Reclaiming the guernsey lilies: Phylogeny and vulnerability of endemic bulbous monocots

In South Africa plant biodiversity is an extremely important source of economic revenue via ecotourism (e.g. the flower season in Namaqualand), traditional medicine, horticulture and agricultural practices, but it is currently under threat. In this project, we will focus on the species from the subtribe Strumariinae (Amaryllidaceae, seven genera, ~87 known species), several of which are endemic to South Africa and used in traditional medicine, while the majority are of horticultural importance. As a consequence of this cultural and commercial interest, many of the Strumariinae species in South Africa are currently threatened due to habitat loss and over-harvesting. Previous global phylogenetic studies of the family were limited to one specimen per species and revealed non-monophyletic relationships within genera, most obviously in *Nerine*, *Hessea* and *Strumaria*. This taxonomic ambiguity requires revision using a more comprehensive local sampling scheme to fully assess and document the extant number of species occurring in South Africa. This project will consolidate existing biodiversity data in collections and expand it with intensive field surveys of an estimated 60 taxa. Information to be collected includes current distribution ranges, locality data, abundance estimates, morphological traits, herbarium vouchers, photographs and material suitable for DNA studies. We intend to sequence two barcoding regions for the 60 species, generating new barcoding data for up to 200 specimens, with multiple samples per taxa, to help disentangle the evolutionary relationships within this group. The findings of this project will greatly aid in understanding current patterns of distribution of plant biodiversity in South Africa, as well as in the establishment of future conservation plans to ensure the long-term persistence of this valuable and iconic group of plants.