

**Ranomafana (01.01.2012 to 03.31.2012)**

**Year:**

2012

**Quarter:**

January - March

**Communications activities:**

Presentation of TEAM project and the Biodiversity of Ranomafana rainforest to groups of students from different national and regional schools visiting Centre ValBio Ranomafana.

Updates on TEAM Ranomafana Project presentation to the CI TEAM Madagascar representatives at Centre ValBio on February 23, 2012.

**Unusual Events at the TEAM Site:**

The recent extremely dangerous cyclone “Giovanna”, containing a maximum sustained wind of 145mph (125 knots), affected the area of Ranomafana. This cyclone had passed the area from the night of February 13<sup>th</sup>, lasted for few days and produced extensive damage and landfalls.

During the field expedition for collect of fertile voucher specimens to TEAM sites 3 and site 5, some trees were found destroyed and felt down by the cyclone. At plot 5, for example, trees number 346 and 1178 are still alive but lost their canopy; tree 528 was cut at the base and presumed dead; trees 371 and 739 were felt down; and some trees lost most of their leaves. The presence of landfalls within the park was also noted. Even though many trees had lost partially their leaves, the fertile parts, such as flowers and fruit parts had remained.

**New Species:**

NONE

**Protocol Activities:**

After the accomplishment of all field expedition, material and equipment check, cleaning, and inventory were conducted. Both “Vegetation and Terrestrial Vertebrates” teams also continued to do the field reporting.

**Vegetation**

The vegetation team assured the laboratory work on previously collected plant voucher specimen preparation. Thus, all plant specimens were verified, identified, annotated, and dried up using the dry oven at Centre ValBio.

Additional field expedition was planned for the vegetation collect of fertile parts for the plant voucher specimens. Expedition to plot 3 (Andranofady) and 5 (Maharira) had been conducted during this period (January – March 2012) (see Table below).

**Table.** Expedition plan for fertile voucher plant specimen collection

<b>Expedition Period</b>	<b>Vegetation Plot Number</b>	<b>Site Name</b>
March 20 to 23, 2012	3	ANDRANOFADY

March 27 to 30, 2012	5	MAHARIRA
----------------------	---	----------

Among the two sampled plots, plot 3 (Andranofady) represents less fructifying trees than plot 5 (Maharira). Andranofady plot 3 was sampled with 15 trees with flowers and fruits, while at Maharira, 19 were sampled for fertile voucher specimens. About 52.63% of the sampled specimens contained fruits at plot 5 while 38.46% with buds at plot 3. All specimens had been sampled of 49.59% fruits and flowers (see Table below). Collected fertile voucher specimens from these plots have already processed and will be dried up and preserved for future taxonomic identification and confirmation. Further identification of the unknown individual stems will be planned and conducted in collaboration with the Missouri Botanical Garden (MBG) in Antananarivo. Thus, herbarium samples will be stored at Centre ValBio, and doubles will be deposited at Parc Tsimbazaza and MBG.

**Table.** Collected fertile voucher plant specimen at plot 3 and plot 5

Description	No individual trees & liana		
		Plot 3	Plot 5
Number of stems from which fertile voucher specimens were collected	15	19	
% of voucher specimens with flowers	15.38	15.79	
% of voucher specimens with Fruits	15.38	52.63	
% of voucher specimens with Buds	38.46	31.58	
% of voucher specimens with Flowers and Fruits	23.8	0	

#### Terrestrial vertebrates

After field monitoring, data entering and uploading had been conducted. Camera trap cleaning and maintenance have also been conducted. All cameras were checked, tested, and stored for future use, following the TEAM standard protocols. No damage or malfunctioned camera was found. Also, to speed up the field vegetation for the collect of fertile parts, the Terrestrial Vertebrates team has also been helping the voucher specimen collecting.

#### Climate

Regular climate station monitoring continues with bi-weekly maintenance and monthly data collection (chronology see below Table).

Schedule/Month	January	February	March
Maintenance	01/01/2012 and 15/01/2012	01/02/2012 and 15/02/2012	01/03/2012 and 15/03/2012

Data Collection	15/01/2012	15/02/2012	15/03/2012
-----------------	------------	------------	------------

### **Data analysis:**

#### **Vegetation**

All vegetation data from the six plots (Plot 1: Andemaka; Plot 2: Bevoahazo; Plot 3: Andranofady; Plot 4: Ranomena; Plot 5: Maharira; Plot 6: Mangevo) have been obtained. A total of 47 Families were identified for all the six Ranomafana TEAM Vegetation Plots. The most abundant families within the six plots included the families of Myrtaceae, Lauraceae, Clusiaceae, Malvaceae, Cunoniaceae, and Rubiaceae. The rarest families with density of stems lower than 10 individuals / hectare also included the family of Podocarpaceae, Lamiaceae, Menispermaceae, and Canellaceae. There are still several unknown tree individuals within each of the plots at varying taxonomic levels. For example, all identified individuals do not represent all existing species within the plot (only 65, 02% of all individuals). Plot 6 (Mangevo) has 39 Families, 96 species within 74 genera which represented 66, 05% of identified individuals; and Plot 5 (Maharira) showed the least number of Families (32) with 64 species and 53 genera which represented only 48, 53% of all identified stems. By looking at the six vegetation plots, Plot 3 (Andranofady) with the highest stem density (1404 individus/ha) represented the highest identified individual rate (93, 81%). However, Plot 5 (Maharira) with 1292 individus/ha, second after Plot 3 in stem abundance, had the highest percentage of unidentified individuals (51, 47%). From the identified stems, Plot 2 (Bevoahazo) had the most diversified families and species (44 Families with 103 species within 77 genera).

#### **Terrestrial vertebrates:**

All camera trap data have been entered into the DeskTEAM. Camera trap photos were identified and annotated. DeskTEAM exporting and uploading have been in process.

A mean total number of 5,262 pictures have been found from all the three Arrays.

**Climate:** Regular data collection and station maintenance were done and regular climate data uploading have been conducted. From January to March 2012, there was a slight decrease in air temperature (21.09 to 20.58C). In March there was a decrease with minima of 12.34C. An increase in the amount of rainfall was noted from January to February (0.08 to 0.12mm), especially high during the passage of the cyclone, then a drop to 0.006 in March. The relative humidity stayed high during the three months January to March with an average of 87.33%.

#### **Meetings**

A series of meetings with CI Madagascar, University of Fianarantsoa, and conference call with the TEAM network have been held during this quarter. With TEAM CI Madagascar on February 22, project updates and planning were discussed. Better project management and communication were addressed and discussed. With the University of Fianarantsoa, on March 06<sup>th</sup>, student involvement in TEAM project and their academic planning and accomplishment were discussed. With Madagascar National Parks (MNP), a meeting with the park manager was held on March 16<sup>th</sup> to discuss about the impact of the project TEAM on Ranomafana protected area and its input for the conservation of Ranomafana National Park. Some additional protocol criteria were also suggested for a better use of the collected vegetation field data. The conference call meeting with CI TEAM network DC Washington - Madagascar, on March 14<sup>th</sup> put the Madagascar TEAM network at the same page. Problems in data uploading and reporting in the TEAM portal were also discussed along with planning for the next monitoring phase.

**Protocol Problems:**

Some uploading problems on the Vegetation data occurred for two plots (plot 2 and plot 6). Data were entered without error but could not be saved into the portal. Reports have been sent to TEAM Headquarters and we will continue to search for the source of the problem.

Web quarterly reporting was delayed due to some technical problems, such as internet connection. We will assure that they will be done very soon.

**Schedule Problems:**

NONE

**Logistical Problems:**

NONE

**Suggestions:**

For the data analysis, additional vegetation monitoring criteria, such as, disturbance signs, plot ecology and structure, stem height, canopy structure, and understory vegetation structure, would be very necessary and helpful if added into the protocol, for a better understanding of the rainforest dynamic and biomass changes.

---

Source URL: [http://www.teamnetwork.org/ci\\_quarterly\\_report/ranomafana/3722](http://www.teamnetwork.org/ci_quarterly_report/ranomafana/3722)