

**Project Update  
(RSG Ref: 40.02.07)**

**Strengthened Community-Based Biodiversity  
Conservation in Selected Sites of Cebu,  
Philippines  
"Siloy Project 2007"**

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## Introduction

Cebu is considered the hottest of the global hotspots for biodiversity conservation (Mallari et. al, 1999). Apparently Cebu has total of 6 restricted-range species two of which are globally threatened and found nowhere else in the world (Cebu Flowerpecker and Black Shama).

In 2003 the Rufford Small Grant project supported a community based biodiversity conservation initiatives which lead to the protection and conservation of the forest Alcoy and Dalaguete Southern, Cebu. This project aims to develop the biodiversity conservation by engaging local government units of Boljoon, Argao, Alegria and people's organization.



Fig. 1 Everett's White-eye (*Zosterops everetti*) one of the subspecies endemic in Cebu and netted one individual in Boljoon. (Photo by: Godfrey Jakosalem)

## Objectives

### Research

The main goal of this project is to determine the conservation status of this species through the evaluation of its distribution area. The work will provide an estimate of the wild population size, and determine the specific threats that the species is facing. These studies will also recommendation to government in conserving Cebu's biodiversity.

### Capability Building

With the success of the RSG project phase 1, we engaged local communities, teachers, and students to work for conservation. The objective of this component is to train and develops more local communities, local government units, biology and forestry students in research and wildlife monitoring activities.

### Conservation Education

Youth volunteers was organized and trained to conduct conservation awareness activities during the first RSG project. The conservation education program will be focused on awareness activities with emphasis to the threatened birds of Cebu, trainers training program on conservation and organized youth volunteers in other locality. Gather forest protection practitioners and present current conservation initiatives of people's organization and local government unit's initiatives in forest conservation. Present of project results to local stakeholders, local government units and scientific community to lobby for support for conservation

## Project Site Description

### Boljo-on

Boljo-on is a coastal town in the south eastern side of Cebu Island. It has a population of 13, 380 individuals with a population density of 111.2 square kilometers. Majority of the locals in the coastal area were fishermen while majority of the upland folks are vegetable and subsistence farmers. Most of the crops grown were carrots, pechay, bagiou and string beans, eggplant, squash, tomatoes, chili, sayote and root crops. Corn is the staple food and is grown year long. A road from the town that passes through the upper barangays connects to Nug-as in Alcoy, Alegria town and Mantalongon in Dalaguete. This road is used to bring agricultural products from the barangays to the city passing through the main market places of Nug-as and Mantalongon.

After planting season, locals turn to charcoal making and fuelwood collection to earn a living. As most of them do not have planted trees for harvesting, they turn into the forests and scrubland areas to cut trees for charcoal and firewood.

The largest forest in Boljoon, located in barangays Nangka and San Antonio has a similar structure with that of Nug-as forest. The average canopy height is eight meters tall where in some areas the average canopy height is only six meters tall. Large trees are sparsely distributed and majority of the trees are small and lies close with each other. Elevation in the area ranges from 580 meters above sea level to 650 m asl. The forests in Lower Beceril-Upper Beceril-San Antonio have elevation ranging from 100 m ASL to 400 m ASL. This forms a separate patch and was connected to El Pardo and Nangka through isolated small patches of scrubland and second growth forests.

### Argao

The municipality of Argao is 66.9 kilometers southeast from Cebu City. Argao is a town composed of forty-five (45) barangays where 32 barangays are located in the uplands. The highest recorded elevation in the area is 593 meters located within the barangay of Tabayag and Conalum.

The topography of the Argao River Watershed varies from gently sloping to undulating and steep slopes. The northeastern portion of the watershed, particularly Mt. Lantoy and Mt. Tacli-ad have the roughest terrain and steepest slopes. The steep slopes extend up to Mt. Paling-paling on the southern portion of Argao River.

The main headwaters of the watershed are the Maangtud Spring at Granchina, Dalaguete. The creek goes down to Salug aided by the waters of creeks coming from Dumalan. In Salug, the Maangtud Creek meets with the Ablayan Creek to form the first visible river channel. It winds down in a meandering course towards Argao getting additional water flows from Maloray and Manlapay creeks. Tributaries from Linut-od, Balaas, Santicon, Babayongan, Bulak and Cambantug add to its streamflow. The creeks from Tacliad, Cansuje and Conalom add to its streamflow.

Argao was part of the Southern Cebu Reforestation Development Project (SCRDP). The remaining natural forests are found in the peak of Mt. Lantoy and in the slopes of Argao River. Separate forest patches are found in barangay Cambantug which forms part of the forests in Dalaguete mountain range, barangays Panadtaran and Usmad-Tabayag and in barangays Conalum and Cansuje. Here one can find mother trees of Ipil *Intsia bijuga* trees and

Molave (*Vitex parviflora*). Natural vegetation and tree plantations cover about 29% (1,119.54ha) of the watershed area.

A number of occupants were awarded Community-based Contract Reforestation projects within the watershed. Replanting of bamboos, exotic trees like Mahogany, Agoho, Bagras, Teak, Gmelina, *Acacia mangium* and indigenous trees were conducted. The Mag-uugmad Foundation Inc. assisted organized communities in the development of community-based resource management plans in Cabalawan and Tabayag. Soil and water conservation techniques in farming were introduced to farmers.

The reported 300 ha of old-growth dipterocarp forests in Argao in 2001 (Mallari *et al.*, 2001) might be an overestimate of the actual forest cover in the area. The estimated forest cover left in Argao is 60 ha. The patches of forests are surrounded with fruit trees and cultivated areas, coconut plantations, tree plantations made up of introduced trees and scrubland that are also used by local communities as grazing areas. Seasonal crops like cabbage, *pechay*, onion and carrots are also found in the area. Low-lying areas were planted with rice.

Potable water supply is sourced from springs within the watershed areas. Some barangays developed their own water system for their agricultural and domestic consumption. At the headwaters of Argao River in Salug, Dalaguete, an irrigation dam was developed and served 50 hectares of ricefields. The Argao River cuts a narrow gorge between Mt. Lantoy and many figs (*Ficus sp.*) grow in cliffs. Several large limestone caves are found in cliffs which are frequently visited by spelunkers and local hunters.

### Alegria

The coastal town of Alegria is located in the south western portion of Cebu Island bounded by Badian in the north, Malabuyoc in the south and Alcoy in the east. Alegria is a 4<sup>th</sup> class municipality composed of nine (9) barangays. Most of the upland barangays in Alegria have unexplored cave systems including barangay Valencia.

Valencia is the largest barangay of Alegria in terms of land area. A provincial road passes from Alegria town to barangay Valencia then exits to Mantalongon before reaching Dalaguete town. Portions of Valencia were once part of the reforestation project of Southern Cebu Reforestation and Development Project (SCRDP). Introduced exotic species of trees e.g. Mahogany *Sweetenia macrophylla*, Gmelina *Gmelina arborea*, Agoho *Casuarina* and Falcata *Acacia falcata* still remains in the area. A stream

emanating from the barangay drains into Alegria town.

## Project Results and Outcomes

### Research

We conducted a wildlife survey in the forest of Beceril, Boljoon, Cebu last May 2007. The results we observed a total of 65 species of birds observed and seventeen of these species were Philippine endemic birds of which the endemic and endangered Black Shama *Copsychus cebuensis* and the Streak-breasted Bulbul *Ixos squijorensis monticola* were observed.



Fig. 2 Lesser Bamboo Bat (*Tylonycteris pachypus*) A new island species for Cebu. (Photo by: Godfrey Jakosalem)

A total of 14 species of mammals were recorded in Boljoon. Fruit bats represent the highest number both in terms of number of individuals observed and in the number of species, followed by insect bats. Among the species of fruit bat netted are Little Golden-mantle Flying Fox *Pteropus pumilus*, Philippine Tube-nose Fruit Bat *Nyctimene rabori* and Common short-nosed fruit bat *Cynopterus brachyotis*, Large Flying fox *Pteropus vampyrus*. Some species of insect bats are represented only by single individuals. This is partly due to the difficulty of capturing the species using mist-nets. In this case, we relied mostly on counting roosting colonies in caves one of species caught was the Lesser Bamboo Bat *Tylonycteris pachypus* was recorded for the first time in Cebu.

Roosting colonies of flying foxes were reported in the gullies of Lower and Upper Beceril barangays since 2003. The colony was visited last May 2007 but the roosting tree was already destroyed by the strong winds of the last typhoon. The colony was not encountered in the rest of the forests.

The locals have reported on the presence of Malay Civet Cat and Palm Civet Cat. The Civet cats were locally called maral or milo and were perceived as

nuisance since the civet cat sometimes venture into the farms and raid the chickens.

The locals have reported the presence of Sailfin Lizards and Monitor Lizards. These species were locally hunted for their meat. The anglehead lizard *Gonocephalus sophiae* was also reported in the forests. It is very likely that the species is also found in the forests of Boljo-on as the larger population is found in the adjacent forest of Nug-as.

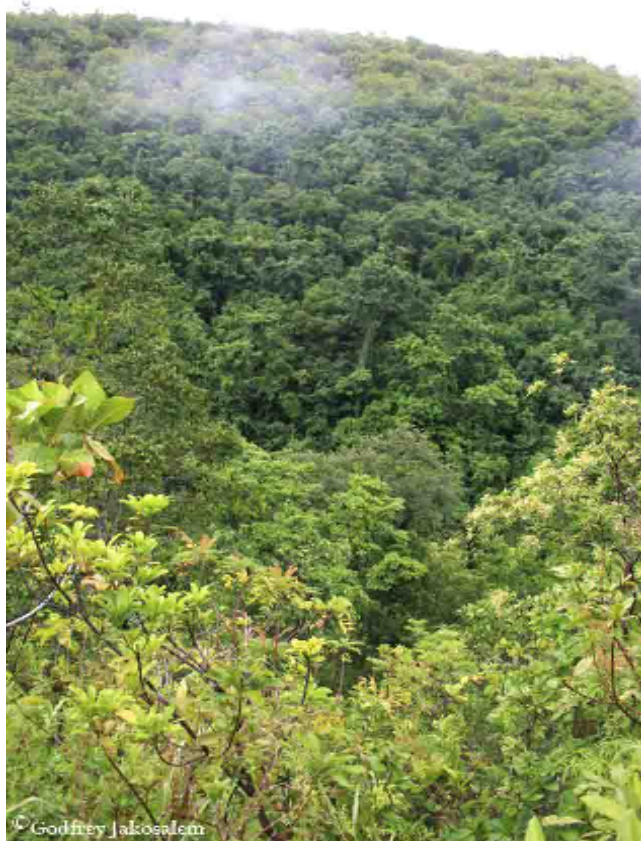


Fig. 3 a view of the forest cover of Beceril, Boljoon (Photo by: Godfrey Jakosalem)

The Cebu Cinnamon tree *Cinnamomum cebuense* was reported in the forests of Nangka – San Antonio. The “bitu-on” flower or Kappa-kappa *Medenilla magnifica*, an endangered species of plant was also reported in the area.

Other trees of importance are “bago” *Gnetum gnetum* where the young shoots were harvested by the locals for food. The leaves of “mana” *Cinnamomum* sp. were also harvested and sold commercially as a spice. The fruits of “anis” tree were also harvested and sold in the local market as well as consumed locally. Two economically important species of trees were mentioned by the locals present in the area: White Lauan *Shorea contorta* and “anislag”.



## Threatened Species



Fig. 5 A new distribution record of the Philippine Tube-nose Fruit Bat *Nyctimene rabori* an endemic species to Cebu and Negros. (Photo by: Godfrey Jakosalem)

Two threatened species of birds were recorded in Beceril forest. These are the Black Shama *Copsychus cebuensis* and the Streak-breasted Bulbul *Ixos siquijorensis monticola* were observed. Both species are highly dependent on forest for survival. The Black Shama was only observed in areas with dark understories and areas with clumps of larger species of trees.

The Large Flying Fox *Pteropus vampyrus*, Little Golden-mantled flying fox *Pteropus pumilus*, and the Philippine Tube-nose Fruit Bat *Nyctimene rabori* were the only threatened species of mammals recorded.

The presence of sailfin lizards *Hydrosaurus pustulatus* of the Genus *Hydrosaurus* are the largest living agamids in Cebu (Family Agamidae). Sailfin lizards are essentially endemic to the Wallacean Region, which includes all of the Philippines except Palawan. Two individuals were observed in the Beceril River.

## Conservation Education

### Biodiversity Lectures

The group has started giving lectures since 2004 to high school and elementary students and presentations during barangay council meetings; youth groups and peoples' organizations. Since farming is the main livelihood of the community, the lectures of the group focus on the relationship of the forest and biodiversity with farming. Topics like water and nutrient cycles in a forest ecosystem are discussed in relation to farming for better comprehension. Stories relating to wildlife and farming with special attention on the role of wildlife in pest control and pollination (e.g. bats and banana) never fail to fascinate the listeners. The presence of endemic species in their forest (e.g. Cebu Cinnamon, Cebu Flowerpecker and Cebu Black Shama) is highlighted in every lecture, bringing pride to the community especially when they learn that the species cannot be found anywhere else in the world. A total of 13 schools and community council were visited by the volunteers.

### 3<sup>rd</sup> Alcoy Siloy Festival

Alcoy forest holds the largest population of the threatened endemic, Cebu Black Shama, locally known as Siloy. Taking advantage of this unique attribute, the Municipality of Alcoy, initiated Siloy Festival to promote Alcoy as a tourist destination as well as the conservation of the threatened bird. It is observed during Alcoy's Annual Fiesta Celebration on the month of August.

The Siloy jingle which tells the tale of Siloy and the people in Alcoy was played during the entire festivities. Incidentally, it is an original composition of one of the forest warden, of Bag-ong Alayon Alang sa Kalamboan sa Ekonomiya sa Tawo (BASKET). Siloy dance steps created by local choreographers patterned after the behavior / movements of the Cebu Black Shama were interpreted by students from different schools in Alcoy during the mardi gras that capped the weeklong fiesta celebration.

The float competition, which is participated by all nine barangays in Alcoy, shows various interpretations of the bird and its habitat. Barangay Atabay float won the competition this year.

### 1<sup>st</sup> Siloy Quiz Bee

An inter-school competition held last August 21, 2007 was participated by 12 teams from six schools in Alcoy and Dalaguete. It was as part of a series of activities during the Alcoy Siloy Festival. The participants were divided into two categories, elementary and high school division. Alcoy Central Elementary School and Guiwang Elementary School fielded 2 teams each (3 members / team) for the

elementary division. For the high school division, two teams (2 members / team) were also fielded by each of the participating schools: Alcoy National High School, Nug-as National High School, Dalaguete National High School and St. Mary's Academy. Ms. Jean Utzurum of Negros Island Mobile Education Unit came over to Alcoy to be one of the quiz bee judges.

The photo on the left shows the team from Alcoy Elementary School huddle for a consultation before writing down their final answer.

The activity aimed to raise the awareness of the youth on Philippine biodiversity, particularly that of Cebu. Questions which focused on Philippine biodiversity were divided into three categories – easy, intermediate and difficult with 10 questions per category. The result of the activity also served as an informal evaluation on how effective was the conservation education activities conducted in various venues within the Municipalities of Alcoy and Dalaguete.

The teams from Guiwang Elementary School and Dalaguete National High School bagged the first prize for the elementary and high school division, respectively. Predictably, the winning teams came from schools where the Duaw Sangyaw Youth Volunteers and CBCF had a series of lectures, exhibits, and other awareness activities. The members of the winning team in the high school division also participated in the Ecological Youth Camp in 2006. It seems that the annual terrestrial youth camp organized by CBCF is an important vehicle for raising biodiversity awareness among the youth.

### **3<sup>rd</sup> Philippine Bird Festival**

The 3<sup>rd</sup> Philippine Bird Festival organized by The Wild Bird Club of the Philippines (WBCP) was held last September 21 - 22, 2007 at Waterfront Hotel in Cebu City and Olango Wildlife Sanctuary, respectively. The unique birds and bird sites of Cebu were highlighted during the festival with 2,500 school children in attendance. This year's theme "Just Watch, Don't Catch" emphasized that birds are best appreciated in their natural habitat, not in captivity. The Siloy Festival dancers from Alcoy opened the two day event. The Siloy Mascot together graced the opening of the festival. Photo on the left is the festival poster (photo by: WildBird Club Philippines)

Through photo exhibits, lectures, film showing, and children's activities (like drawing, coloring, face-painting and origami) children and children at heart discovered two of Cebu's treasures: the Cebu Flowerpecker and Black Shama, along with other

birds endemic to the Philippines.

CBCF in collaboration with the Duaw Sangyaw Volunteers together with other conservation groups all over the country joined the event joined the festival. Five Duaw Sangyaw volunteers together with CBCF staff man the exhibit booth featuring birds endemic to Cebu Island. The booth became an instant hit among the kids and kids at heart. The volunteers also learned new activities and techniques on how to make awareness raising fun and interesting. Shown in the photo on the right is the booth of CBCF

On the second day of the bird festival, the volunteers visited Olango Island Wildlife Sanctuary and had a chance to see migratory birds. The Island is used by migratory birds as a major refueling station as well as wintering ground. The field trip was a fun learning experience for the volunteers.

### **Eco-savers Youth Express Organized**

A group thirty 3<sup>rd</sup> and 4<sup>th</sup> year high school students from the Dalaguete National High School organized themselves into Ecosavers Youth Express, a school based organization dedicated in conducting conservation awareness activities within their school. The founding members were all alumni of the Terrestrial Youth Camp that CBCF and Duaw Sangyaw organized in 2005 and 2006.

The group had already elected their set of officers and approved their work plan for the June 2007 to March 2008 school year. The group had put up a billboard in the school where topics / pictures related to biodiversity and the environment are posted. Other activities include waste segregation. Four members of the group also helped as assistant facilitators in the 2007 Terrestrial Youth Camp held in Alcoy National High School in Nug-as, Alcoy.

### **Terrestrial Youth Camp**

CBCF in collaboration with the Duaw Sangyaw Youth Volunteers for Biodiversity Conservation held the the 4<sup>th</sup> Terrestrial Youth Camp, with funding support from NEZS last October 2007. A total of 35 second and third year students from Alcoy National High School and Nug-as National High Schools; Casay National High School, Cawayan National High School and Dalaguete National High School; and new members of the Duaw Sangyaw; joined the camp.

Over the four years that CBCF and Duaw Sangyaw conducted youth camps, a total of 200 young people, both students and out of school youths, were able to participate. The figure below shows the number of

participants as well as the participating schools in the Terrestrial Youth Camp from 2004 to 2007. During the first year, participants came from two schools from the Municipality of Alcoy. However, in the most recent camp in 2007, it dramatically increased to 5 schools from the Municipalities of Alcoy and Dalaguete. It is hoped that in the next camp, we will be able to accommodate more schools from other the municipalities of Boljoon, Alegria and Malabuyoc.

Designed to create biodiversity awareness and foster leadership and camaraderie among the campers, activities included biodiversity lectures, visit to the forest, exhibit on the Wildlife of Cebu and the Philippines, head-dress making, ecologically themed games as well as planning workshop where campers indicated what sort of activities that they can do to help conserve biodiversity. The picture on the right shows the participants from Alcoy National High School presenting their workplan. The 3 day camp culminated with a tree planting activity where participants were able to plant at total of 155 native seedlings provided by KMYLB.

The activities were facilitated by CBCF staff, members of the Duaw Sangyaw Youth Volunteers and Eco-savers Youth Express. The camp became a learning experience for both campers and facilitators and a venue for exchange of information and experiences between facilitators, particularly in organizing and facilitating camps.

## Presentation of Results

The results and findings of the study were presented to the Local Government Units (LGU) of Alegria, Boljo-on. The results Black Shama and other wildlife Research Argao Watershed will be presented to the Argao Watershed Management Council and to Municipality of Argao will be presented next month during the environment month.

A paper about "Building partnership with local communities and local government units in managing threatened wildlife and habitats in Cebu Island, Philippines" accepted for oral presentation by the Society of Conservation Biology (SCB) this July. The paper is about the management of habitats in Southern Cebu. RSG project is one of the project supporters.

## Moving forward

☞ *Creation of Duaw Sangyaw Youth Volunteers for Biodiversity–San Agustin Chapter* a neighboring community of Nug-as. Due to difficulty in logistics, members of Duaw Sangyaw residing in Barangay San Agustin,

Alcoy decided to form a faction of the group. They will start recruiting young volunteers from their barangay starting January 2008. The group will then handle awareness activities in their locality and its neighboring barangays. The group is expected to be formally organized after the scheduled basic ecology training.

☞ *Basic Ecology Training.* A training on basic ecology, which will serve as orientation for the new recruits of the Duaw Sangyaw Youth Volunteers and refresher for the existing members, is planned on June 2008.

☞ *Terrestrial Youth Camp.* It is envisioned that more schools will be accommodated in the 2008 youth camp, which is annually held every October. This will be in collaboration with the local government units and sponsoring institutions.

☞ *English Speaking and Reading Comprehension Enhancement Course.* Due to the success of the first phase, it is expected that enrollment will increase in the second phase of course. In fact, several graduates of the first phase of the course and others who missed the first phase have signified interest to join the second phase of the program. Members of the Duaw Sangyaw and forest wardens will be given priority if enrollment will go beyond the number that the teacher can handle.

☞ *Training as Biodiversity Guides and Birdwatching Guide.* As the most knowledgeable persons in the community about the forest, guiding both local and foreign visitors has become one of the functions of the forest wardens. With steady increase in the number of visitors going to Nug-as, CBCF in consultation with the forest wardens, is looking into engaging the youth volunteers as guides. It is apparent that the young volunteers have the advantage of available time. A series of training i.e. on bird identification, trail guiding, etc. is envisioned for the volunteers before they will be able to take on the task as guides.

