



Darwin Initiative Main/Post/D+ Project Half Year Report (due 31st October 2018)

Project reference	23-034
Project title	Edible Wild Orchid Trade: Sustaining Livelihoods and Biodiversity in Zambia
Country(ies)/territory(ies)	Zambia
Lead organisation	Royal Botanic Gardens, Kew
Partner(s)	Nicholas Wightman (Homegarden Landscape Consultants Ltd.); Dr. Royd Vinya (Copperbelt University); Sarina Veldman (Uppsala University); Guni Mickels-Kokwe (Sanga Research & Development); Mike Bingham (Sanga Research & Development); Dr. Kazutomo Yokoya (RBG, Kew); Jonathan Kendon (RBG, Kew); Dr. Serene Hargreaves (RBG, Kew); Hildegard Crous (Cape Institute of Micropropagation); Philip Seaton (Orchid Seed Stores Sustainable Use)
Project leader	Dr. Ruth Bone (RBG, Kew)
Report date and number (e.g., HYR3)	HYR3
Project website/blog/social media etc.	Facebook Page 'Chikanda Orchid Conservation Initiative'

1. Outline progress over the last 6 months (April – Sept) against the agreed baseline timetable for the project (if your project has started less than 6 months ago, please report on the period since start up to end September).

- The second shipment of Chikanda orchid seeds (Output 2.7) was initiated on March 16th through the submission of documents to the Zambian Forestry Department for approval which was finally granted on May 6th and the seed shipment sent to Kew on May 8th. It was received at Kew's Plant Reception and Quarantine Unit on May 14th from which Mr. Jonathon Kendon collected the seeds and initiated cleaning and sowing procedures on both asymbiotic and symbiotic media using the orchid mycorrhizal fungi collected, isolated, cultured and identified by Dr. Kazutomo Yokoya. There has been increased germination rates with the second shipment of Chikanda orchid seed compared to the first shipment in 2017 with both Kew and CBU labs reporting positive results.
- The shipment of Chikanda reference voucher specimens (herbarium, spirit and DNA) collected in February 2018 fieldwork in collaboration with Dr. Benny Bytebier (Output 2.5) was initiated on March 16th through the submission of documents to the Zambian Forestry Department for approval which was finally granted on May 6th. Unfortunately, due to Phytosanitary certificate shortages at Zambia's Plant Quarantine and Protection Unit and travel commitments of the Project Manager to the UK, the voucher specimens were only shipped to Bews Herbarium at the University of KwaZulu-Natal on June 13th but only received on August 8th due to issues of import permit acquisition by Bews Herbarium staff. To date 89 specimens have been collected, with 35 identified to species level and increasing the Chikanda orchid DNA database. The list of scientifically identified Chikanda tubers traded in Zambian marketplaces has increased by 24 species to date since the inception of this project.

- The fourth bi-annual newsletter was written and distributed (Output 3.5) to Chikanda orchid newsletter mailing list.
- In May, Project Manager travelled to the UK to attend meetings with the Project Leader at the Millennium Seed Bank as well as to attend Kew's 2018 Tropical Plant ID course. The trip was funded through a grant from the Bentham-Moxon Trust for visiting botanists.
- The CBU community visit was held on August 2nd in which selected individuals from the three participating communities in Mwinilunga District were brought to CBU to view the operations of the CBU tissue culture lab and conservation greenhouse (Output 4.9). In addition, Agents of Change Foundation volunteer reporters were on site to interview community participants and CBU staff for their Youth Outreach Awareness radio programs which has replaced the "Patchwork Meadow" programme (Output 4.8) from the original log frame due to the departure of key staff at the participating schools.
- A scientific paper based on findings reported in the MSc thesis of Seol-jong Kim has submitted to the journal Genes, by Dr. Sarina Veldman, Seol-jong Kim and co-authors (Output 3.6), for Open Access publication.
- Plans have been initiated for a shipment of symbiotically cultured Chikanda orchid seedlings by Jonathon Kendon (Output 2.8). He will travel to Zambia between the end of February and early March 2019 repatriating the fungal-symbiotic seedlings produced at Kew as well as cultures of the better performing orchid mycorrhizal fungi collected and isolated by Dr. Kazutomo Yokoya in 2017.

2a. Give details of any notable problems or unexpected developments/lessons learnt that the project has encountered over the last 6 months. Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.

- Continued challenges has been experienced in dealing with Zambian government bureaucracy in relation to obtaining necessary approval for the shipment of Chikanda plant material outside Zambia (impacting Outputs 3.4 and 3.5 and delaying progress for Outputs 2.7). The time delays in getting approval has been detrimental on time sensitive plant materials (i.e. Chikanda orchid seeds) especially which can result in loss of seed viability and delayed germination and production of Chikanda seedlings for repatriation to Zambia.
- A delay was experienced in the signing of the Grant Agreement between RBG, Kew and Sanga R&D due to clarification being sought on Clause 7.2 which deals with intellectual property rights generated from the DI grant as it relates to previous work carried out by Sanga R&D. Further delays were experienced due to the Grant Award amount inadvertently triggering a procurement process (that delayed the acceptance of the Grantee as a New Supplier in the Kew finance system), and subsequent delays with the foreign payment process due to staff shortages. The cumulative effect of these delays led to postponement Sanga R&D's social survey work (Outputs 4.3 and 4.4, already been delayed through a DI Formal Change Request submission).
- Implementation of the participatory orchid management plan (Output 1.6) has not yet occurred though the plan has now been finalised by all the participating communities.
- The development of the interactive illustrated orchid identification key (Output 2.6) has progressed and is being tested with non-botanically oriented volunteers to better tailor the language and structure for the wider population of users.

2b. Have any of these issues been discussed with LTS International and if so, have changes been made to the original agreement?

Discussed with LTS:

Yes/No

Formal change request submitted:	Yes/No
Received confirmation of change acceptance	Yes/No Work underway to revise log-frame

3a. Do you currently expect to have any significant (e.g., more than £5,000) underspend in your budget for this year?

Yes No Estimated underspend: £

3b. If yes, then you need to consider your project budget needs carefully. Please remember that any funds agreed for this financial year are only available to the project in this financial year.

If you anticipate a significant underspend because of justifiable changes within the project, please submit a rebudget Change Request as soon as possible. There is no guarantee that Defra will agree a rebudget so please ensure you have enough time to make appropriate changes if necessary.

4. Are there any other issues you wish to raise relating to the project or to Darwin's management, monitoring, or financial procedures?

- As suggested in the Y2 Annual Report, the Project Leader and Project Manager in consultation with Darwin Initiative (LTS), Victoria Pinion, are revising the project Log Frame.

If you were asked to provide a response to this year's annual report review with your next half year report, please attach your response to this document. Additionally, if you were funded under R24 and asked to provide further information by your first half year report, please attach your response as a separate document.

Please note: Any planned modifications to your project schedule/workplan can be discussed in this report but **should also be raised with LTS International through a Change Request.**

Please send your **completed report by email** to Eilidh Young at Darwin-Projects@ltsi.co.uk. The report should be between 2-3 pages maximum. **Please state your project reference number in the header of your email message e.g. Subject: 22-035 Darwin Half Year Report**