

Bwindi Apes Conservation Education Partnership 2018 Annual Report

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Bwindi Apes Conservation Education Partnership (BACEP)

The Bwindi Ape Conservation Education Partnership (BACEP) is 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 the endangered great ape species of Bwindi Impenetrable National Park through community conservation awareness programs. BACEP is currently working with four primary schools, all less than five kilometers from the boundary of Bwindi. These schools are: Ruhija Primary School, Bitanwa Primary School, Mburameizi Primary School and Kanyashogi Primary School. This partnership began in 2015 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 component originally developed by the UNITE for the Environment programme 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 (2008-2018)

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, chalk and portable chalkboards are always in short supply). One way to address these concerns 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. Since 2015 BACEP has worked with four schools, building on the previous activities of the Max Planck Institute and integrating teacher focused components, designed by the UNITE for environment program, working in Kibale National Park. The 2015 model of BACEP has been slowly evolving over the last three years as we have tried to adapt the program to meet the changing needs of the teachers, students and community members around Bwindi Impenetrable National Park. 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 P6 and P7 at the four primary schools. The aim is to have lessons taught using similar student centered teaching approaches that are being demonstrated at the teacher trainings.
- Hold teacher trainings each term (three per year) to teach practical skills and increase 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.
- Support the developing needs and bring new ideas to the communities, such as community film showings, workshops on building fuel efficient stoves and providing community litter bins.

Activities Overview - 2018

It was been a very successful year for the Bwindi Apes Conservation Education Partnership. 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 2018. 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. Our student evaluations indicate that there is an improvement in knowledge over the course of the year and that general attitudes towards conservation are high. We are confident that BACEP is an example of how effective conservation education can be performed. The program continues to evolve and grow, based on experience and interest of the communities.

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 community litter pick up days and providing litter bins to the community members around two trading centres, in Ruhija tourism area and Mpungu sub-county.
- Maintained tree nurseries at the primary schools, resulting in the distribution of 1772 tree seedlings to the families of the school children of the four schools.
- Held three interschool competitions among the four schools. One was a music competition with a theme of "Gorilla conservation" involving a poem, traditional dance and song, presenting the challenges and methods to conserve gorillas. The second was a sports competition involving 144 students competing in football and netball. The third competition of 2018 was a debate with a theme "Should the Bwindi Impenetrable Forest be cleared for Agriculture?".
- Held three teacher trainings focusing on making compost pits, constructing fuel efficient stoves, and learning how to make keyhole and kitchen gardens. All three trainings also involved problem solving activities, centered around data analysis and behavioral change.
- Conducted student evaluations at the beginning and end of the school year to help assess the progress and effectiveness of our program.
- Conducted 23 film showings to approximately 6000 local community members.

Classroom Lessons on Conservation

We provided four conservation education lessons to grades P6 and P7 at the four schools in the program. The lessons given this year were: Forest walk, Tree planting, Litter collection (tragedy of the commons) and Gorilla behavior. Similarly to 2017, we concentrated the conservation lessons on only P6 and P7 students. We aimed to provide lessons to groups of 40 students or less which enables us to have smaller classes and tailor the lessons to the level of students

present. This has provided a more suitable learning experience and allows us to have activities which involve all the students. The curriculum emphasizes local biodiversity and conservation needs by focusing on the ecology of Bwindi, particularly the two great ape species, chimpanzees and mountain gorillas. We also have included three lessons that provide background knowledge to support the out-of-classroom activities. These include a lesson on the necessity of tree nurseries, a lesson about the different habitats of Bwindi to correspond with the forest walk, and a 'Tragedy of the Commons' themed lesson to partner with the litter collection activity. We endeavor to have an activity in each lesson and also aid the development of skills such as reading, writing, arithmetic and problem solving. The lessons are always taught to encourage student involvement and self-discovery.



Interschool Competitions

BACEP held three school competitions among the four schools in 2017. The first was Music Dance and Drama under the theme Gorilla Conservation, in which 140 pupils attended, 35 guests and interested community members. The students competed in four different elements. Each school performed a poem, song, traditional dance and play. The song and the poem were



presented in English. The play and traditional dance were performed in the local language so that parents and other people who attended could understand the message the pupils were delivering to the audience. The second competition was a sports competition. Despite not having direct conservation education benefits the BACEP team appreciate the involvement of a sports theme competition, as it is popular among the

students. Furthermore, it helps break down gender stereotypes by having the girls' netball hold as much weight as the boys' football games in determining the winner. This year 144 students participated in netball and football. Lastly, the final competition of this year was a debate competition under a theme "Should forests be cleared for agriculture?". The debate competition involved 80 pupils, and over 50 guests made up of parents, teachers, community leaders and government officials. The head teacher of Kiyebe Primary school, in a different sector of the park, also attended the debate competition as he had heard of the success of the programme. The competitions provide a great opportunities for the four school to come together as well as allow interaction amongst community members, tourists lodge staff and the park authority.

Radio Broadcast

For the winner of the Music, Dance and Drama competition, BACEP organized a trip to a local radio station in April 2018. Kanyashogi primary school pupils and teachers made a trip to Kanungu Broadcasting Services to educate the public about Gorilla conservation. They presented songs and poems about conservation during the one hour broadcast. 35 students were involved in the radio broadcast. Emily went into labor with her third child on the way to the radio broadcast. All went well.



Teacher Trainings

BACEP carried out three 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 six years. The ultimate goal for the teacher trainings is to have all primary school teachers easily integrating conservation education into their lessons and shifting their teaching methods

towards student-centred learning. In 2018 BACEP staff adapted the trainings, so that each trainings involved a practical conservation project. The three projects learnt this year were building a compost pit, constructing a fuel efficient stove, and making kitchen and keyhole gardens. The teacher learned how to design and build these conservation projects, so that they can replicate what was learnt from the training at their homes, schools and communities.

The teacher trainings also included lesson planning, discussion sessions, and problem solving and data analysis activities. The theory activities were designed to allow teachers to learn more about the practical project and assess its benefits and challenges. We had over 50 teachers attending each training workshop. At the beginning and at the end of each training, the teachers were evaluated via a questionnaire to determine if the training had had an impact.

Student Evaluations

Pupils in Primary six were evaluated using simple questionnaires at the beginning and end of the school year to determine if the information from the classroom lessons and the knowledge taught during BACEP trainings was transferred to the students. To establish the effectiveness of the BACEP program these evaluations have also been performed in two schools that are not part of our teacher training programs, to serve as controls (Karambi and Kitojo). A total of 110 pupils completed the questionnaire at the beginning of the year and 102 were questioned at the end of the year. Unfortunately, due to a high level of pupil drop out it was not possible to repeat the questionnaire to the same number of primary 6 students at the end of the year. The questionnaires contained 29 questions, which were a combination of knowledge based, attitude, and behaviour change focused questions. Analysis shows that the students overall have a relatively high appreciation of conservation around Bwindi. Furthermore, the evaluations showed that the students learned and retained specific information from the year's activities.

Community Film Showings

In 2018 BACEP has shown great ape conservation films to the communities around Ruhija, Mpungu, Ikumba and Buhoma. 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, the films provide access to scientifically based information about gorilla behavior and ecology otherwise unavailable to members of local communities. In 2018 we did a total of 23 film showings, in which approximately 6000 people attended. Due to the popularity of this program, this year we showed the films to communities further from our base in Ruhija. The BACEP coordinator spent one week in the Buhoma sector of the park showing the films at eight schools and one church. The films were also shown at three schools around the Ndego gate and four schools in Mpungu sub-county, both areas which are known for high levels of poaching. We were also able to show the films as part of a workshop delivered to 30 teachers from the southern sector of the park, where tourism has not been active as long as the other areas. Each film showing is 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 for 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 plants some seedling in their compound and the rest are distributed to the student's families. The wood from these nurseries will eventually be employed as a sustainable means of provisioning building materials and fuel wood for both school projects and the community. Furthermore, the trees distributed are environmentally friendly or agro-forestry trees. This year 1,772 tree were distributed to parents of the 4 schools (see Table 1). Unfortunately, the tree nurseries were less successful this year because there was less rain than previous year. Also, there were some vandals, that uprooted the trees at Mburameizi Primary School. As well as the trees grown in the tree nurseries, BACEP schools were also provided with fruit trees to grow in the school compounds. Each school was given 40 fruit trees of four different species, avocado, orange, jackfruit and guava.

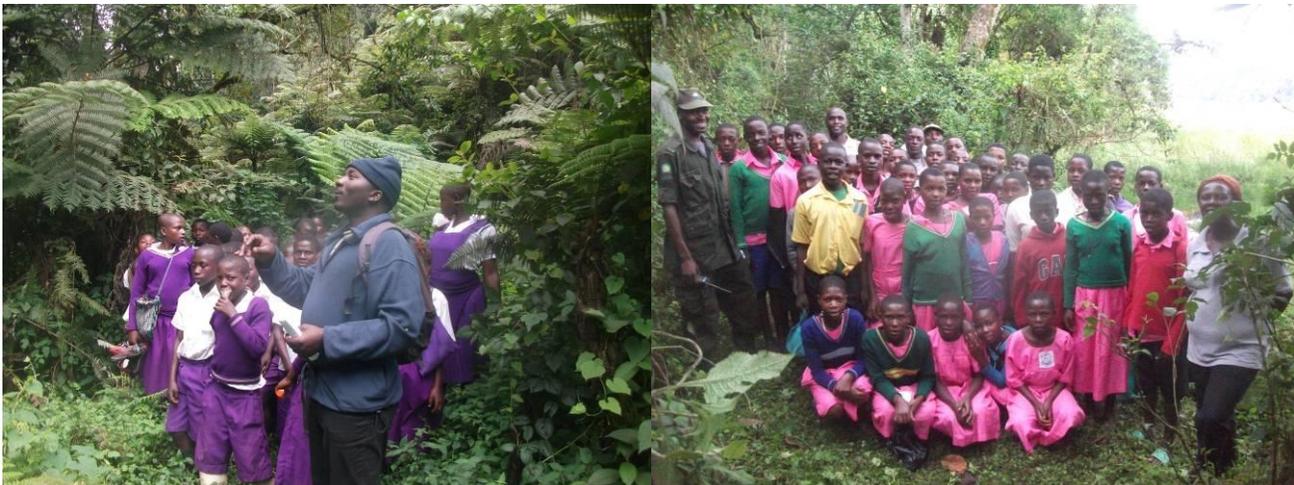
Trees Grown 2018		
School	Tree species	No. of trees
Mburameizi primary school	<i>Greveria</i>	0
	<i>Pinus patula</i>	110
	<i>Calliandra</i>	244
Ruhija Primary school	<i>Greveria</i>	28
	<i>Pinus patula</i>	288
	<i>Calliandra</i>	170
Bitanwa primary school	<i>Greveria</i>	81
	<i>Pinus patula</i>	260
	<i>Calliandra</i>	216
Kanyashogi primary school	<i>Greveria</i>	17
	<i>Pinus patula</i>	30
	<i>Calliandra</i>	143
	<i>Black wattle</i>	185
Total		1772

Table 1 - Summary of the number of trees and species grown in each of the four BACEP schools and how many were distributed at the end of the year.



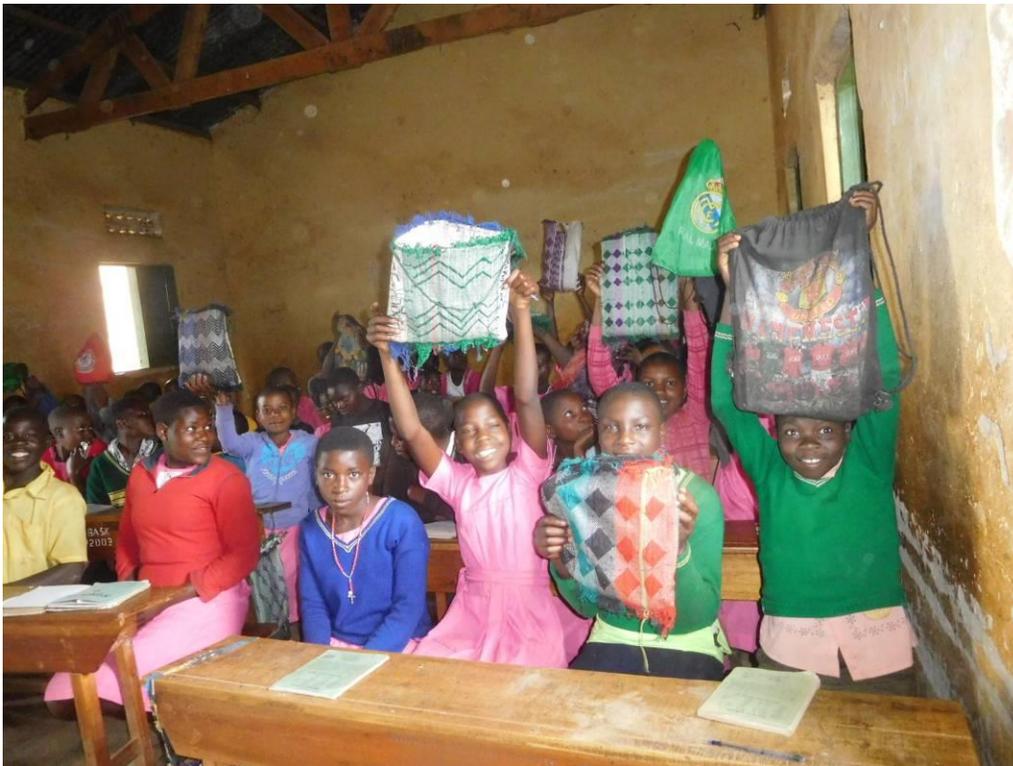
Forest walks

In March, BACEP took pupils for a forest walk to learn more about Bwindi Impenetrable National Park. The forest walk was preceded by a classroom lesson focusing on observing the differences in habitats within the forests and their different physical characteristics. From the four schools, 304 pupils and 8 teachers participated. The forest walk incorporates a visit to the Mubwindi swamp. The pupils/children of this area know stories about the girl (Nyinamukari) who was sacrificed in the swamp more than 100 years ago. The UWA guides retold the myth about the girl whilst the students observed the swamp. This is an important cultural tradition from the area and is still used today to promote messages about conservation.



Litter Collection Day

As we have done in previous years, we had a litter collection day in 2018. This year a total of 222 pupils from four 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. This year the litter collection activity was partnered with a classroom lesson about litter collection with the theme of 'tragedy of the commons', as a way to explain that everyone should work together to preserve resources that are shared.



Community Litter Bins

Following the BACEP litter collection day in 2017 and discussions between the park authority and the community, it was acknowledged that community litter bins were needed. After the successful installation of litter bins in the Ruhija trading centre in 2017, during 2018 BACEP organized for seven litter bins to be installed in to two more community centres. We organised that litter from the bins would be transport to the Park Authority offices in Ruhija, where they would take charge of the disposal.



School Conservation Activities

BACEP schools have willingly participated in conservation of the environment through actively forming conservation clubs that have done many conservation activities at the schools such as installing waste bags around the school compound, enforcing litter pick up every day, and burning waste weekly. The club members were also able to plant vegetables and fruit trees around the school compound. One of the BACEP schools (Kanyashogi primary school) has created talking boards and put them around the compound as a way to teach people how to conserve Bwindi Impenetrable National Park.



Staff and Partners

The BACEP project is being administered by Ms. Emily Turinawe (under the supervision of Dr. Martha Robbins and Mr. Jack Richardson). Ms. Turinawe has a background in environmental science and community involvement. Ms. Turinawe is from the area and speaks the local language, Rukiga. Mr. Bruce Ainebyone and Mr. Tinka John from UNITE for the environment have provided advice and support on the programme as well as Mr. Ainebyone coming to facilitate one of the teacher trainings in 2018. During 2018 we expanded the BACEP time with the addition of, Miss. Speria Ayebare, who has helped with tree nurseries, teaching classroom lessons and doing film showings, whilst Ms. Turinawe was on maternity leave. 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

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