

Critical carnivores: the conservation potential of *Nepenthes* in *ex situ* collections

O.G. Murrell^{1,2,*}, P.J. Esseen², R.N. Lewis², J.K. Rowntree³, L.J. Williams², and F.Q. Brearley¹

¹Manchester Metropolitan University, Manchester, United Kingdom

²Chester Zoo, Upton by Chester, Chester, United Kingdom

³University of Plymouth, Plymouth, Devon, United Kingdom

*Corresponding author email: olivia.murrell@stu.mmu.ac.uk

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Nepenthaceae is the largest pitcher plant family and is monotypic with only one genus: *Nepenthes*. The center of diversity is Southeast Asia, but many species are narrow endemics and endangered at some level. *Nepenthes* faces threats not only from the frequency of endemism, but also from threats to native habitats and prevalence in the illicit plant trade. Despite the precarious position of this genus in the wild, *Nepenthes* is widely held in botanic garden collections worldwide; however, little is known about the conservation status of this genus *ex situ*. The objective of this study is to determine which species are held in collections and to what extent they represent the *in situ* genetic diversity. To achieve this, we have adopted the zoological model for endangered species conservation by consolidating known accession-level data about *Nepenthes* in collections. With this dataset, we hope to support more informed breeding decisions and material exchanges. In this first stage of research, we gathered accession data from 60 institutions worldwide, and found that 66% of the species in the genus are represented in gardens, but 40% of these represented species have fewer than 5 individuals in living collections. Additionally, 81% of the species evaluated for the IUCN's Red List are represented. While this indicates good coverage in terms of number of species, there are still relatively few individuals in collections. Populations are small and are at risk of inbreeding depression if not managed with genetic diversity in mind. With this research, we aim to begin addressing the need for an action plan for the long-term sustainability and conservation of *Nepenthes* in *ex situ* collections.