
Bwindi Apes Conservation Education Partnership

Annual Report of Conservation Education Activities

Bwindi Impenetrable National Park

2017

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Bwindi
Conservation Education Partnership (BACEP)

A p e s

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 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 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 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 (2008-2017)

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 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. 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 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.
- 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 - 2017

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 2017. 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 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 Ruhija tourism area. The community members have a motto 'Keep Ruhija gorilla tourism zone clean and ever green'.
- Maintained tree nurseries at the primary schools, resulting in the distribution of 1490 tree seedlings to the families of the school children and a further 171 tree planted at schools.
- Held three interschool competitions among the four schools. One was a music competition with a theme of "Sanitation and hygiene" involving a poem, traditional dance and song, based on the health of peoples' and gorillas' health and forest conservation. The second was a sports competition involving nearly 140 students competing in athletics. The third competition of 2017 was a debate with a theme ' "Conserving wildlife in Bwindi National Park has done more harm than good".
- Held three teacher trainings focusing on the topics of waste management, human wildlife conflict and wildlife of Bwindi.
- Conducted student evaluations and classroom observations to help assess the progress and effectiveness of our program.

Classroom Lessons on Conservation

We provided six conservation education lessons to grades P6 and P7 at the four schools in the program. The lessons given this year were: Forest walk, What is an ape?, Litter collection (tragedy of the commons), Human wildlife conflict, Conservation threats and activities in Bwindi, and National parks. Similarly to 2016, we concentrated the conservation lessons on only P6 and P7. We increased the number of times each lesson was given at each of the schools and thus we were able to have smaller classes and tailor the lessons to the level of students present. This has provided a more suitable learning experience. 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 being done. 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

among the 2017. The

Dance and Drama under the theme sanitation and hygiene/waste management. 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. This year 140 students participated in athletics including activities like wheel barrow, bottle filling, sack race and three legged race. The athletic competition also included a teacher and BACEP staff race. Lastly, the final competition of this year was a debate competition under a theme “Conserving wildlife in Bwindi has done more harm than good”

held three school competitions four schools in first was Music



Radio Broadcast

For the winner of the Music, Dance and Drama competition, BACEP organized a trip to a local radio station in May 2017. Kanyashogi primary school pupils and teachers made a trip to Kanungu

Broadcasting Services to educate the public about sanitation and hygiene. They presented songs and poems about sanitation and hygiene during the one hour broadcast. On the way to the radio station the students visited one of the churches in Kinkiizi Diocese (Cathedral Nyakaterere C.O.U) to sing and dance to the congregation in that church. The bishop in this diocese has done a lot to ban plastic bags in all schools, churches and hospitals. The church leader who was leading the service went ahead to thank the school and BACEP for the good work they are doing to maintain hygiene at their school.



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. The teacher trainings include lesson planning, discussion sessions, and activities that 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). We had approximately 40 teachers attending each training workshop. The topics are chosen by the teachers and this year they were: waste management, human wildlife conflict and wildlife of Bwindi. At the beginning and at the end of each training, the teachers were evaluated via a questionnaire to determine if the training has had an impact.

Classroom Observations

To evaluate the effectiveness of the training workshops, observation of the teachers were performed in the schools. 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. To establish the effectiveness of the BACEP program these observations were also performed in two schools that are not part of our teacher training programs, to serve as controls (Karambi and Kitojo). This year 41 teachers were observed, 31 teachers in the four BACEP schools and a further 10 teachers in the two control schools. From the classroom observation data from 2015 up until 2017, North Carolina Zoo was able to illustrate improvements in both the two areas, teaching methods (Figure 1) and conservation knowledge integration (Figure 2). The charts illustrate improvement in the performance of the BACEP teachers over the last 3 years as well as demonstrate the difference in performance between the BACEP and control schools.

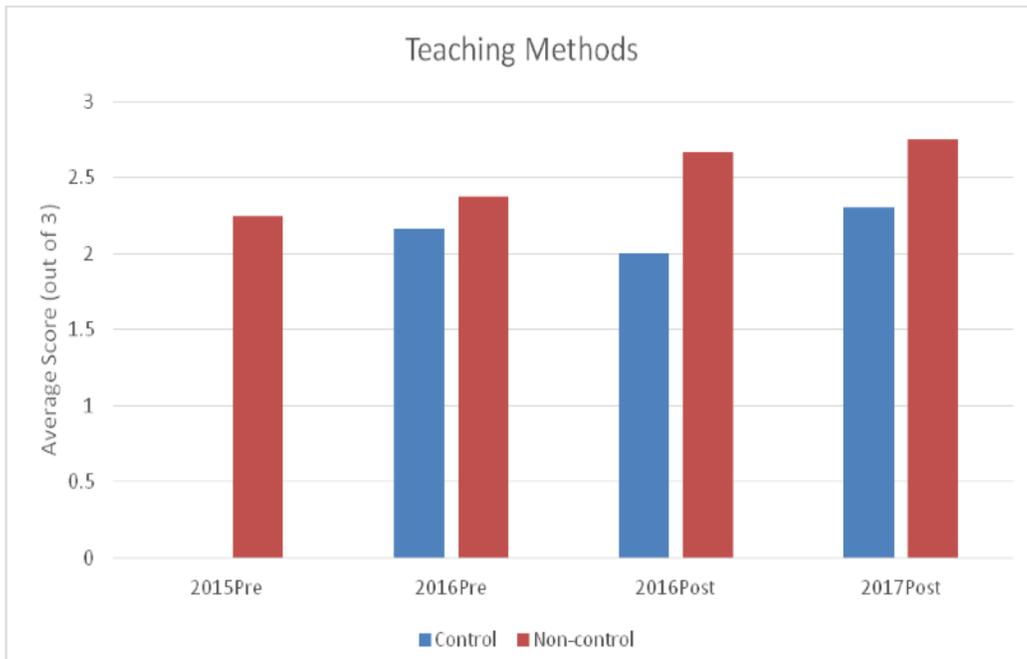


Figure 1 - Classroom observation data indicating the improvements of teaching methods in BACEP schools (red) and control schools (blue) during the course of the three years of the program, during pre and post workshop evaluations. Scoring based on a scale of 0 to 4, with 4 being the strongest score.

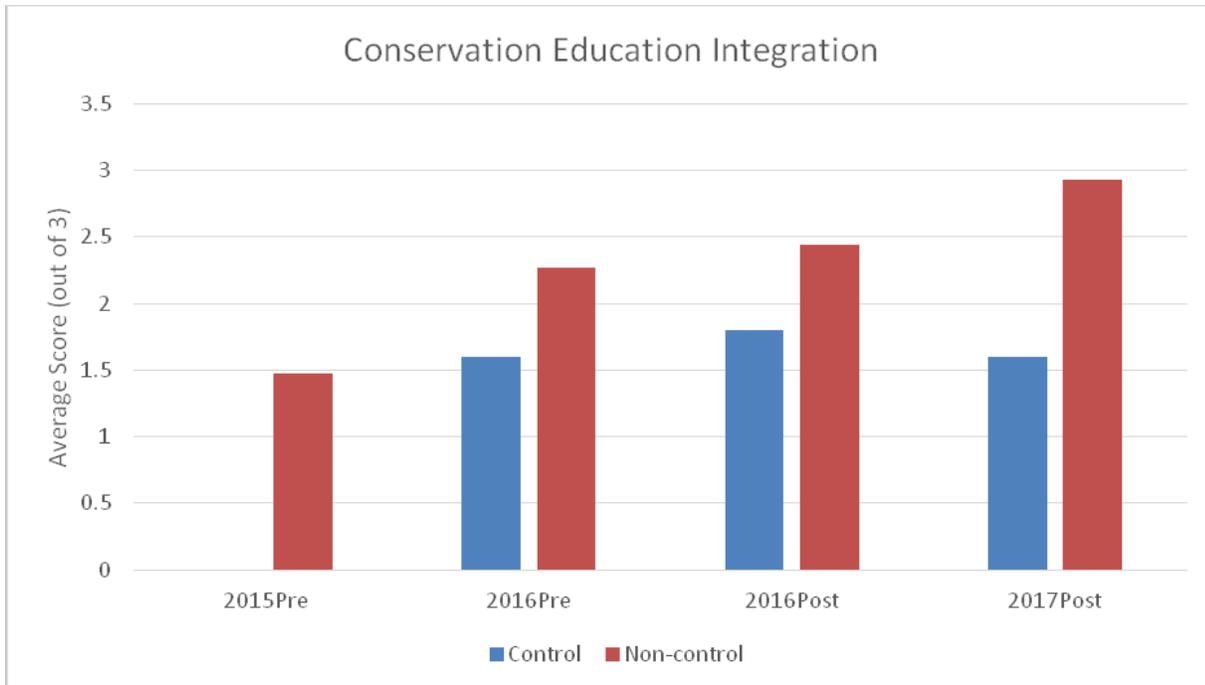


Figure 2 - Classroom observation data illustrating the improvements of BACEP teachers (red) in their ability to integrate conservation education knowledge in to their classroom lessons, compared to control schools (blue). Data from the period of 2015 to 2017, scoring based on 0 to 4 scale, with 4 being the strongest score.

programs, to serve as controls (Karambi and Kitojo). Analysis of the 2017 student evaluation questions demonstrated that there is improvement in most of the questions for the BACEP schools. In contrast, an improvement is observed in very few of the questions at the control schools, which do not benefit from the BACEP program.

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 1,490 tree were distributed to parents of the 4 schools and a further 171 trees were planted in the schools compounds (see Table 1). Unfortunately the tree nurseries were less successful this year because the was less rain than previous year. Also, there were some vandals, that uprooted the trees at Mburameizi Primary School.

Conservation Education Project Trees Grown 2017			
School	Tree Species	Trees distributed	Trees planted at schools

Bitanwa P.S.	Caliandra	0	0
	Pinus	400	0
Kanyashogi P.S.	Caliandra	210	0
	Pinus	294	171
Mburameizi P.S.	Caliandra	0	0
	Pinus	0	0
Ruhija P.S.	Caliandra	108	0
	Pinus	478	0
Total		1,490	171

es grown in
distributed



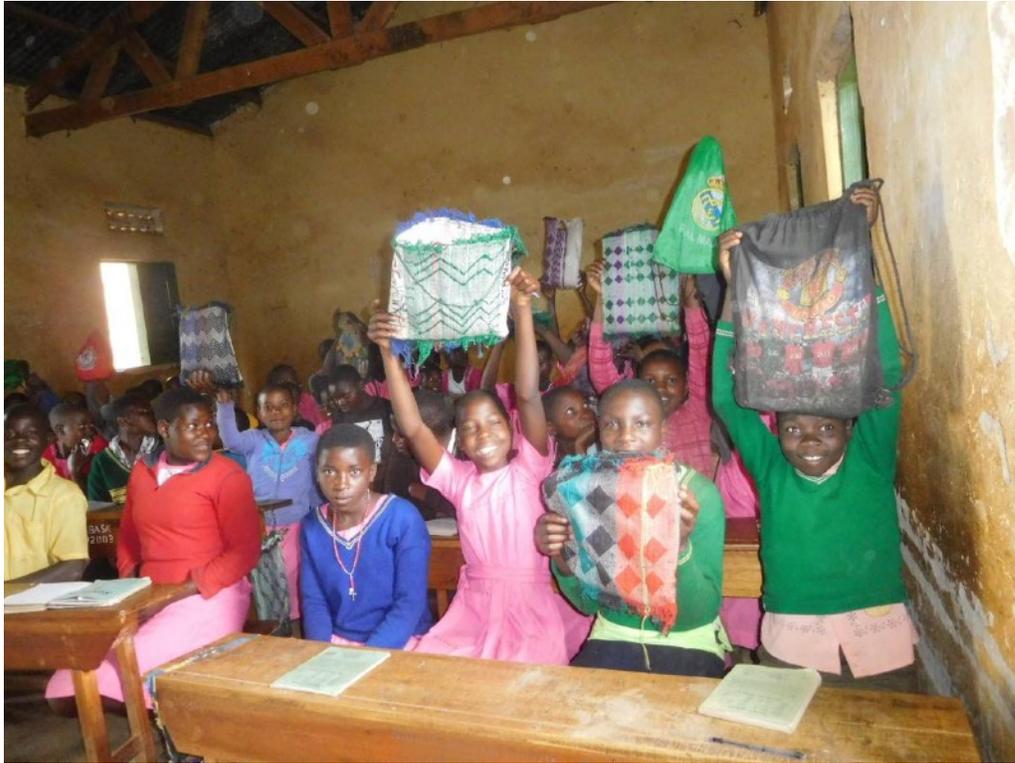
Forest walks

In March, BACEP took pupils for a forest walk to learn more about Bwindi Impenetrable National Park,. The lesson focused on observing the differences in habitats within the forests and their different physical characteristics. From the four schools, 338 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 2017. This year a total of 324 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 over 150 members of Ruhija Community Gorilla Tourism Development Association joined the school pupils during this activity by picking litter within the community centre on the same day. Afterwards the Warden in Charge of Ruhija sector (Uganda Wildlife Authority) met with the community members and the pupils to share with them about the dangers of litter in our communities and in the forests. The communities were happy about the warden's speech and welcomed the idea of picking litter and keeping Ruhija Tourism zone clean. One of the community members went ahead to request BACEP to always put these programs in schools and communities as a way of reducing and teaching the members about the dangers of having a dirty environment. 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 Pick Up

Following the BACEP litter collection day and discussions between the park authority and the community, it was acknowledged that community litter bins were needed. BACEP organized for four litter bins to be installed in the community in collaboration with Ruhija community Development association, who then organized community litter picking in August as a way to reduce waste around the trading center. They spent more than 5 hours picking litter and later they met with the Chairperson of the association and the Community Conservation Ranger Ruhija sector. The community members have a motto keep "Ruhija Gorilla Tourism zone clean".

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 around the school compound and they are planning to grow fruit trees. Furthermore, the conservation clubs together with school leaders have created Music, Dance and Drama groups which have done a great deal to sensitize the communities during parents' days, end of primary seven celebrations days and school Sundays. Over 300 church members have been entertained at Ruhija and Kanyashogi primary schools. 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 our beautiful Bwindi Impenetrable National Park and the environment at large.



Staff and Partners

The BACEP project is being administered by Ms. Emilly Turinawe and Mr. Anthony Kalyegira (under the supervision of Dr. Martha Robbins, Mr. Tinka John and Mr. Jack Richardson) Ms. Turinawe has a background in environmental science and community involvement. Ms. Turinawe and Mr. Kalyegira 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. Mr. Anthony Kalyegira was offered a new position as Senior Environmental Officer for Kamwenge district, therefore will no longer be part of the team in 2018. 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, NCZoo, Cleveland Metroparks Zoo and UWA government officials and health workers who helped with this project. We thank Drs. Corrine Kendall and Kristen Lukas for their input into the program and Dr. Austin Leeds for his analysis of the student questionnaires. We would also like to thank all the teachers and students that contribute to the success of the 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.

