

## GCRF Underutilised Plants of Tropical Africa Hub - Timeline

### Capacity & partnership building in Guinea (2–29 October 2016)



PI Dr Martin Cheek, Prof. Isabel Larridon, Charlotte Couch and Xander van der Burgt of the Royal Botanic Gardens, Kew (Kew) visited our research partners at the Université Gamal Abdel Nasser de Conakry (UGANC) and the National Herbarium of Guinea (HNG) to provide [capacity building](#) by teaching a module on the Master in Biodiversity and Sustainable Development, co-taught by Kew and UGANC. During this visit, a conceptual workshop for a GCRF proposal and meetings with a range of Guinean project partners were held at UGANC. Consecutively, collaborative fieldwork was

undertaken with the Guinean partners and local communities to support our ongoing joint research project on [Tropical Important Plant Areas](#) funded by the Darwin Initiative and a GBIF BID (Biodiversity Information for Development) grant. The team from Kew and HNG visited the Guinean Minister for Higher Education and Scientific Research (MESRS) to raise awareness and support for the developing GCRF proposal. The Minister requested that additional Guinean research institutes be included in the programme if possible.

*Photo: Charlotte Couch training a Guinean student in field survey techniques (Photo: Isabel Larridon).*

### Visit to Kew (1–30 November 2016)

Dr Sékou Magassouba (Director-General of the UGANC-National Herbarium of Guinea) and Saïdou Doumbouya (of the Guinean Ministry of the Environment, Waters and Forests, MEEF) visited Kew for joint training and research as part of the [Tropical Important Plant Areas](#) project funded by the Darwin Initiative and a GBIF BID (Biodiversity Information for Development) grant and to further develop the GCRF Hub partnership with the Kew team.

*Photo: Dr Sékou Magassouba and Saïdou Doumbouya visiting Kew's Quarantine House which provides secure, fully equipped plant importation facilities to meet requirements set by DEFRA.*



### GCRF development workshops and botanical surveys in Cameroon (December 2016)

Workshops to explore and brainstorm the developing GCRF Hub, linking it with the [Tropical Important Plant Areas](#) (TIPAs) programme in Cameroon, were led by PI Dr Martin Cheek at both University of Yaoundé I (UY1), and at the Institut de Recherche Agricole pour le Développement (IRAD). Over twenty research staff and students joined each of the events. A meeting with the Department of Protected Areas (MINEF) of the government of Cameroon to discuss TIPAs and the GCRF Hub proposal also took place. Kew's links with IRAD began in 1992 with a series of capacity building projects at the National Herbarium of Cameroon. Simultaneously, led by Xander van der Burgt, joint field surveys for the TIPAs programme and seed banking of threatened tree species with local communities were executed in the South Region of Cameroon.

### Visit to Kew and Kew International Medal (20–30 March 2017)



Prof. Sebsebe Demissew (Co-Director on the GCRF Hub proposal) from Addis Ababa University and Gullele Botanic Garden in Ethiopia visits Kew in the context of his ongoing botanical research and partnership building. Prof. Demissew was awarded the Kew International Medal on 22 March to celebrate his important service to the mission of Kew.

*Photo: Prof. Sebsebe Demissew being awarded the Kew International Medal (Photo: Pat Heslop-Harrison).*

### Joint botanical survey and seed banking mission (5–27 April 2017)

Kew botanist Xander van der Burgt travelled to Guinea to continue collaborative botanical fieldwork with National Herbarium of Guinea, NGO Guinée Biodiversité and local communities, carrying out surveys of [Tropical Important Plant Areas](#) (TIPAs) collecting seeds for ex situ conservation and preparing the ground for a GCRF Hub.

*Photo: Xander van der Burgt (Kew) with community representatives, a team for the National Herbarium of Guinea and NGO Guinée Biodiversité, trekking to a remote proposed TIPA locality to carry out botanical surveys and collect seeds for ex situ conservation (Photo: Xander van der Burgt).*



### Field surveys and partnership building in Uganda (2–14 May 2017)



PI Dr Martin Cheek travelled to Uganda for partnership building. Presentations, discussions and workshops with Ugandan partners to co-develop a GCRF-TIPAs programme were held at Makerere University, National Agricultural Research Organisation, Entebbe (NARO), the National Parks Authority and at the Department of Forestry, Kampala to co-develop the proposal. Simultaneously, four Kew staff (Dr Iain Darbyshire, Prof. Isabel Larridon, George Gosline and Elizabeth Downes) with staff and students from

Makerere University explored potential Tropical Important Plant Areas in southern and western Uganda.

*Photo: Dr Iain Darbyshire, George Gosline and Elizabeth Downes collecting herbarium specimens with Protase Rwaburindore and Samuel Mutebi who are based at the Makerere University Herbarium (Photo: Isabel Larridon).*

### AETFAT conference in Kenya (15–19 May 2017)

A plenary talk on the GCRF Hub and Kew's the [Tropical Important Plant Areas](#) (TIPAs) programme in Africa was presented by PI Dr Martin Cheek to over 200 delegates at the triennial African Botanical Congress (AETFAT) in Nairobi, attracting a high level of interest and debate.

### Botanical survey in Guinea (June 2017)

Kew botanist Charlotte Couch travelled to Guinea to carry out botanical surveys as part of the [Tropical Important Plant Areas](#) project funded by the Darwin Initiative and a GBIF BID with staff from the National Herbarium of Guinea, the NGO Guinée Biodiversité and local communities. Joining them was Kew MSc student Olly Hooper, modelling the distribution of the threatened sub-montane cloud forests of the Guinean Highlands for his thesis.

*Photo: Kew MSc student Olly Hooper with Abdoulaye Baldé (former student of the Master in Biodiversity and Sustainable Development at UGANC), botanist Fatoumata Fofana and a community representative (Photo: Charlotte Couch).*



### Joint botanical survey and seed banking mission (24 September–25 October 2017)



Xander van der Burgt and Aurélie Grall (Kew) travelled to Cameroon to carry out botanical surveys with botanists from the National Herbarium of Cameroon based at the Institut de Recherche Agricole pour le Développement (IRAD), who are a research partner on the GCRF Hub proposal. Xander and Aurélie also provided training in collecting and storing seeds for ex situ conservation and set up a national seed bank for Cameroon as part of the [Millennium Seed Bank Partnership](#).

*Photo: Xander, Aurelie and botanists from the National Herbarium of Cameroon during a botanical survey and seed banking trip in Cameroon.*

### Botanical surveys and partnership building in Mozambique (9–29 October 2017)

During a workshop with local partners supported by the ongoing [Tropical Important Plant Areas \(TIPAs\): Mozambique](#) project, Kew's Iain Darbyshire and Jo Osborne met with Camila de Sousa and Tereza Alves at the Instituto de Investigação Agrária de Moçambique (IIAM) in Maputo on the 10<sup>th</sup> October to develop further the decades-long existing partnership to address the emerging GCRF Hub programme. They discussed research on useful plants indigenous to Mozambique. Samples of *Funtumia africana* from the NGO MICAIA



(Mozambican project partner) have already been shown to have potential commercial applications in new products by our GCRF Hub partners at the University of Leeds - School of Design.

*Photo: Dr Iain Darbyshire (Kew) and botanists from IIAM during participate botanical exploration of Important Plant Areas in Mozambique (Photo: Jo Osborne).*

### Building partnerships in Ethiopia (October 2017)



Richard Deverell (Director of the Royal Botanic Gardens Kew), Kew's Director of Science Prof. Katherine Willis (Co-Director on the GCRF Hub proposal), Sandra Boterell (Director of Marketing and Commercial Enterprise at Kew), Dr Paul Wilkin (research work package leader on the GCRF Hub proposal) and James Borrell visited Ethiopia in the context of the [ongoing Enset project](#) and to build partnerships. Many of these partnerships have been promoted by Prof. Sebsebe Demissew (Addis Ababa University & Gullele Botanic Garden) who is a Co-Director on the GCRF Hub proposal and who provided

invaluable input during the development phase of the proposal.

*Photo: Building partnerships in Ethiopia.*

### Partnership building in Guinea (27 October 2017)

Charlotte Couch (Kew) invited Cedric Martin (Country Director of the NGO United Purpose) to the National Herbarium of Guinea based at Université Gamal Abdel Nasser de Conakry for a partnership building meeting. United Purpose is a charity with an innovative community-led approach to delivering the SDGs and eradicating global poverty and inequality with experience with commercialisation of plant-based products in collaboration with communities and national authorities. Interesting discussions were held, and United Purpose will join the GCRF Hub proposal as a new project partner.

*Photo: Cedric Martin from the NGO United Purpose visits the National Herbarium of Guinea (Photo: Charlotte Couch).*



### National Seed Bank for Guinea (19 November–15 December 2017)



Xander van der Burgt and Laura Jennings (Kew) travelled to Guinea to collect seeds from threatened tree species and to set up the new national seed bank for Guinea as part of the [Millennium Seed Bank Partnership](#). The new seed bank will be managed by our long-standing partners of the National Herbarium of Guinea who are based at our research partner institute Université Gamal Abdel Nasser de Conakry.

*Photo: One of the first seed collections to be stored in the new Guinean national seed bank (Photo: Xander van der Burgt).*

### Visit to Guinea (10–27 January 2018)

PI Dr Martin Cheek visited Guinea to hold a range of partnership building workshops, and to carry out participative ethnobotanical exploration in Guinea.

*Photo: Dr Martin Cheek (Kew) with Denise Molmou (National Herbarium of Guinea), local community representatives and rangers during an ethnobotanical survey of a community forest in Guinea.*



### Visit to Kew (6–28 February 2018)



Nagnouma Condé and Tokpa Seny Doré from the National Herbarium of Guinea visit Kew for internships on georeferencing and IUCN Red Listing as part of the ongoing [TIPAs Guinea-Conakry \(2016-2019\)](#) project, building capacity to collaborate on the proposed GCRF Hub research programme. They donated samples of natural plant products from Guinea for research at our GCRF Hub partner King's College London (nutrition) and Kew (plant chemistry), to prepare for the nascent GCRF programme.

*Photo: Nagnouma Condé and Tokpa Seny Doré from the National Herbarium of Guinea receive training in georeferencing and IUCN Red Listing.*

### IUCN Red Listing workshop, partnership building and fieldwork in Mozambique (25 February–17 March 2018)

Dr Iain Darbyshire, Jo Osborne, Saba Rokni and Jonathan Timberlake from Kew travelled to Mozambique to hold an IUCN Red Listing workshop and build for partnership with the Instituto de Investigação Agrária de Moçambique (IIAM) in Maputo. Afterwards, they jointly carried out botanical surveys in the context of the ongoing [Tropical Important Plant Areas \(TIPAs\): Mozambique](#) project.



*Photo (above): Kew and IIAM staff working together to assess the conservation status of threatened plant species in Mozambique.*

*Photo (left): Saba Rokni (Kew) and botanists from IIAM during participative botanical exploration of Important Plant Areas in Mozambique (Photo: Jo Osborne).*

### Visit to Kew (2–6 April 2018)

Prof. Sebsebe Demissew (Addis Ababa University), member of Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) and Director of Gullele Botanic Gardens

in Ethiopia visits Kew for a range of partnership building workshops with the GCRF Hub PI and co-investigators. Prof. Demissew possesses key expertise in agrobiodiversity and sustainable trade, and will act as Co-Director of the GCRF Underutilised Plants of Tropical Africa Hub.

### **Full stage proposal co-development meetings and workshops (6 March–12 April 2018)**

Six proposal co-development meetings and workshops were organised between 6 March and 12 April bringing together many co-investigators and project partners to discuss the proposal structure, and the five research work packages in depth. These meetings and workshop, held at Kew, University of Leeds and University of Greenwich, brought together over 30 researchers and staff involved in the GCRF proposal from the UK and sub-Saharan African partners.

### **Partnership building in Ethiopia (October 2017–April 2018)**



In the context of the Enset project, a partnership between Royal Botanic Gardens, Kew, University of Leicester and Ethiopian research partners, Dr James Borrell from Kew has made four fieldwork trips to South West Ethiopia investigating local knowledge and agronomic practices around enset (*Ensete ventricosum*) cultivation. He has worked closely with project partners from the universities of Addis Ababa, Hawassa and Wolkite, and specimens have been collected and recently sent to Kew and to the University of Leicester for flow cytometry and GBS sequencing. Lectures to staff/students at Wolkite and Hawassa Universities about the project and knowledge exchange activities have also taken place. We will build on the Enset project and its partnerships during the GCRF Hub programme.

One of our Ethiopian partners measuring enset (Photo: James Borrell).

### **Partnership building at Kew (19 April 2018)**

Dr Worku Negash Mhired from research partner University of Gondar in Ethiopia visited Kew with long-standing collaborators Prof. Pat Heslop-Harrison and Dr Trude Schwarzacher from University of Leicester. Dr Mhired discussed the collaborative research proposed in the Underutilised crops work package building on existing links with University of Leicester.

### **Partnership building at Kew (8 May 2018)**

Scientists from Cameroon (Institut de Recherche Agricole pour le Developpement), Ethiopia (University of Gondar) and UK (University Leicester and Royal Botanic Gardens, Kew) planning research programmes on improving nutrition and yields from underutilised resilient indigenous orphan crops for the GCRF bid, focussing on enset, yams, niri, etc.



Dr Marie Florence Ngo Ngwe (IRAD), Dr Trude Schwarzacher and Prof. Pat Heslop-Harrison (University of Leicester), Dr Worku N. Mhired (University of Gondar), Dr Paul Wilkin, Dr Juan Viruel and Prof. Isabel Larridon (Royal Botanic Gardens, Kew) (Photo: Martin Cheek).