



Elinor Breman

Senior Research Leader
Kew Gardens
Wakehurst, United Kingdom

1. Please share with us your life trajectory and how you came to work at the Kew Gardens.

My background is in plant sciences with a focus on tropical forest ecology. I went to work as an intern at the La Selva field station in Costa Rica after graduating to learn more. Returning to the UK I completed an MSc in Forestry and Land Use, before travelling, and gaining experience in Australia's Victoria State Forest Department. Back in the UK, I worked for CABI for a few years, before heading back to Central America to run tropical biology expeditions. After that I returned to academia, completing my D.Phil. in palaeoecology, investigating grassland-savanna transitions in South Africa in the Holocene (last 10,000 years), then stayed on for several post doctoral positions. I came to work at Kew Gardens almost 10 years ago, having visited the Millennium Seed Bank as a tourist with my family. I had been so impressed with the work that they were doing that I kept applying until they employed me – even though my background was not in seed science (I have learnt a lot since!).

2. How did you learn about GLH and what motivated this partnership?

I learnt about GLH through Paul Smith at BGCI (Botanic Gardens Conservation International), who is great at connecting people. I was immediately inspired by GLH's ethos, by the resilience of the hibakujumoku (survivor trees) and by the

message of hope these special seeds send. In addition to growing on trees for display at Kew's botanic gardens in London and at Wakehurst (West Sussex) I was interested in storing seeds from each of the hibakujumoku at the Millennium Seed Bank, for long-term conservation. I am also interested in studying these seeds – seeing how well they survive in storage and if their genetic make up has been affected by the atomic bombs their parents survived.

3. The main mission of GLH is to share the message of peace through the atomic survivor plants. What are your thoughts on its mission and how important and effective are plants as a medium?

GLH's mission is as important now as it has always been – unfortunately humanity needs to be continually reminded that we should cling to and celebrate peace, and that it is a fragile thing. I believe that plants are a very effective way of bringing people together and transcending differing views. Through the work of the Millennium Seed Bank we have also brought conservation practitioners together across divides, and in regions of the world in conflict. The seeds sent out by GLH not only provide a strong message to current and future generations about the impacts of conflict, but by growing a new life they also show hope and that we can overcome adversity.

4. Millennium Seed Bank Partnership is one of the largest conservation programs in the world. What

Elinor Breman obtained her D.Phil and MSc from the University of Oxford, and her MA from the University of Cambridge. She is currently the Senior Research Leader in Seed Conservation at the Royal Botanic Gardens, Kew's Millennium Seed Bank. Her role has oversight of the global Millennium Seed Bank Partnership, ensuring conservation, restoration and training goals for the partnership are met.



are the challenges you face when it comes to facilitating these international partnerships?

Since 2000, the Millennium Seed Bank has worked in partnership with almost 100 countries and territories to help conserve their national floras. There have been challenges along the way – but as with the hibakujumoku seeds together the partnership has overcome these and managed to conserve 40,000 of the world's rare, threatened and useful plants. Challenges vary depending on where you are working and what you are trying to conserve. Adequate resourcing is a continual problem for the world's wild plant seed banks, especially given the challenge faced: 2 in 5 plants threatened with extinction. In addition, locating plants to collect has become harder during the partnership, with on-going land use changes and unsustainable practices affecting the natural world, and increasingly the impacts of climate change meaning that sometimes populations are no longer present when a site is visited, or seeds are not set due to stresses on the plants.

5. The Millennium Seed Bank helps protect against extinction and in turn contributes towards the development of other related fields. How important is ensuring that the importance of conservation is shared with the youth and those outside the fields related to environmental sciences and how do we enable it?

It is indeed important to ensure youth and those

outside our field of work understand the importance of conservation. The Millennium Seed Bank is fortunate in being based at Kew Gardens – which has an excellent education team at both the London and Wakehurst sites, with school groups visiting on most days of the year to learn about our work. In addition, we have over a million visitors a year to our gardens – providing further opportunities to educate about conservation. There is always more that can be done, and Kew now has ambassadors and youth explainers who deliver our message to those who might not otherwise hear us. We also actively seek interdisciplinary projects and partnerships to involve other sectors in our work. Through our global partnerships we can also extend our message, and many of Kew's projects involve outreach with community and school groups, to increase understanding and ownership of plant conservation.



Elinor Breman with GLH saplings at Wakehurst