

## **Project Update: May 2012**

### **Implementation of TroPEG Protocols in Mbembe**

Prior to the TroPEG work in Mbembe, M.N. Sainge (Research Director) sent out a public notice to the M.Sc. class of Botany and Plant Physiology of the University of Buea for the need of two MSc research students to undertake their research Thesis under TroPEG with funds from Rufford Small Grant Foundation. Students then applied following this notice. The candidates short listed were called for an interview after which Jumbam Blaise and Awani Mireille were finally selected to carry out their MSc Thesis research on the Diversity, distribution and Conservation status of Tree species in the MFR and the Diversity, Distribution and Conservation Status of Herbaceous plant species in the MFR respectively in three vegetation types.

All field equipment was then put in place and five persons left Buea for Mbembe: M.N. Sainge (TroPEG, Research Director), M.N. Lyonga (TroPEG, Field Manager I), M.B. Libalah (TroPEG, Field Manager II), B. Jumbam (Student) and M. Awani (Student). When we got to Ako, we introduced ourselves to the Divisional Officer (Nombo David) and Brigade commander. At Buku, we introduced ourselves to the Fon of Buku (Fon Lenge Joseph Eku). Local field assistants were employed from Ako, Buku, Buku-up and Ndaka.

### **TroPEG 1 ha plot**

Four 1 ha plots were established based on vegetation type and altitudinal gradient. Two of whom were woodland savanna plots at an altitude of 297 m at 06° 52'42.5"N, 10° 37'26.7"E and 309 m asl at 06° 53'22.1"N, 10° 36'50.9"E one semi-deciduous forest plot at 322 m at 06° 53'11.8"N, 10° 36'35.1"E and one grassland savanna plot of 841 m at 06° 50'51.9"N, 10° 36'55.5"E.

### **Plot Survey**

#### **Tree plot**

The topographical survey of the plot was carried out following the Tropical Ecology, Assessment and Monitoring Network (TroPEG) methodology using compasses. This was then followed by the establishment, data collection and the plant identification team. All plots were established northward, and surveyed into 100 x 100 m with the GPS points of the four corner post taking using a GPS Garmin 6Cx (See table below) and demarcated by a 50 cm long 10 mm diameter iron rod painted yellow at the top. Each ha was divided into 25 quadrates of 20 x 20 m. Each quadrate of 20 x 20 m was further divided into 16 5x5 m sub quadrates. The 5x5 m and 10 x 10 m quadrates were demarcated with temporal post with red ribbon tied at their top for visibility. All tree stands and lianas of  $\geq 1$  cm (10 mm) were measured, painted at the point of measurement (POM) 1.3 m for trees and above the last roots for lianas. The xy coordinate of all individual trees and lianas of the grassland and woodland plots were measured, but not for the forest plot. Voucher specimens of most species recorded were collected and identified as far as possible to species. All collected specimens were described, dried and sorted to family, genus and species.

### **Herbaceous plots**

At the centre of each 20 x 20 m sub quadrat, a herb plot of 2 x 2 m was established. This was further divided into four sub quadrat of 1, 1; 2,1; 2,2 and 1,2. The 2 x 2 m quadrates were demarcated with temporal pegs with red ribbon tied at their top.

### **Plant Uses**

The third data set that was generated during this survey was ethnobotany. This is because the population depends very much on plant uses due to the lack or few healthcare centres.

### **Results**

A total of 6679 individual plants and lianas stands were recorded in the 4 ha sample plot with plot 1 woodland savanna having 1098 individuals, plot 2 woodland savanna having 382 individuals, plot 3 forest having 4963 individuals and plot 4 grassland savanna having 236 individuals trees.

A total of 2510 individual stems were recorded in the 4 ha sample plot.

### **Conclusion**

Data entry and sorting of plant specimens is ongoing. Plant identification will be carried out at the National herbarium in Yaounde sometime in July 2012, data analysis and the final report will then be compiled.



Plot layout, measuring of xy coordinates and tree diameter.



1Zanthoxylum sp, Tag and point of measurement point in red.



Data collection process.