St Helena Cloud Forest Project update: October - December 2023

The St Helena Cloud Forest Project is a highly collaborative multi-year project working to implement the Peaks Management Plan for St Helena's 'Peaks National Park'; a globally significant area for biodiversity which is also vital for St Helena's long-term water security. Key actions across the first four years of the project include monitoring and research to inform and secure the island's water security and climate change adaptation efforts; improving, restoring and creating cloud forest habitat to increase areas for mist capture and ensure the conservation of associated species; and supporting the sustainable development of St Helena by developing opportunities through ecotourism, education, sustainable land use and conservation training.





O What happened under each pillar?

Biodiversity

- •Improved weather in this quarter meant the teams focus has been on the maintenance of cloud forest restoration sites at Wells, Cabbage Tree Road, Taylors and Taylors corridor, and invasive control. The SHG Peaks teams also spent some time on contingency tasks away from the restricted areas of the cloud forest in periods of bad weather to avoid further spread of pathogens. These included:
 - ♦ Clearance of invasive species at new living gene bank sites at Girlings
 - ♦ Infrastructure maintenance and repair at EMD's endemic nursery
 - ♦ Supporting the endemic nursery with cleaning and processing seed for longterm storage
- At Scotland, a nursery phytosanitary protocol, developed in Q2, is being implemented to generate clean planting material. After time spent deep cleaning the EMD nursery throughout the year, propagation of cloud forest species recommenced. A visit from two horticulturalists at the Royal Botanic Gardens, Kew, provided further horticultural support and nursery phytosanitary training.



Freshwater invertebrate sampling

- ♦ Bulk soil sterilisation to support production of pathogen free plants continued.
- ♦ Renovation of two shade houses continued, as well as planning for two new shade houses for cloud forest species propagation.
- ♦ Seed collection of Peaks species for storage and propagation, and fern micro-propagation activities continued
- At the St Helena National Trust, Vicky Wilkins from the Species Recovery Trust was on island to support invertebrate fieldwork and help refine the habitat assessment methodology. In addition:
 - ♦ Y2 annual invertebrate report was drafted and is under review; work continued on the Diana's Peak Grass moth monitoring report.
 - ♦ Scoping for Golden Sail Spider sites, as well as suitable freshwater invertebrate monitoring sites, concluded.
 - ♦ The invasive invertebrate team focused on invasive monitoring, control trials for ants and wasps and harlequin ladybird surveys.
 - ♦ Red List Assessment drafting for over 80 endemic cloud forest invertebrate species continued.

Water security and climate change

- The international water research team had a successful fieldwork season in October including geophysics surveys, soil infiltration testing and water quality testing. They also provided extensive training in use of geophysics equipment so surveys can continue on island.
- Scripts were produced for two water-pillar focussed films.
- Monthly climate data from automatic weather stations and mist and rain gauges were collected, and maintenance carried out on equipment. Water level and flow monitoring continued.
 - ♦ Real-time data from the automatic weather stations can be accessed via: https://wow.metoffice.gov.uk/ (pan to St Helena).



Socio-economic

- The St Helena National Trust's Education & Outreach Officer completed a UK trip for training and capacity-building through exposure visits to RSPB, the Natural History Museum, Wembury Marine Centre and more.
- Work continued on drafting resources for the secondary education pack on St Helena's cloud forest; video scripts for school-led film projects; and research into 3D models and technology as an alternative outreach tool until access is available again.
- The Trust completed the final draft of the Historic Features Assessment, which will be published on the project webpage in Q4.
- A research bursary was awarded to Amy Webster to support her final research trip in Q4 before writing up her PhD thesis on disease in Black Cabbage trees on the Peaks.
- A visioning workshop was held in October to discuss the future direction of the SHCFP.

























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Update on Plant Pathogens

- The St Helena Government prohibited public access to critical areas of the Peaks National Park including the cloud forest from 11 April until December 2023 to help to prevent the further spread of the pathogens.
- Following the precautionary principle, the closure of sensitive areas of the Peaks has been extended to March 2024, a process to grant authorised access through EMD remains in place. During this time the CABI team will be on island (project DPLUS157) to start inoculation trials, provide more training on pest management techniques, and undertake diagnostic sampling.

What's coming up January to March 2024?

- A capacity-building visit from Kew will support fern micro-propagation through training and advice.
- Arctium are on island to complete soil moisture study, review datasets and undertake interpretation for water balance study.
- Propagation of cloud forest species for living gene banks and restoration work is ongoing, and germination trials of cloud forest species will be undertaken.
- Maintenance of restored habitat, invasive clearance works, and infrastructure repairs will continue on the Peaks, at living gene banks and the Scotland nursery.
- Publication of invertebrate survey reports, and commencing Y3 annual surveys.
- Aerial mapping of cloud forest habitat to assess tree health, pathogen spread and habitat expansion; and GIS training.
- Education and outreach day at PAS focussed on water pillar.

Project Outreach

- An RSPB Saving Nature with Science blog was published celebrating the new spider species: https://community.rspb.org.uk/ourwork/b/ science/posts/new-spider-species-discovered-on-saint-helena-the-jewel-of-the-south-atlantic-ocean
- In October Kirsten Ellis (PM) and Danni Sherwood (Spider expert) gave a public talk at the Friends of St Helena AGM in London.
- On St Helena, the SHCFP hosted three public talks:
 - ♦ Jo Gilbert from the RSPB spoke about the Cloud Forest Project and RSPB's wider landscape restoration work.
 - ♦ The water pillar team presented on the water resource and geophysics of St Helena titled 'Journey of a Raindrop from Cloud Forest to Ocean' - this is available on YouTube: https://youtu.be/RZsr6RsgBO4
 - ♦ Vicky Wilkins from the Species Recovery Trust spoke about St Helena's invertebrates and the work she is involved in on other UKOTs.
- Lawrence Muranganwa from Connect Saint Helena attended the IWA Water and Development Congress & Exhibition 2023 in Kigali, Rwanda, and presented the SHCFP through an exhibition space at
- The project continues to be promoted on social media see our Twitter and Facebook links below.
- Watch the Cloud Forest project films on YouTube:

0 Biodiversity https://youtu.be/8xB9VxD1PjY 0 **Water Security** https://youtu.be/-tMwOD1eKn0 Socio-Economic https://youtu.be/oL0dEOLj2Eo 0 https://youtu.be/C5 -IhJd6OA 0 Partners Involved https://voutu.be/ucpOiD9noF0 0 Capacity-Building Biosecurity https://youtu.be/IWFDnBHLCAM 0

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