

# Shayla Ellick - UKOTs Programme work experience report

---

*Royal Botanic Gardens, Kew*

*June – November 2012*

## **Red List the Native Plants of St Helena**

During this period of work experience at Kew my project was to undertake and make available Red List assessments of native St Helena plants based on the [IUCN](#) assessment process. As well as making an important contribution to conservation on St Helena, this project contributed to the [Global Strategy for Plant Conservation](#) (GSPC) Target 2 (an assessment of the conservation status of all known plant species, as far as possible, to guide conservation action). The GSPC is a cross-cutting issue of the [Convention on Biological Diversity](#) (CBD), and the St Helena Government has ratified the CBD. Consequently this project contributed directly to commitments agreed by the St Helena Government.

Undertaking this Red-Listing project allowed me to put into practice the skills and knowledge I gained at Kew during my placement year<sup>1</sup> [placement report lodged with St Helena Government], enabling me to use the Herbarium collection for practical conservation work.

My starting point was the existing St Helena species list held in the [UKOTs Species and Specimens Database](#), which had already been updated by Dr. Phil Lambdon based on his recent fieldwork and research for the St Helena field guide to vascular plants. All species on the list that were classed as 'Native' were exported into a separate RDE within the database. Where there were issues of taxonomy or nativity for a species, advice was sought directly from Dr. Lambdon. With the use of online resources such as [Tropicos](#), [The Plant List](#), [World Checklist of Selected Plant Families](#) (WCSP), [eFloras](#) the native distribution, biogeography, synonyms and other required data for each species was researched and the relevant fields updated. Where existing specimen records from Herbaria around the world were found for any of these species on [GBIF](#) (Global Biodiversity Information Facility) or [ePIC](#) (electronic Plant Information Centre), the datasets were also downloaded to be used during the Red Listing process.

Species that were found to have widespread native distributions, and/or species for which large datasets were downloaded from GBIF/ePIC, were classed as 'low priority'. As there were plenty of online records for these species, there was no need to pull specimens from Kew's collection and digitise. The remaining species (i.e. not widespread and without a large online dataset) were classed as 'high priority' species. This prioritisation process allowed time and resources to be focused on 'high priority' species that were searched for in Kew's herbarium collection. Specimens found in the herbarium were collected as per Kew's digitisation workflow. For each species, up to 30 specimens from across the identified native distribution were pulled out for digitisation. Each specimen collected was barcoded, labelled, databased and scanned before being returned to the herbarium.

---

<sup>1</sup> <http://www.kew.org/news/kew-blogs/ukots/sandwich-students-ukots-research-at-kKew.htm>

After all the pulled specimens had been databased, geo-referencing commenced for each specimen using the locality printed on the label. Each locality was researched and with the use of Google Earth and online gazetteers (i.e. Fuzzy Gazetteer, Google Maps, etc.) the co-ordinates and the resolution (accuracy) of each locality was determined.

## Progress made and next steps

All 'high priority' species have been researched and specimen collection completed. 280 specimens were collected in total, and they have all been barcoded, labelled, databased, scanned and returned to the herbarium cupboards. All of the Kew specimens collected have also now been geo-referenced. Georeferencing for downloaded datasets (i.e. GBIF/ePIC data) will be undertaken in future as needed where gaps in locality data exist. A Red Listing refresher course was provided by Martin Hamilton<sup>2</sup>, UKOTs Programme Coordinator in early October. This included detailed explanations of Red Listing terminology and IUCN definitions, familiarisation with IUCN Red Listing documentation and a more thorough understanding of the quantity and quality of data required to undertake a species Red List assessment. The course also included a demonstration in the use of the CAM (conservation assessment module) in Brahms, which will be used for Red List assessments. Unfortunately no real assessments were able to be completed due to a delay in the implementation of the CAM module, however a series of mock and draft assessments were undertaken in order to gain practice the use of the CAM module. Any future assessments will also become part of the UKOTs Online Herbarium<sup>3</sup> which makes them easily accessible to the public, and will enable reassessments to be undertaken more easily.

## Skills gained

This project enabled me to take skills learned during my Kew placement and apply them practically to conservation on St Helena. The use of online databases and herbarium collections as tools for research, conservation and priority setting will greatly assist me in applying these skills on St Helena. Further, knowledge of using the Brahms database software allows me to take home the capacity to use data from the database and other resources to feed into conservation planning processes such as species action plans.

Undertaking this project has also given me the skill set, specific knowledge and resources required to complete Red List assessments on St Helena, which will be a fundamental part of my role within the Environmental Management Directorate. I am fortunate to be able to bring back invaluable resources (i.e. the database, specimen data and images, species data etc.) from Kew to St Helena, ensuring I can start my new post with minimal data gathering. In addition, maintaining links with the UKOTs team will ensure I have access to current information and resources, including details of ex-situ collections held outside of St Helena. Kew has agreed to provide support via electronic communication and systems (email, Skype, Google Drive) to assist implementation of Red List assessments in St Helena.

---

<sup>2</sup> [http://www.kew.org/science-research-data/directory/people/Hamilton\\_Martin.htm](http://www.kew.org/science-research-data/directory/people/Hamilton_Martin.htm)

<sup>3</sup> [http://www.kew.org/ucm/groups/public/documents/document/kppcont\\_046096.pdf](http://www.kew.org/ucm/groups/public/documents/document/kppcont_046096.pdf)

## Future aspirations

This project has helped to provide me with a framework for future Red List assessments on St Helena and thus guide conservation decisions. During my research I discovered approximately 26 species of plants that are listed as endemic to St Helena have not yet been assessed/ Red Listed. Ideally, these species would be a priority for Red Listing and following this all native species should be assessed. To be able to assess these species using Brahms software ensures that the data is easily stored and will ensure that existing assessments can be updated as needed. Brahms is a great resource for Red Listing; it is an accessible database where data has been made available and can be easily exported. Using Brahms makes the Red List process less complicated, and information can be more easily updated. Consequently, any future assessments and reassessments will also be easier to update, as it can be done by altering select fields within the database (as opposed to the continuous updating of a word document). Brahms also allows for data to be easily outputted in user-friendly formats; data and trends from the database could also be used to feed into planning and conservation decisions and actions.

For conservation actions to be successful and local priorities to be accurate and up-to-date, island level data must be provided to supplement these assessments, for example, species information on island such as how many collections of each species are on the island, where they are located, how many are available for use, etc. Continuing Red List assessments and feeding into the conservation planning process will be an ideal area for the skills gained during my time at Kew. I am thus very excited that this will be part of my role and that I will be active in delivering this.

There is also potential for the island to have a small herbarium. Kew has, in cold storage, a small number of duplicate specimens collected during project work on St Helena that can be repatriated to the island when adequate storage and curation facilities are available. Having a small herbarium on the island would be advantageous for conservation work, for educational opportunities and also for new staff to familiarise themselves with St Helena plant species.