

## **Progress Report**

On

Conservation of *Azanza garckeana*, a poorly studied, and locally threatened plant species in Nigeria



**Submitted to:**

The Rufford Foundation

**By**

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### **Introduction**

Populations of *Azanza garckeana* (snot apple) in Nigeria are rapidly declining due to increasing threats of landuse change, excessive exploitation and climate change impact. Even though the nutritional and medicinal potential of *A. garckeana* have been appreciated both locally and in international space, the species has not received any conservation attention. This project is working towards the conservation of *A. garckeana* populations in Nigeria through assessment of its population status, seedlings propagation and planting, and community awareness. In the last six (6) months, we were able to successfully carryout the following activities:

### **Activity 1: Reconnaissance Visit**

In April 2022, the project team paid a courtesy visit to Mai Tula, Alh. Dr. Abubakar Atare II, and the heads of the three Tula districts –Tula Wange, Tula Baule and Tula Yiri. The team briefed the traditional leaders of the project’s aims, objectives and schedule of activities. Mai welcomed the team, assured us of his full support and gave us local field guides for the entire project duration. Also, the team paid courtesy visits to the project partners including Gombe State University (GSU) and Jewel Environmental Initiative (JEI) to officially inform them of the project’s kick off.



**Figure 1:** L-R Dr Zhigila D.A., Chief Yerima Doma, HRH Abubakar Buba Atare (Mai Tula), Dr Maigari Ishaku, The Chieftdom Secretary, Jedidah Akawu Jacob (Project Leader) and some Palace Officials



**Figure 2** The Project Leader - Jedidah Akawu Jacob led the team to the Vice-Chancellor of Gombe State University, Prof Aliyu Usman El-Nafaty. **Figure 3** L-R, Mr Bima S. Umar (C.E.O, Jewel Environmental Initiative), Jedidah Akawu Jacob (Project Lead), Dr Daniel Andrawus Zhigila

### Activity 2: Field Survey

**Study site selection:** To identify key areas where *A. garckeana* grows within Tula, we carried out a preliminary survey. Sites for data collection were selected based on knowledge of the distribution of *Azanza garckeana* within the study area, and our prior collections of herbarium specimen. Ground-truthing was done prior to data collection to verify the presence of *A. garckeana* through field observation. We found *A. garckeana* populations in high densities in three contrasting land use types, namely, within settlements/homestead, farmlands and wild landscapes neighboring settlements.

**Sampling design:** an extensive field survey was conducted in the study area through June to October 2022. Tula Yiri, Tula Wange and Tula Baule were sampled. A total of 30 transects and 15 quadrats were subjectively laid 15 in each of the study sites. The edge of each transects and the four corners of each quadrat were marked with stakes and GPS locations noted. The number of individuals on each study site were recorded. We found two “outlier” populations of *A. garckeana* in Laushi and Banganje districts of Billiri and Shongom local government areas. All geographic areas of *A. garckeana* presence were identified and their coordinates recorded. During the field survey voucher specimens were collected and taken to Gombe State University herbarium. All data collected are currently being analyzed.

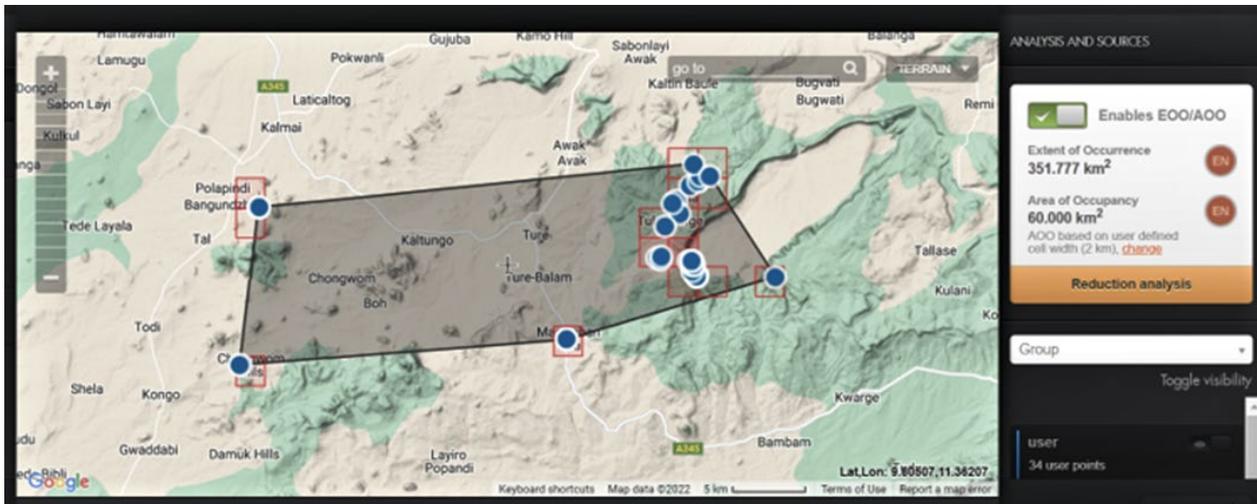


Figure 4. Map of the studied area showing Extent of Occurrence and Area of Occupancy.



Figure 6. The Project Leader - Jedidah Akawu Jacob during field survey at Dutsen Mamaki in Billiri LGA of Gombe State.  
 Figure 7. L-R, Dr Daniel A. Zhigila and Jedidah Akawu Jacob taking data during field survey at Tula Wange.



**Figure 8.** The Project Leader - Jedidah Akawu Jacob labelling collected sample for plant pressing. **Figure 9.** Leaves of *A. garckeana* collected during field survey at Tula Yiri.



**Figure 10.** Flower of *A. garckeana*. **Figure 11.** Unripe fruits of *A. garckeana*.

**Activity 3: Propagation of *A. garckeana* seedlings**

Preparation of pods to raise seedlings in Kanawa Forest: In collaboration with Gombe State University (GSU) and Jewel Environmental Initiative (JEI), 2000 seedlings of *A. garckeana* were raised in Kanawa Forest which were used for tree planting campaigns in the study area.



**Figure 12.** Mixing of sand and manure by Ibrahim and Ahmadu (Staff of Jewel Environmental Initiative). **Figure 13.** Inspection of filled pods by Jedidah Akawu Jacob.



**Figure 14.** The Project team filling pods with mixed sand. **Figure 15.** L-R Naboth Nuhu, Ahmadu, and Jedidah Akawu Jacob inspecting the growing *A. garckeana* seedlings.

#### **Activity 4: Community awareness and tree planting campaign**

We conducted community awareness alongside the distribution and planting of 2000 *A. garckeana* seedling within communities of the three Tula (Wange, Baule and Yiri) districts. Below is a cross section of pictures from the awareness campaign, seedling distribution and planting.





**Figure 16.** Uploading of *A. garckeana* seedlings by garden staff of Jewel Environmental Initiative (JEI) **Figure 17.** A cross section of participants holding *A. garckeana* seedlings with Chief Yerima Doma (Hakimi of Yiri) after community lectures. **Figure 18.** A cross section of women holding the *A. garckeana* seedlings. **Figure 19 and 20.** Dr Maigari Ishaku handing over the *A. garckeana* seedlings to Chief Yerima Doma while he distributed it to the participants. **Figure 21.** Chief Yerima Doma flagging off the planting of *A. garckeana* seedlings. **Figure 22 and 23.** The project team planting *A. garckeana* seedlings on farmlands



*Figure 24. The Project Leader - Jedidah Akawu Jacob presenting the awareness material (T-shirt and face cap) to the Vice-Chancellor of Gombe State University, Prof Aliyu Usman El-Nafaty.*