

Metacollection development of Wollemi Pine

C.A. Offord^{1,*}, M.T. Phelan¹, J.G. Bragg¹, D. Crowley^{2,3}, D. Luscombe⁴, and J.P. Siemon¹

¹Botanic Gardens of Sydney, Sydney, Australia

²Westonbirt, The National Arboretum, Forestry England, Gloucestershire, UK

³Botanic Gardens Conservation International – U.K., Kew, Richmond, London, United Kingdom

⁴Bedgebury, The National Pinetum, Forestry England, Kent, United Kingdom

*Corresponding author email: cathy.offord@botanicgardens.nsw.gov.au

Keywords: Conservation genomics, conservation horticulture, metacollections

Wollemi Pine (*Wollemia nobilis*) was discovered in 1994 in a remote canyon north-west of Sydney Australia. There are fewer than 100 adult trees of this critically endangered species in the wild and it is threatened by disease and wildfire. Efforts to conserve this conifer species include the development of an *ex situ* population at the Australian Botanic Garden Mount Annan providing an opportunity to study and develop a deep understanding of its biology, leading to other conservation actions such as translocation to wild locations. Following new understanding of the genetic diversity of the wild and *ex situ* populations, a metacollection program was developed to further secure this species in botanic gardens and arboreta. A critical partnership was formed between BGCI and Forestry England which enabled the international conservation effort. In late 2023, 35 ‘six packs’ of genetically different plants were distributed to botanic gardens in the UK and Europe in suitable areas identified by an online survey (published by Offord and Zimmer in *Plants, People, Planet* 2023) and the BGCI Climate Assessment Tool (CAT). This metacollection provides a rare opportunity to study the growth of Wollemi Pine in different locations and management regimes, as well as providing a resource for *ex situ* conservation.