SOMALILAND BIODIVERSITY FOUNDATION

Activities Report for 2021

Teaching

At the request of the Dean of Agriculture, Faisal taught a class in plant taxonomy for agriculture students during the first half of 2021. Twenty students took the class which included a field trip to the Golbog Escarpment where the students learned about the plants present there and how to prepare herbarium specimens. Seven specimens were collected for the museum.

Students pressing plants on class field trip

Growing the museum

Ahmed Awale and Faisal made a collecting trip to eastern Somaliland, adding thirty specimens to the collection, including nine from Sanaag. These were the museum's first collections from Sanaag since Ahmed Dunkaal's collections of *Boswellia.* Later, Faisal and Ahmed participated in a field trip with Dr. Prof. Sebsebe Demissew, a major contributor the Flora of Somalia, and colleagues of his from the National Herbarium of Ethiopia. This expedition was part of an initiative to build a collaboration with Ethiopian botanists. It resulted in the collection of 100 specimens for the museum, collection information for which was later sent to Faisal by Dr. Melaku Wondafrash, one of Sebsebe's colleagues who participated in the trip.

Faisal also facilitated two other field trips, one for scorpions, the other for birds. Dr. Lorenzo Prendini of the American Museum of Natural History led the scorpion expedition. It included two other scorpion specialists, Dr. Tharina Bird of DITSONG, the National Museum of Natural History of South Africa, and Massimiliano (Max) Roppo, of Sapienza University of Rome, Italy. They collected several specimens, including some they suspect are new records for Somaliland or possibly new species. Dr. Prendini will be sending their collecting data to the Foundation in 2022 for inclusion in OpenZooMuseum. Another outcome of this expedition is Dr. Bird's agreement to offer a workshop on collecting and preserving insects for the University of Hargeisa in 2022.

The bird expedition was led by Dr. Osman Gedow and included two German ornithologists. They succeeded in their primary goal, obtaining the samples needed to determine whether not birds Osman had observed in 2020 represent a new species. The samples are still being analyzed. The results will be available in 2022.

Mary delivered several items to the Museum in November, many being items purchased the previous year. Among items delivered were a dissecting and compound microscope, both of which had an integrated camera, multiple labels for use in the succulent garden, another set of the *Flora of Somalia*,

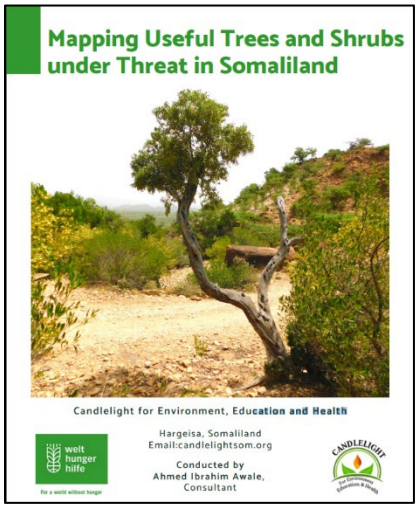
additional press components, plastic envelopes for use in protecting specimens used for demonstration purposes, and a heater with a fan. Unfortunately, the camera on the compound microscope failed to work when we tried to use it and the heater, which was intended to speed up the drying of plant specimens, blew the outlets in the museum. One beneficial consequence was that we improved the museum's electrical resources, adding several additional outlets, thereby eliminating the need for extension cords that cross the floor and overloading of existing outlets.

Mary's focus while at the university was primarily on enhancing its ability to offer a high quality course in plant taxonomy. Faisal and spent considerable time using the *Flora of Somalia* to identify species. In addition, they and Ahmed met with Abdurazak Tahir, Dean of the College of Agriculture, to discuss the possibility of relocating the museum to provide it with the space needed to serve as an integrated research and teaching facility. Two potential spaces were identified, but both will need some renovation.

The University invited the Foundation to assume responsibility for looking after the whole of the area on its side of the library building, not just the portion immediately in front of the museum. The area includes an old (Acacia tree [name please] but is mostly weedy. As a first step, we extended the rain gutter the full length of the building. Further investment will depend, in part, on plans for relocating the museum.

Publication

Awale, A.I. 2021. Mapping useful trees and shrubs under threat in Somaliland. Candlelight for Environment, Education and Health, Somaliland.



This publication resulted from work conducted by Ahmed for Candlelight. Faisal accompanied on some of the fieldwork. It has led to recognition of the need to learn more about the factors affecting seedling establishment of the species involved. Overuse by humans and their livestock are undoubtedly part of the explanation, but low seed set, lack of pollinators, and climate change are probably also contributors. There is, however, little information available about these.

Newsletter 8 was published, in English and Somali, in February 2021.

New linkages

Insects: As stated earlier, Dr. Tharina Bird has agreed to offer a workshop on insect collecting to students from the University of Hargeisa's agriculture program in the summer of 2022. This is a major step forward. Insects are vital to soil health and pollination. Despite this, only four specimen records from Somaliland were in the Global Biodiversity Information Facility when this report was prepared. Three are of moths and one of a fruitfly. They were collected between 1915 and 1951. The records have been added to OpenZooMuseum. The fly specimen in the British Museum of Natural History, London, UK, and the three moth records in the Peabody Museum of Yale University, USA.

Colitis phisadia (Blue-spotted Arab), one of the insects documented in GBIF as being in Somaliland.

Restoration: In November, Ahmed, Mary, and Faisal met with Thomas Hoerz of WelterHungerHilge (WHH) and Guuleed Ahmed of LanderProsopis to discuss our mutual interest in improving food security in Somaliland. The meeting was the outcome of correspondence between Mary and Stephen Thomas of Global Health Service concerning work by LanderProsopis on controlling Prosopis in ways that have the potential to be financially self-sustaining. In subsequent emails, a framework for a pilot project was developed, one that would involve restoring a plot of land with native plants surrounding an area for raising food crops and tracking the project's impact in multiple dimensions such as income and food generation, soil temperature and fertility, insect and plant diversity, and skill development.

Visiting Darsalaam

Following the meeting, Guuleed took Mary to see an active Prosopis management site at Darasalam. It was one of the areas where Prendini and his colleagues spent time looking for scorpions and is the proposed site for the insect workshop and the pilot restoration project. It is close to Hargeisa but with the facilities needed to offer onsite workshops.

Fundraising activities

Fundraising

Anjanette raised $1075 for work with Frankincense through FaceBook. Her willingness to use this approach led us to take the steps required to have the Foundation approved as a recipient of donations via Facebook.

FaceBook attracts a lot of attention, and it makes it easy for people to donate to a cause. The disadvantage is that the cause involved is not provided with details about the individual donations.

There were no other fundraising initiatives during the year.

Financial summary

The Foundation's income during 2021 was $45,253. Most of this came from two donors. It includes a donation made in December cover the operating costs in Somaliland for 2022.

The Foundation's expenses during 2021 came to $31,140 of which $2,868 (9%) was for business expenses. The major expenses were payroll in Somaliland ($13,805), website management and software development ($7050), and Barkworth's travel to and stay in Somaliland ($4083). Website and software development included revising and maintain the Foundation's website plus work new software for running run OpenHerbarium and OpenZooMusum, the web sites through which we share information about Somaliland's biodiversity. The new version will be easier to navigate, have additional tools for learning about Somaliland's biodiversity, and enable expanding the developer pool.