

PhD placement/PIPS: Millennium Seed Bank Partnerships conservation

Placement supervisor:

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Placement department:

Conservation Partnerships within the Millennium Seed Bank Partnership team

Placement overview and objectives:

The MSBP team oversees the global partnership that brings plants into long-term conservation through seed banking and supports the use of seeds in ecological restoration. The team delivers capacity building activities and technology transfers across the world.

There are opportunities within the team for a number of projects (see below) that will support our work in conservation, restoration and training. The majority will be office based at Wakehurst, though there is potential for fieldwork support (time of year dependent), lab-based work (to support training, and to help with processing backlogs), and communications and engagement work to share knowledge about the work we do and the importance of plant conservation.

We would be happy to host students from both science, arts and humanities backgrounds and are open to additional project ideas.

Tasks to be undertaken/possible projects:

- **Evaluating and sharing germination data with partners:** R codes (or VBAs on Excel) that can automate summary data from the germination results with a view to producing a tool (e.g. shiny app) to report said data for use by the team and partners alike. Mail outs to partners (including generating templates and linking existing code with our Master Contact list) and handling queries about the results. Be the liaison between the partners, coordinators and germination team. Opportunity to enhance network and communication skills.
- **The cost of conservation:** Following on from the work of an MSc student on a cost benefit analysis of seed conservation at the MSB. Comparing the cost-benefit of seed banking in different countries and developing a toolkit that can be used by the team and partners to maximise the effectiveness of conservation. Develop skills in prioritising and cost-benefit analysis.
- **Exceptional Species strategy:** Building on existing work, collate gathered information and develop a strategy document for exceptional species work at the MSB with a view to developing funding/collaborative proposals. Enhance writing and project proposal development skills.
- **IUCN Red Listing:** of the complete species list of the genus *Kalanchoe* based on an existing, georeferenced dataset in association with Kew's Plant Assessment Unit. This project will require training on Red-listing methodologies and affords an opportunity to become an accredited Red List assessor.
- **Documenting the endemic plants of the Horn of Africa area of endemism:** Building on the completion of an aggregated dataset of all occurrences of Ethiopia's endemic plant species, we intend to broaden the scope of the dataset to include the country and cross-border endemics across the whole of the Horn of Africa. The project will involve researching the available

occurrence records from virtual herbaria and citizen-science projects, undertaking complete georeferencing of each occurrence and undertaking some initial analysis of species distribution, vulnerability and responsiveness to climate change in the region. Data will be used to inform the Tropical Important Plant Areas project in the region.

- **Oral history of the MSB:** opportunity to interview those involved with the inception of the MSB and create an oral history of this global plant conservation programme (from a Kew perspective and hopefully also a partner one).
- **Data analysis:** the MSBP team curates a wealth of data relating to seed collections around the world, providing opportunities to interrogate this data to find partners and processes that can help move forward our conservation and restoration efforts.

Required skills and experience:

These will be project dependent but include those listed.

- IT skills, including databasing and statistical analysis
- Basic familiarity with a coding language such as R, Excel VBA.
- Basic knowledge of biodiversity loss and plant conservation/restoration (however, we are interested in people with a different academic background joining our team to bring new and challenging ideas)

Skills and areas of knowledge that can be developed:

- Understanding how large scale, international and collaborative conservation programmes operate
- Teamwork (ability to integrate into the MSBP team)
- Project management (manage their own time as well as tasks to be completed by other team members)
- Presentation skills
- Communication skills e.g. writing for a non-specialist audience
- Working with international partners and developing partnerships
- Project development and proposal writing

Location of work:

Wakehurst, Millennium Seed Bank. Possibility of onsite and hybrid working. Flexible working hours available.

Accommodation may be available onsite.

Length of placement:

Usually, 3 months but negotiable.