

Project Update: July 2021

***Acacia negrii* (VU);** In order to collect seed and seedlings of this tree, we went to the field in different parts of the country after getting GPS points where the plants were sampled many times ago.

After so many times of searching it in at least three field works (one field work was conducted with other members for other collection activities of the botanic garden), only 17 seeds and two seedlings of *Acacia negrii* were collected from Chilimo forest and in the way from Addis Ababa to Ambo town. I searched the seeds for purchase but failed to get it. From the field in Chilimo forest, we collected the two seedlings from its population under the mother tree. The two seedlings were treated in the greenhouse for 1 month and planted in the Red List Theme of the garden. After about 4 months of staying alive, the seedlings died even with frequent watering and management. The collected seeds were treated and sown in the pot and put in the controlled greenhouse. However, only 10 seeds were grown among the 17 seeds in the greenhouse may be due to the dead embryo in the seeds of the tree. Therefore, only 10 seedlings are alive now and getting better and growing better in the greenhouse (Fig. 1).



Fig.1. Seedling of *Acacia* in greenhouse

***Commiphora monoica* (CR):** this shrub mainly found in Sof-Omar Cave area of Bale, Oromia regional state, over 500 km from Addis Ababa (fig 2). We have collected some seedling level shrubs of this species from Sof-Omar and stored in greenhouse for future

re-introduction programme. All the samples collected from the area are alive and in greenhouse. We have uprooted the targeted seedlings by not harming others and uprooting is only possible where we have a good number of individuals. Unfortunately, getting seeds for this species become difficult and only its live seedlings were collected. For the future, with the financial support of the botanic garden, tissue culture will be conducted for its propagation and re-introduction programme.



Fig 2. *Commiphora monoica* live individual collected from Sof-Omar Cave area.

***Maytenus harenensis* (CR);** Matures seeds of this plant were collected from Bale Mountains National Park, 2.5 km south of Rira small town, located southeast of the country and 400 km far from Addis Ababa. This plant is endemic to this area and not recorded elsewhere in Ethiopia (Fig 3). The collected seeds (about 100) were dried, treated with cold water, and sown in the plastic pot and put in green house under controlled conditions. The seeds were under care and management in the greenhouse, waiting for its germination.



Fig 3. Fruits of the *Maytenus harenensis*, collected from 2.5 km south of Rira on the way to Dello Mena (March 2021)

***Rhus glutinosa* A. Rich. subsp. *glutinosa* (VU):** The seeds of this shrubby plant were collected from two different fieldworks (to Bale mountains National Park, Jimma area and Chilimo forest) (Fig 4a and 4b). Up to 10 seedlings and 10 kg of seeds of this plant was collected. Once seeds collected, it was pre-treated with cold water, sown on the soil bed, and waiting for its germination. Recently, it has started growing on the soil bed and soon will be transplanted to plastic pot and put under the shade in the nursery. Many thousands of this plant are being propagated so that the conservation status would be changed in the future.



Fig4a. Some of the seedlings of *Rhus glutinosa* planted and managed in the RED LIST THEME (photo captured: 15/7/2021).



Fig 4b. The seeds of *Rhus glutinosa* A. Rich. subsp. *glutinosa* (Feb. 2021)

***Polyscias farinosa* (VU):** Following several GPS points, we have conducted fieldworks for seed and seedling collection towards north and northwestern parts of the country. We went up to the Abay George on the way from Addis Ababa to Bahir Dar. Again, we went to up to Bure towards the way to Nekmete. However, we did not get either the seeds or seedlings of this species. We went to the same place second time and failed to get this species. It is now very important to decide the conservation status of this species if we lose it from already mentioned areas. It needs thorough assessment for this species on national basis.

Teams participated in the fieldwork

The place is locally called "Rira", where we found the *Maytenus harenensis*, critically endangered species. In the photo below, the one writing on the notebook (who sits left side) is the coordinator of this field, Dr. Talemso Seta. The one second to him pressing the dry plant specimen and the one standing near to him is the staff members of Gullele Botanic Garden (Fig 5).



Fig 5. The field team working in the field (pressing of dry specimens for *Maytenus harenensis* and other species to deposit in the Herbarium of Gullele Botanic Garden)



Fig. 6: The field challenges (Field car tire in maintenance in between Bale Robe and Sof-Omar)



Fig. 7. Site clearance and preparation done for Red List Theme (Oct. 2020)



Fig. 6. Shades constructed to protect seedlings from sunlight after propagation (this shade has been constructed in the garden not only for this project but also for future use in coordination with other stakeholders).