank of Wales: collecting, conserving and restoring the Welsh flora

E. Baker^{*}, E.A. James, L.T. Franzen, L. Jones, and K.J. McGinn

National Botanic Garden of Wales, Llanarthne, Wales, United Kingdom

^{*}Corresponding author email: ellyn.baker@gardenofwales.org.uk

Keywords: *ex situ* conservation, moss, reintroduction, seed bank

Seed banking is a vital tool for conserving the genetic diversity of plants for the future, acting as an insurance policy against potential extinctions. With almost half of vascular plant species having declined in abundance and distribution in Wales over the last 50 years, it is more important than ever that efforts are made to conserve these species. Since 2018, the National Botanic Garden of Wales has been developing its own seed bank, with a focus on Welsh native flora to ensure banked collections contain Welsh provenance seed. Wales is home to many endemic and endangered species, and many genetically distinct populations, therefore it is important to capture this diversity within seed bank collections. The National Seed Bank of Wales now contains over 200 accessions from 120 taxa, ensuring the enduring survival of many of our rarest native species. The seed bank has already been able to contribute to the *in situ* conservation and restoration of multiple species, developing skills within horticulture and science to support Wales wide initiatives. We have been working to grow *Rumex rupestris*, a species of European conservation importance, from the seed bank collections for reintroduction to areas where it is locally extinct. Research is also being undertaken on the rare moss *Tortula canescens*, providing a case study for the *ex situ* propagation and transplanting of moss, supporting future bryophyte conservation. The ability of this recently formed seed bank to rapidly support ongoing and newly established conservation projects demonstrates the importance of regional seed banks and botanic gardens to local conservation.