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ITA
INKATERRA
ASOCIACIÓN

ECOLOGICAL REPORT

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VALENCIA STATION

ECOLOGICAL REPORT OF VALENCIA STATION

INTRODUCTION

Valencia station is located at Valencia Lake (Tambopata province) near the Peru-Bolivia border, where various research projects –mainly on birds and mammals– take place, as well as ecotourism, and conservation of high terrace forests and Brazil nut trees and ichthyology resources. Likewise, activities concerning the Brazil nut tree take place like inventories, harvest and transport conditioning. Also surrounding the station there are trails for birdwatching and butterfly monitoring.

PROJECTS

ECOLOGY AND TAXONOMY OF THE EPIPHYTE FLORA ASSOCIATED WITH THE BRAZILIAN NUT TREE (BERTHOLLETIA EXCELSA BONPL.) ON THE GRANTING OF INKATERRA IN MADRE DE DIOS

Thesist: Ana Lucia Rodriguez Arista

The Brazilian Nut Tree (*Bertholletia excelsa* Bonpl.) is an essential species for both the functioning of ecosystems that inhabit the Amazon basin and the local economies of several Amazon regions of Brazil, Bolivia and Peru (Zuidema, 2003). Besides being a species that supports thousands of homes a year after harvest (Stolan, 2004), it is also considered a priority for conservation because their use is not primarily wood but fruit, collecting its fruit almost entirely from natural stands (Clay 1997). It is thanks to this that the Brazilian nuts also maintains a role as a supplier of seeds for feeding wildlife in the forest. On which we can mention, several large mammals as "añujes" (Dasyprocta sp.) and "capuchin monkeys" (Cebus sp.) as well as a variety of birds, including the "macaws" (Ara Macaw).

Furthermore, the chestnut tree also interacts with various insects and epiphytes that contribute to pollination. The pollinator fauna are basically large Hymenoptera from the Euglossinae tribe Apinae subfamily (Zuidema, 2003), which are attracted by the scent given off some orchids, including mainly Coryanthes vasquezii. However, little is known about other epiphytes inhabiting the chestnut tree and the extent of their interaction with it.

Photo N°1.- Volunteers in Valencia station

Photo N°2.- Boat ride in Lake Valencia

TALES AND MYTHS WORKSHOP

Participants: ITA Volunteers

On June 10 a workshop of tales and myths, which is very important for the communities of Lake Valencia and Real palm where children of educational facilities (see photo N°3) were involved, was performed. This issue is very important because you can see the relationship of children with their parents and grandparents. It is known that the tradition of tales and myths is passed down from generation to generation. This can be seen by doing this types of workshops where children can draw and create their own stories or myths or tell those who have been told by their grandparents. It is also the way to keep the cultural traditions and beliefs of a community.

Photo N°3.- The workshop of tales and myths in lake Valencia on the 10th of June 2014

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BIOLOGICAL STATION ITA

ECOLOGICAL REPORT OF BIOLOGICAL STATION ITA

MONITORING SYSTEM OF TRAPS FOR FRUITS AND SEEDS

By: Juan Chillihuani Coronado

Participants: ITA Volunteers

INTRODUCTION

"Casa ITA" biological station was established in 2004; it is located 17 km (10.6 miles) on the left bank of the Madre de Dios River. It is ITA's operation Centre on Lower Madre de Dios, from Puerto Maldonado up to the border with Bolivia. At "Casa ITA" various research and conservation projects take place, focused on sustainable management of the Amazonian ecosystems. It´s a monitoring Centre of the Amazonian biodiversity and training facility for young researchers.

METHODS

In the station ITA there is a permanent plot of 4 hectares of trees, where the central system of fruit and seed traps is installed. Each system consists of 196 traps; 0.7mx 0.7m each measured and are suspended 1.5 m above the forest floor to prevent terrestrial animals to have contact with the traps to avoid their damage or destruction. The distance between each trap is 8 ft and they are located in 14 columns and 14 rows (north-east direction). Each trap consists of a wire frame covered with green mesh (net), in such a way to form a cavity so that the fruits and seeds that fall from the canopy are trapped (See Photo N°1).

The collection of fruits and seeds are held twice a month (every 15 days). The monitoring is done in three days. The first day the fruit of 196 traps are collected. The second day the data is processed, the seeds collected are separated by species and the respective count for each species fallen from the mother tree is done. Then each species is given its corresponding code (Amazon Book (RA)). Subsequently the Boucher containing specimens of fruits and seeds are photograph. On the third day after collection and data processing damaged traps are repaired and then we start looking for the mother tree that has dropped the new fruits to identify them. Knowing the location of all mature trees around the trap it can be determined, for each kind of seed in each trap, where the nearest adult of the same species is. This way, you can determine which fruits and seeds have fallen directly from their parent trees (See Photo N°2).

Photo N° 1.- Traps for fruits and seeds

Photo N° 2.- Collecting fruits and seeds in the traps

Photo N° 3.- Volunteers helping collect the fruits and seed in the traps

RESULTS

Between the month of May and June in the collection of seeds and fruits, 18 species and 15 different families were recorded (See Table 1 and photo No.5-N ° 22).

Table N°1.- List of the species recorded for EBCI between the month of May and June

Species	Familiy
Mendoncia hirsuta	ACANTHACEAE
Cremastosperma sp	ANNONACEAE
Unonopsis floribunda	
Pseudomalmea declina	

Euterpe precatoria	ARECACEAE
Terminalia oblonga	COMBRETACEAE
Sloanea sp	ELAEOCARPACEAE
Machaerium sp	FABACEAE
Laetia corymbulosa	FLACOURTACEAE
Sparantanthelium tarapotanum	HERNANDIACEAE
Psittacanthus cucullaris	LORANTHACEAE
Guazuma ulmifolia	MALVACEAE
Pseudolmedia laevis	MORACEAE
Poulsenia armata	
Heisteria acuminata	OLACACEAE
Coccoloba peruviana	POLYGONACEAE
Prunus vaana	ROSACEAE
Celtis iguanea	ULMACEAE

ANEX

Photo N° 5.- *Coccoloba peruviana*

Photo N° 6.- *Unonopsis floribunda*

Photo N° 7.- *Terminalia oblonga*

Photo N° 8.- *Sloanea sp*

Photo N° 9.- *Guazuma ulmifolia*

Photo N° 10.- *Machaerium sp*

P ea

atoria

acuminata

Photo N° 14.- *Prunus vaana*

Photo N° 15.- *Laetia corymbulosa*

Photo N° 16.- *Cremastosperma sp*

Photo N° 23.- Volunteers of the monitoring system of traps for fruits and seeds in the biological station ITA

Photo N° 17.- *Mendoncia hirsuta*

Photo N° 18.- *Pseudolmedia laevis*

Photo N° 19.- *Sparattanthelium tarapotana*

Photo N° 20.- *Poulsenia armata*

Photo N° 21.- *Pseudomalmea declina*

Photo N° 22.- *Psittacanthus cucullaris*

MONITORING OF BEETLES SCARABAEIDAE IN DIFFERENT AREAS OF INKATERRA

By: Juan Chillihuani Coronado

Participants: ITA Volunteers (Rosa Cespedes Garcia y Sol Kohen)

INTRODUCTION

The Scarabaeidae family are beetles widely distributed, they are also one of the most unique and diverse within the Scarabaeidae superfamily groups (Hanski & Camberfort 1991). This is an ecologically important group because it controls populations of flies, fertilizes the soil, recycles nutrients and is a secondary seed disperser (Ramirez 2009). In the world, about 6000 species are recognized, of these 1250 are recorded for the Neotropics (Escobar 2000). They are a cosmopolitan group, which globally about 200 genera and 6000 species are known. Most of this fauna is in the Neotropical region, which contains 70 genera and about 1300 species. These beetles are an important component of the soil fauna of tropical forest ecosystems (Halffter 1991), whose main ecosystem function is based on its feeding habit of excrement primarily of vertebrates and their reproductive strategies associated with microhabitat coprophagy (Waterhouse 1974, Heinrich and Bartholomew 1980, Halffter 1991, Borror et al. 1989).

Hanski and Cambefort (1991), Favila and Halffter (1997) and Escobar and Halffter (1999) suggest the use of dung beetles as an indicator group in tropical forests for biodiversity analysis and to measure the effects of human action concerning the alteration and fragmentation of habitats. Scarabaeinae presented a number of attributes to be considered as ecosystem indicators. The most prominent being: his easy capture, execution of sampling standardized protocols, its role in the functioning of ecosystems and you have enough knowledge about their taxonomy, distribution and natural history.

That's why in the EBCI stations, we are monitoring these species with the support of volunteers and students, to measure the degree of conservation of our areas.

METHODS

For this work conventional collection equipment for catching beetles like barber traps with bait (beef, chicken, animal feces and human feces) were used (See photo N°1).

The barber trap, were made of a plastic container with lid, with one liter of capacity, four openings 3 X 4 cm. Near the top of the container a small cup is placed inside suspended transversely by a wire, this cup contains the bait (See photo N°2). Inside the larger vessel 200 ml of saturated salt solution and detergent was placed (See photo N°3).

Photo N°1.- Materials used for the barber traps

Photo N°2.- Volunteers placing the barber traps

Photo N°3.- Barber traps

RESULTS

Between the month of May and June the collecting of beetles that was recorded were 22 species, 10 genera and 5 different tribes respectively (See Table 1 and photo N°4-N°13).

Table N°1.- Preliminary Species recorded in EBCI

Tribe	Genus	Species
CANTHONINI	CANTHON	*Canthon aequinotialis*
CANTHONINI	CANTHON	*Canthon fulgidus*
CANTHONINI	DELTOCHILUM	*Deltochilum amazonicum*
CANTHONINI	DELTOCHILUM	*Deltochilum granulatum*
CANTHONINI	DELTOCHILUM	*Deltochilum orbiculare*
CANTHONINI	DELTOCHILUM	*Deltochilum sp*
CANTHONINI	SCYBALOCANTHON	*Scybalocanthon aereus*
CANTHONINI	SYLVICANTHON	*Sylvicanthon sp*
COPRINI	DICHOTOMIUS	*Dichotomius conicollis*
COPRINI	DICHOTOMIUS	*Dichotomius mamillatus*
COPRINI	DICHOTOMIUS	*Dichotomius prietoi*
EURYSTERNINI	EURYSTERNUS	*Eurysternus sp*
EURYSTERNINI	EURYSTERNUS	*Eurysternus foedus*
ONTHOPHAGINI	ONTHOPHAGUS	*Onthophagus ophion*
ONTHOPHAGINI	ONTHOPHAGUS	*Onthophagus sp*

PHANAEINI	COPROPHANAEUS	*Coprophanaeus lancifer*
PHANAEINI	COPROPHANAEUS	*Coprophanaeus telamon*
PHANAEINI	OXYSTERNON	*Oxysternon conspicillatum*
PHANAEINI	OXYSTERNON	*Oxysternon silenus*
PHANAEINI	PHANAEUS	*Phanaeus sp*
PHANAEINI	PHANAEUS	*Phanaeus bispinus*
PHANAEINI	PHANAEUS	*Phanaeus cambeforti*

ANEX

Photo N°4.- *Oxysternon conspicillatum*

Photo N°5.- *Dichotomius prietoi*

Photo N°6.- *Canthon fulgidus*

Photo N°7.- *Deltochilum sp*

Photo N°8.- *Eurysternus sp*

Photo N°9.- *Oxisternon sp*

Photo N°10.- *Coprophanaeus telamón*

Photo N°11.- *Phanaeus sp*

Photo N°12.- *Canthon sp*

Photo N°13.- *Coprophanaeus lancifer*

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