

**Bwindi Apes Conservation Education Partnership  
Annual Report of Conservation Education Activities  
Bwindi Impenetrable National Park  
2015**

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**Bwindi Apes Conservation Education Partnership (BACEP)**

The Bwindi Ape Conservation Education Partnership (BACEP) is a collaboration among Cleveland Metroparks Zoo, North Carolina Zoo, UNITE for the Environment, and the Max Planck Institute for Evolutionary Anthropology. BACEP's mission is to conserve endangered great ape species of Bwindi Impenetrable National Park through community conservation awareness programs. BACEP is currently working with four primary schools, all within a radius of five kilometers from the park boundary. These schools are: Ruhija Primary School, Bitanwa Primary School, Mburameizi Primary School and Kanyashogi Primary School. This partnership began in 2014 and builds on previous conservation education activities that were organized since 2008 by Bwindi Gorilla Project of the Max Planck Institute for Evolutionary Anthropology. BACEP expands those activities by adding two components: teacher training developed by the UNITE for the Environment programme (based near Kibale National Park) and evaluating the effectiveness of the work being done by BACEP. The focus of the teacher trainings is student-centered teaching, which has been shown to be a very effective method of learning.

## **Overview (2008-2015)**

Local people living in the communities on the edge of Bwindi Impenetrable National Park typically know very little about the environment, conservation issues, or the critically endangered mountain gorillas living nearby. Furthermore, there is a great need to improve the educational standards as well as the infrastructure of the schools (they have no electricity or running water and basic supplies such as paper, pens, and chalk portable black board are always in short supply). One way to address this concern is to provide lessons and other activities in conservation education to primary school children. In 2008, the Bwindi Gorilla Project of the Max Planck Institute of Evolutionary Anthropology began working with the two primary schools nearest to where they are based in Ruhija, the Ruhija Primary School and the Bitanwa Primary School. Both of these schools have only six teachers with about 350 students studying in grades primary 1- 7. In 2012 the project expanded to include an additional six schools (Mburameizi, Ruhija Model and Nursery, Kamuko, Kanyashogi, Buremba and Karambi) through a collaborative project entitled the Great Ape Education Program (GAEP). The previous work done in this area has now evolved to create BACEP. We are extremely grateful to all organizations and individuals, including Mondberge, who have contributed funding for this project.

## **Overall Goals:**

- Provide conservation education lessons on a monthly basis to grades P5, 6, and 7 at the four primary schools. The aim is to have lessons taught in the same student centered teaching that is being demonstrated at the teacher trainings.
- Hold teacher trainings each term (three per year) to develop the knowledge of the teachers in areas of conservation and methods of student-centered teaching.
- Conduct additional activities to provide the students and teachers with more 'hands-on' experience for learning and conservation education, such as forest walks, litter pick-up days, and tree nurseries.
- Develop links among the schools by conducting competitions every term, in which schools demonstrate their learning of conservation issues in different formats, such as debate, music, dance and drama.

## **Activities Overview - 2015**

It has been a very successful year for the Bwindi Apes Conservation Education Project. Due to the tireless efforts of our staff, donors and the local communities and schools, the project has made tremendous progress during the course of 2015. To date, this project has been very well received by both the students and teachers. They are keen to learn and very interested in how conservation issues interact with their everyday lives. We are optimistic that the program will increase the knowledge of students in the area about the value of the mountain gorillas, Bwindi Impenetrable National Park, and conservation issues in general. We are confident that BACEP will be a success and that it will provide an example of how effective conservation education can be performed.

To outline just a few of this year's achievements we have successfully:

- Provided lessons in conservation to four local primary schools, in addition to providing essential scholastic equipment.
- Implemented community outreach programs including film showings and litter pick up days.
- Maintained tree nurseries at the primary schools, resulting in the distribution of nearly 6000 tree seedlings to the families of the school children.
- Organized a training workshop about fuel efficient stoves. Two more workshops are planned for 2016, to enable communities further from Ruhija to benefit from this technique.
- Held two interschool competitions among the four schools. One was a music, dance, and drama competition with a theme of 'population growth'. The other was a 'knowledge bowl' competition with a theme of understanding global variation. The students were given background information on 12 countries and then competed with poems and a quiz.
- Held two teacher trainings based on the theme of biodiversity, which were attended by about 25 teachers.
- Conducted student evaluations to help assess the progress and effectiveness of our program.

### **Classroom Lessons on Conservation**

We provided six conservation education lessons to grades P5, 6, and 7 at the four schools in the program. The lessons given this year were: endangered species, sanitation and hygiene, water, earth, plants, and the Bwindi forest. The curriculum emphasizes local biodiversity and conservation needs by focusing on the ecology of Bwindi. We endeavor to have an activity in each lesson. The lessons are always taught to encourage student involvement and self-discovery.

### **Forest Walks**

In November we took pupils of P5 and P6 (408 students) for a walk in Bwindi Impenetrable National Park. The forest walk not only allows pupils to learn about Bwindi, but also gives them the opportunity to go into the national park, which most pupils have never done. The goal of the forest walk was to explain the habitats of Bwindi. The children were given a worksheet to complete about the different habitats, which encouraged the children to focus on what they could see and hear in the forest. The children were asked to think critically about why the habitats look different and which characteristics changed in the different habitats. During this walk, Uganda Wildlife Authority (UWA) guides (including the Community Conservation Ranger) explained the different parts of the forest and asked the children to think about the benefits of conserving the national park and its organisms.

Additionally, they learned about cultural and traditional values that early people used in Bwindi Impenetrable National Park including how their taboos/totems, norms and myths have contributed to the conservation of the park.

### **Interschool Competitions**

BACEP held two school competitions among the four schools in 2015. The first was entitled 'Continental Geography', with the aim to help the pupils learn more about the location of different countries around the world and their culture and wildlife. Each class was assigned one country that they had to write and recite a poem about. Then each school competed in a quiz about all 12 countries in the competition (2 from each inhabited continent). It included aspects of gender equality, national parks, religion and history for each country. The second competition was a music, song, and dance competition under the theme 'human population pressure on the environment', which is also part of the Ugandan primary school syllabus. This competition addressed the increasing human population, its pressure on the environment and natural resources, and measures that can be taken to control it.



Preparing for a dance competition / Uganda © Andreas Klotz

### **Teacher Trainings**

BACEP carried out two teacher trainings this year. The teacher trainings were developed from a method performed by 'UNITE for the Environment' in Kibale National Park over the past five years. The ultimate goal for the teacher trainings is to have all primary school teachers easily integrate conservation education into their lessons and shift their teaching methods towards student-centred learning. The topic chosen for this year's training was biodiversity. As this was the first training, biodiversity was chosen as a topic to provide the teachers with a foundation for understanding issues relating to conservation since biodiversity itself is a basis for conservation.

The course also focused on how humans and our natural surroundings are part of biodiversity and that we depend on each other. The teacher trainings included lessons, discussion sessions, and activities which can be used in their classrooms to teach their students about the topic (all materials for the activities during the training are given to the teachers).

At the beginning and at the end of training, the teachers were evaluated to find out if the training has had an impact. For example, during the biodiversity II training evaluation, teachers were asked to give one example of an invasive species. For the pre-evaluation, all of the 12 teachers who attempted the question wrote incorrect responses, for the post evaluation 20 out of 21 teachers who attempted the question wrote correct responses.

<b>Name</b>	<b>Goal</b>	<b>Number of teachers that attended</b>	<b>Number of teachers expected</b>	<b>Percentage attendance</b>
Biodiversity I	To define biodiversity and state its importance	23	25	92%
Biodiversity II	To address the status, threats and ways how we can protect biodiversity	34	38	89%

### **Classroom observations**

The goals of classroom observations were two fold. First, we sought to determine if the teachers were integrating the conservation and environmental knowledge they learned at the trainings into their lessons. Secondly, we wanted to observe the teaching methods being used by the teachers.

- 73% (23 of 28) of all the teachers in the BACEP schools have been observed in class.
- Each teacher observed was given feedback about the lesson and advised on how to integrate conservation education and improve on their teaching methods.

### **Student Evaluations**

Pupils in Primary three and six were evaluated using simple questionnaires at the beginning and end of the school year to determine if the information teachers were taught during BACEP trainings was transferred to the students. A total of 169 pupils were observed at the beginning of the year and 186 were observed at the end of the year. To establish the effectiveness of the BACEP program these evaluations have also been done in two schools that are not part of our teacher training programs, to serve as controls (Karambi and Kitojo). The data are currently being analyzed to see how effective the work has been.

### **Community Film Showings**

BACEP has shown great ape conservation films to the communities around Ruhija. The goal of this activity is to help educate people in the communities about great apes and inspire the improved measures for gorilla conservation within Bwindi national park. The films include three 20 minute videos created by the Great Ape Education Program (GAEP) program that address major conservation related issues of great apes in Uganda (consumption of bush meat, snares and deforestation). Additionally, films provide access to scientifically based information about gorilla behavior and ecology otherwise unavailable to members of local communities. This year we did screenings in eight locations that reached more than 1000 members of the local communities. Each film showing was followed by a discussion with the audience about what they have learned and their opinions on how to conserve Bwindi National Park.

### **Tree Nurseries**

One of the largest pressures on Bwindi's local communities is their overwhelming need for wood as both cooking fuel and building materials. The tree nurseries serve as an interactive classroom, enabling children to become active participants in the germination, gardening, and tree planting process. When the seedlings are ready to be permanently planted, each school keeps some and the rest are distributed to children's families. The wood from these nurseries will eventually be employed as a sustainable means of provisioning building material, fuel wood for both school projects and children's families.

<b>Conservation Education Project Trees Grown 2015</b>		
<b>School</b>	<b>Tree species</b>	<b>No of trees</b>
Mburameizi	<i>Greveria</i>	278
	<i>Pinus patura</i>	720
	<i>Podocarpus</i>	0
Ruhija primary school	<i>Greveria</i>	1800
	<i>Pinus patura</i>	2175
	<i>Podocarpus</i>	0
Bitanwa primary school	<i>Greveria</i>	560
	<i>Pinus patura</i>	450
	<i>Podocarpus</i>	0
<b>Total</b>		<b>5983</b>



Tree nursery in Uganda © Andreas Klotz

**Fuel efficient stoves programme (FESP)**



The fuel efficient stove project started with a workshop in 2013 during which local members of the community were taught how to construct fuel efficient stoves. These stoves (shown above) are built to better conduct heat, therefore less firewood is needed. During 2015 we wanted to assess the progress of this project and therefore we conducted informal interviews (20-30mins) with 13 people in the Katooma and Bishaayu area who had fuel efficient stoves. Although there was not enough time to conduct a formal questionnaire on a larger number of houses, we wanted to gain an overview of people's opinions on the project and try and get an impression for the use of the stoves and if there needs to be more training and input from our organisation.

Reports about the fuel efficient stoves were overwhelming positive. People reported a notable reduction in firewood use when they were asked how many bundles of firewood per week they used before and after the construction of their fuel efficient stove.

People also reported on how much safer the fuel efficient stoves are to use and, due to quicker cooking times, that they now have more free time, to tend to crops or spend time as a family. We also talked with two people that had attended our training to build the fuel efficient stoves and a further five people reported that they now knew how to build them. Due to the success of this project and the high demand and interest in the fuel efficient stoves by other communities we have planned for two further trainings in 2016. These two trainings will take place in areas further from our base, as we hope that this program can benefit a greater number of people.

### **Litter Collection Day**

As we have done in previous years, we had a litter collection day in 2015. This year a total of 210 pupils from three schools participated in this activity. The act of litter collection is supposed to help develop a personal accountability for the state of the environment, and build a sense of community responsibility for keeping the local area clean. Not only does this activity encourage students to take initiative with respect to maintaining the health of their local environment, but it also exposes them to local wildlife they might not otherwise encounter, such as monkeys, birds, snakes, and other small animals. After the activity the pupils meet with UWA officials for additional knowledge about the national park and what should be done maintain our natural resources.

### **Staff and Partners**

The BACEP project is being administered by Ms. Emilly Turinawe and Mr. Joseph Agaba (under the supervision of Dr. Martha Robbins and Miss. Michelle Slavin). Ms. Turinawe has a background in environmental science and community involvement. Mr. Joseph Agaba has a background in environmental science, a Master degree in Biology and 12 years' experience as a secondary school biology and chemistry teacher. Both Ms. Turinawe and Mr. Agaba are from the area and speak the local language, Rukiga. Their participation allows us to communicate effectively to the pupils and people from the community whose English is limited and ensures that our lessons are being understood by the local pupils and teachers. The project also benefits from a close working relationship with the Ugandan Wildlife Authority and some government officials, such as the local chairperson (Local Council Three), Sub County Chief, and Councilor in charge of education, whose staff often provides BACEP assistance with the organization of interschool competitions and events and gladly attend BACEP events.

## **Acknowledgements**

We would like to thank all staff of BACEP, MPI, ITFC, UNITE for the Environment and UWA who helped with this project. We also are very grateful to the various donors for their longstanding support of our work. Lastly, we thank members of the local communities for making this a successful collaboration.