FEBRUARY 2022

THE ST HELENA AMBASSADOR

Editorial

Hi, welcome to the St Helena Ambassador!

In this month's edition you can find out about a new mico propagation unit that is being set up at Scotland, St Helena Girl Guides Thinking Day, how St Helena's endemic seeds are now being stored at International standards, the outcome of the Saint Helena National Trust birdwatch, and more on the training that was delivered to the Conservation team by a Conservation Horticulturalist from the Royal Botanic Gardens, Kew.

If you'd like to contribute a story to the St Helena Ambassador or have any suggestions on what you'd like to see included, please feel free to contact me on tel: 22470 or via email: jodie.s-constantine@sainthelena.gov.sh.

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New micro propagation unit set up to fast-grow St Helena's endemic ferns

A new micro propagation unit to fast-grow St Helena's endemic ferns is currently being developed at the Conservation Nursey, Scotland, St Paul's.

Two specialists from the Royal Botanic Gardens, Kew – Lab Technician, Jonathan (John) Kendon, and Horticulturalist, Marcella Corcoran – were recently on-Island setting up the micro propagation unit and provided micro propagation training to the Terrestrial Conservation staff.

The micro propagation unit at the Nursery contains everything required for handling and preparing the ferns for in vitro cultivation. The unit consists of two rooms – the lab and the growth room. The growth room is air conditioned and contains an illuminated incubator for culturing newly-sown fern spores at a constant temperature and timed lighting. It also contains shelving with tube lights attached which illuminate the shelves underneath,

Karen Williams preparing the fern spores for in vitro cultivation

L-R: Marcella Corcoran and John Kendon

containing jars of fern cultures. The main piece of equipment is a laminar flow cabinet – this allows staff to work in a sterile flow of air. There is also a microscope for looking at the spores, a desiccator to dry the collected spores, water purification, sterilisation equipment and a fridge and microwave for preparing the growing media. Shortly to add to the unit, pending shipment, is a pair of autoclaves to sterilise the media, deionised water cartridges, pH meter, centrifuge and blood mixer for separating viable spores from debris and non-viable spores.

St Helena Government's Terrestrial Conservation staff are now trained to micro propagate (in vitro propagate) endemic ferns.

The facility has been set up because large numbers of ferns are required at a fast rate to complement restoration work currently being undertaken on St Helena. Micro propagation (or in vitro propagation) is being used because it can deliver the fast rates required and makes best use of every available viable spore. Conventional propagation can be used for ferns but sometimes there are large losses and not all viable spores may germinate.Currently the plan is to concentrate on ferns using this method because the other endemic plants can be propagated conventionally. Having the in vitro facility on site means that there is the option to use in vitro propagation for other plants in future if required.

St Helena Girl Guides celebrate their annual Thinking Day

On 22 February, Girl Guiding St Helena joined their worldwide Guiding sisters in celebrating their annual Thinking Day. This globally recognised day honours Lord Baden-Powell, founder of the scout and Girl Guide movements, and Lady Baden-Powell, his wife and first Chief Guide.

The theme this year was 'Our world, our equal future' which involved the topics of climate change, gender equality and taking action. These topics were incorporated into activities that made up the 'Thinking Day Challenge' and those that completed three activities will earn a Thinking Day 2022 badge.

On- Island celebrations took place at the Jamestown Community Centre where girls took part in activities that helped them all become more environmentally conscious and taught them how to be change makers in the fight against climate change and gender inequality.

Awards are presented each year to a Rainbow, Brownie and Guide of the year. This year, Rainbow of the Year was awarded to Yazmin Walters of the Longwood Unit, Brownie of the Year was awarded to Zyanna Henry of the St Paul's Unit and Guide of the Year was awarded to Torrance Benjamin of the Half Tree Hollow Unit. Congratulations are extended to the three winners, those who were highly commended and everyone that participated.
Recognition was also given to Veronica Augustus for her long service in Guiding and also Christina (Tina) Peters for achieving her Leadership Qualification. Well done everyone.

The Jamestown Girl Guide Unit commented:

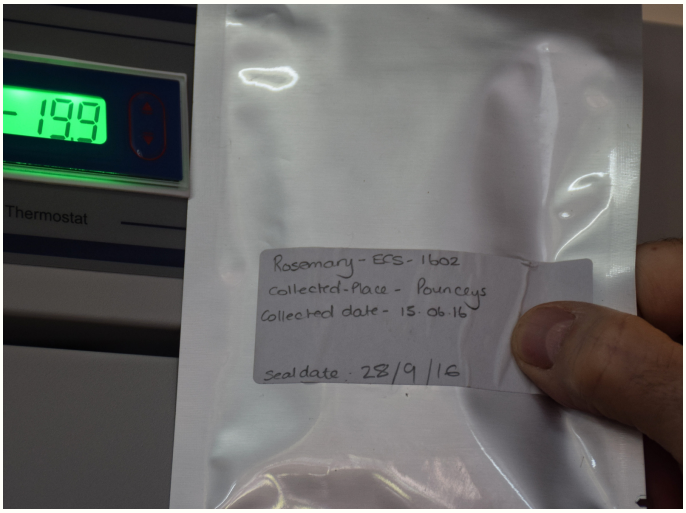
"*We would like to extend our thanks to Jill Young, Kerry Lawrence and Nicole Shamier for judging this year's Guide of the Year entries, Printech for their kind donations of resources used to decorate the venue, the National Trust for supplying us with climate change posters, the Trefoil and Council for organising refreshments, Father Ernest for his prayer reading, and last but not least- every Rainbow, Brownie, Guide and Leader that participated and helped in any way to make the day a success!*

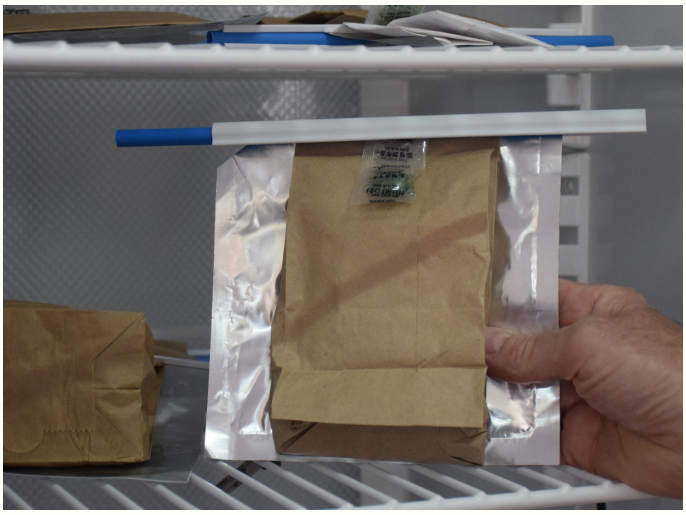
"We will see you next year for Thinking Day 2023 - 'Our world, our thriving future'."

Specialist from Kew Gardens Introduces new method of storing St Helena's endemic seeds

Keith Manger, a manager at Kew's Millennium Seed Bank, was recently on-Island to assist the Environment, Natural Resources & Planning Portfolio's Terrestrial Conservation staff in their efforts to extend St Helena's endemic flora seedbank.

A number of endemic flora seeds are being stored at the Conservation Nursery, Scotland, St Paul's, at 10 degrees, but in going forward the seeds will be stored at -20°C.





"The current international seed conservation standards is to store seeds at -20°C", Keith explained. To help achieve international seed conservation standards, Keith has set up a machine which dries seeds down to 15% relative humidity.

Keith added: *"Freezing seeds is a bit like food at home; if you were to get a bean and freeze it, it's not going to live afterwards because ice forms and kills it, so with seeds you have to dry them down to really low moisture content (15% relative humidity) so ice can't form."*

The seeds are dried using the incubator drier, sealed in a hermetic container, such as a foil pouch, and stored in the -20°C freezer. These seeds will be preserved for hundreds of years.

The Terrestrial Conservation staff now know how to use the incubator drier for re-drying their seeds. Once dried they can be stored in the new -20°C freezer.

Saint Helena National trust hosts first-ever Birdwatch

The Saint Helena National Trust (SNHT) carries out the annual Wirebird Census in January, in order to estimate the Island's Wirebird population. January is their peak nesting season and most birds are tied to their territories making them easier to count. The counts have been taken over by the Invasive Vertebrate Project for its duration and, under this Project, the team is also carrying out Myna roost counts. Held at a similar time every year, results can be compared with previous years and used to monitor trends or predict changes.

This year the SNHT Vertebrate Team hosted their first Island birdwatch, instigated by the Wirebird census and myna roost counts, to find out about other bird species on St Helena. The SHNT can use this information to identify invasive, native or migratory species where they can be found and investigate why i.e. food, wind currents.It can determine the populations and information for the project to target trapping efforts (all species) or even conservation efforts. Inspired by the Royal Society for the Protection of Birds (RSPB) Garden Watch, the birdwatch encouraged the public to become citizen scientists - voluntarily help to conduct scientific research, in this case, collect more data than what a small team could. What's more, the birdwatch was a fun activity that families could do together; observe what birds visited their location for half an hour (30 mins) and tally results.

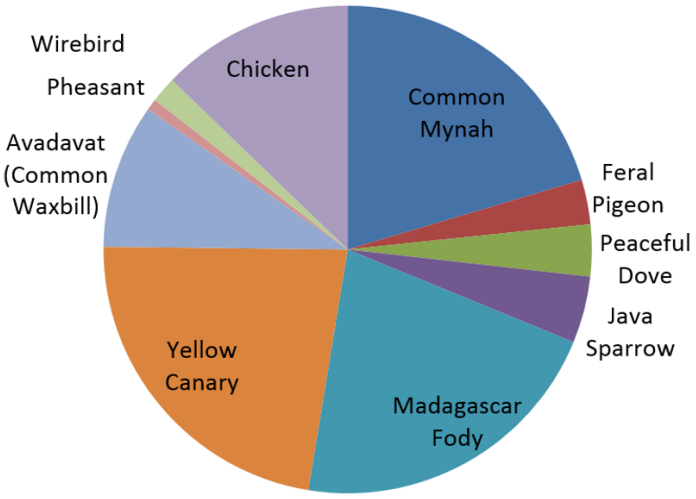
Outreach and Education Officer, Sheena Benjamin, commented: *"The number of birds recorded across the Island will provide a vital snapshot of which species are thriving or struggling, and perhaps provide clues as to why, and how they can be protected or be deemed as an invasive species. Are there any song birds where there are a lot of Mynas present? Are there any game birds? Were there song birds but you don't see them anymore? Does the type of flowers you have in your garden encourage certain birds? Key features were described, some to distinguish between similar looking birds, and included photos of male and females for some species."*

How has Citizen Science helped so far? Reports from the public have allowed the team to find new locations were Wirebirds were found and additional Myna roost sites.

Sheena concluded: *"We did not receive as many return sheets as we had anticipated, however the team did receive lots of verbal feedback and discussions. Conversations such as what is a partridge or where can they be found? Do we still have turkeys? How can we tell the difference between a Madagascan Fody and a Canary?"*

Summary of the results so far: There were no Chuka Partridges, geese or turkeys. Pheasants, both male and female were seen. Ducks were seen and of course feral Pigeons and peaceful Doves. The highest recorded bird seen was the Yellow Canary, and Madagascar Fodies - about the same number of male to female, with the Common Myna coming in third. There was also a high number of chickens seen and some Avadavat with lower numbers of Java Sparrows. Wirebirds were also observed at Horse Pasture!

Pie chart showing percentage of species observed.



St Helena Government's Terrestrial Conservation team receives Horticulture techniques training

Four new members of St Helena Government's Terrestrial Conservation team received horticulture techniques training from Conservation Horticulturalist at the Royal Botanic Gardens, Kew - Marcella Corcoran.

Marcella was on-Island during February and during her time here, delivered horticulture training to four new members of the terrestrial Conservation team; two from the Peaks nursery and two from the Endemic Nursery in Scotland.

As part of the training, Marcella taught the team basic horticulture techniques such as steps involved in successfully germinating seeds, looking at alternative soil (medium) mixes, specific treatment of seeds (for example: seed pods that need to be left to dry so they split open, chipping seeds that have a very hard seed coat and at times washing or soaking seeds (pre-sowing) as well as the importance of potting on to keep roots long and not twisted, forming robust plants that will be reintroduced to the wild.

In the shade house (see photos), Marcella taught the team how to take a tiny seedling from the tray of sown seeds that are growing and put it into its first pot. Training in propagating plants by cuttings and division.

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