



**BUDONGO**  
CONSERVATION FIELD STATION

**ANNUAL  
REVIEW  
2020**

# The Message from the Director

For 30 years now, Budongo Conservation Field Station (BCFS), formerly Budongo Forest Project, has worked to contribute towards positive conservation outcomes in the Budongo forest landscape and beyond. These conservation efforts including research, community conservation initiatives and trainings, works towards contributing to a secure and habitable environment for people and wildlife through positive community engagements and natural resource management decisions informed by science. However, in 2020, the advent of COVID-19 presented new challenges to contend with, and a test on our ability to respond to these new challenges.

Research remains a critical tool in informing policy and decision making. BCFS is particularly keen on maintaining long-term research efforts, that enable answering of novel questions and discerning long-term ecological and social patterns. Changes arising from government efforts to contain the spread of COVID19 portended great limitations to this ambition of maintaining continuous data collection, especially due to limited movements necessary to secure

data from the field, yet the research process in itself presented a risk of spreading COVID19 to wildlife, especially the primates. Overall, it took the commitment and sacrifice of staff to secure long-term research interests with minimal disruption. Whereas some research activities were disrupted, we managed by and large to secure much of the long-term research interests with the benevolence of our partners who facilitated this cause.

On the other hand, the challenges of the Budongo forest landscape keep evolving as human aspirations and development context keep changing. It is our strong belief that the new landscape of conservation is in the communities, whose activities and initiatives greatly impact on conservation outcomes, including inside protected areas. Whereas over time we have defined important activities to address challenges of livelihoods and human-wildlife conflict, some of these initiatives were suspended amidst government restrictions and fear of COVID19 risks. The nationwide lock down also demonstrated the importance of addressing the developmental agenda in conservation landscapes, particularly revealing yet again that disruption in



livelihood activities drive communities to participate in illegal activities in search of alternatives livelihoods. An increased level of illegal activities incompatible with conservation goals was recorded during the lockdown. However, we identify land use changes, especially arising from the growing of commercial crops, with sugarcane as the most dominant; and those that will arise from the development of the oil industry, as the most critical in defining the conservation challenges in the chimpanzee conservation landscape, to which we commit to contributing to addressing in the near future, to alleviate such pressures from conservation areas.

Whereas the absence of especially the international researchers for much of 2020 was unexpected, a negative outcome of COVID19, we turned this into an opportunity to endeavor and provide better facilities for the returning researchers, by embarking on major renovations to improve our accommodation facilities. We also utilized time available from reduced field research hours to provide training opportunities to enhance field staff capacity, consequently improving our research capability and quality. The continuous improvement agenda of staff is and has been important in sustaining our research capability and capacity. Furthermore, we were able to allocate time towards improved administrative procedures and protocols, an avenue we

are committed to advancing, to formalize our internal operations to cope with the necessity of an expanding institution.

After almost ten years of service with BCFS, Mr. Geoffrey Muhanguzi retired from BCFS, and his contributions and mentorship were important in sustaining the response to novel challenges brought about by COVID-19 among others. We appreciate his contributions in positioning BCFS for greater achievements.

The achievements of 2020 were only possible because of the strong commitment and sacrifice of our staff and partners who stood with us even amidst very challenging times. We are particularly grateful to the Royal Zoological Society of Scotland, Oakland Zoo, Arcus Foundation and Earthwatch Institute who through tremendous commitment enabled our activities to continue even amidst the widespread financial challenges across the globe. The National Forestry Authority, Uganda Wildlife Authority, and Masindi District Local Government were instrumental in enabling our initiatives to continue unhindered, amidst strict regulations. To them we are indebted.

Best wishes.

**David Eryenyu**  
*Field Director*



## Upwards and Onwards

The year 2020 just wasn't the "normal" kind of year for the world over. At Budongo Conservation Field Station (BCFS), 2020 also marked major transitioning as Mr. Muhanguzi Geoffrey retired from his formal service (of almost 10 years) as the BCFS Field Station Manager. This necessitated changes to our management structure that included the appointment of Mr. Eryenyu David as BCFS Field Director by the Board of Directors. Having first served at BCFS as Ag. Director, 2004-2007 and returning as Field Station Manager in September, 2010- March, 2020 Mr. Muhanguzi (a.k.a Mkubwa) was dedicated to his service at the field station. His role in growing BCFS partnerships both locally and internationally was profound. He worked together with the team making BCFS a household name among many communities neighboring Budongo Forest Reserve. This can only be explained by the positive impact BCFS has had on these communities under his leadership. In-house, Mr. Muhanguzi's art in building relationships; managing expectations, mentoring and leading the team with utmost dedication was unmatched. We appreciate Mr. Muhanguzi for his service over the years and wish him the best in his future endeavors.

Four new staff joined the team mainly filling positions that had fallen vacant over time and/or bringing a new set of skill to their new positions. Biira Scovia joined as

a Camp attendant, Ukethi Geoffrey as a Field maintenance assistant, Achidri Patrick as an Eco-guard and Mr. Daniel Sempebwa as a Junior research fellow. Daniel has training in laboratory technology and we are positive that with this skill set, the capacity of the chimpanzee health monitoring program shall be enhanced. As zoonosis form one of the most important challenges to chimpanzee conservation, the need for a field laboratory and skill sets to facilitate sample collection, preparation and sample analysis to provide a better understanding of the epidemiology, origins and causes is pertinent in decision making to aid conservation. We are therefore optimistic of Daniel's contributions towards this end. Furthermore, as Mr. Eryenyu took on the mantle, the intention to formalize and streamline management systems was high on our priority list. The bar has been set high and we are excited for the future.

*From all of us at Sonso, we would like to say Thank you!  
Thank you for your leadership and unweathering counsel.  
You led the team and steered the station on.*

Asante Mkubwa



Handwritten signatures and names surrounding the portrait of Asante Mkubwa:

- Jacinta N.L.
- GIFF. R.
- BIIRA
- Daniel. S.
- GEORGI UKETHI
- ADEKE
- Mugisha
- DIMO. N
- GEESOMU
- KUGONZA
- NYEKO. J
- VINCENT.
- RUMG
- MULE JOHNBOGO
- EGUMA
- Sarah. F
- AGWALI
- OSOK M
- Akontoso J Koller
- ATAYO
- ARUA. P
- Egony D.
- Ateeje
- OBONG
- Caroline. K
- mary



## Making lemonade out of lemons

*Harnessing opportunities to grow our capacity in research and training*

2020 was a challenging year even in the field of research; more so for individual researchers. Many restrictions instituted by governments across the globe meant that many researchers (especially the international researchers) were unable to start or continue with their field research projects. For BCFS, it was queer, the total absence of foreign researchers at the station for most of the year (save for January and February period prior to when COVID-19 was declared a pandemic) could never have been imagined but was a reality. Fortunately, most of the researchers that were at the station then, were towards the end of their data collection sessions. BCFS continued to support some of the researchers by collecting their field data wherever possible. However, some researchers have had to wait to be able to resume or start their field work and we hope they can eventually proceed normally with

the availability of vaccines providing minimized risks to individuals as well as the primates by mid-2021. Research remains one of the key elements BCFS engages in and staff training plays an important role in maintaining our research capability. Staff training is imperative in ensuring research quality and integrity besides improving our capacity to conduct different studies. Whereas COVID-19 disrupted a number of research activities, it also provided a window of opportunity, for staff to participate in trainings, to enhance their skills in their key areas of operations, but also to obtain skills in other areas. With adjusted work schedules, BCFS purposed staff to utilize some of the available time to enhance and broaden their skill set. BCFS considers staff excellence as key, and will continue to work towards enhancing the quality of our work, especially for positive feedback towards our long-term research interests and researcher experience.







*The basement of some houses were replaced with brick and concrete to provide a firm and safe base, but also aiming at minimizing the risk of termite infestation)*



Taking advantage of the low numbers of residents at the field station, we were able to carry out major renovations on our housing facilities. Considering that many of our houses are made of wood, over time, the wood has been degrading, and this is exacerbated by termite

infestation. We progressively reinforced and/or replaced parts of the wall structures, remodeled roofs of some of the houses as a way to deal with sporadic leakages during the rainy season. In addition, we enhanced our water collection and storage capacity.

On the other hand, power supply is major resource at the field station as it enables field-based operation of modern equipment besides lighting. We equally embarked on improving the power supply at the station particularly, installing several larger and higher energy supply solar panels, and batteries in some of the houses. This improved our solar energy supply sufficiently meeting the basic needs of all camp residents, possibly with the exception of extremely cloudy weather periods when solar energy supply would be limited by clouding.

**Our philosophy remains to provide sufficient, comfortable and modest work and living environment for researchers and staff. Overall, we take comfort seriously and believe in progressively and organically improving our facilities.**



## Double Pain

*The strain COVID-19 exerts on conservation efforts*

While the world grappled with the COVID-19 pandemic that affected the health and welfare of many people across the globe, the environment too was affected. Whereas there were positive outcomes arising from lockdown and reduced human activity on the overall environment, such as reduced levels of pollution, threats particularly to conservation became eminent. Considering that COVID-19 portends a serious risk to primate conservation, the pandemic provided a formidable task in decision making for many primate research, conservation and tourism sites. The presence of staff, researchers or tourists is a known conservation tool, as their conscious presence in itself

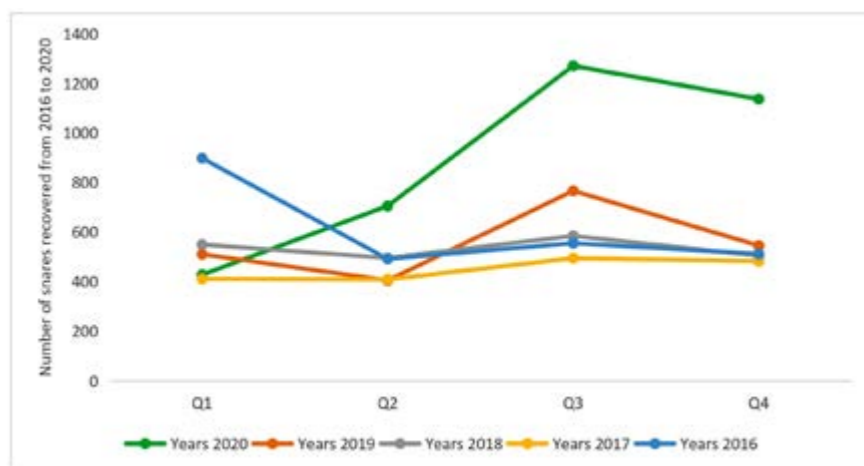
acts as deterrence to those accessing conservation areas with intent to carry out illegal activities. In the Albertine rift region, Africa's biodiversity hotspot, it was the upsurge of illegal activities that we had to contend with as activities at various sites were scaled down to manage the risks associated with COVID-19. Of particular concern was the rise in setting of snares in the forests and other conservation areas. In Budongo Forest (where BCFS Eco-guards regularly conduct patrols to confiscate poaching equipment especially snares among others), the average number of snares recovered from the forest per day rose to 13 from 9 snares as was the case in 2019. Notable is that the spike in number of snares recovered was recorded after



the 1st quarter following the nationwide lockdown in the wake of COVID-19. The mitigation measures that were instituted by government crippled many economic activities and as such community livelihoods. That way many individuals turned to the forest for their livelihoods. Besides poaching, the number of charcoal burning sites encountered also increased, though the incidences of illegal timber

harvesting decreased possibly because of limited transport means during the pandemic. These patterns emphasize the fact that poor people destroy the environment for lack of alternatives, and the disruption in the economic activities of people living around protected areas is bound to fuel activities detrimental to conservation goals.

**A comparison of the number of snares recovered from Budongo Forest over the years during each of the quarters of the various years.**



With the increasing number of snares set in the forests, the incidences of snare injuries in chimpanzees in Kaniyo Pabidi an eco-tourism site in the northern part of the Budongo Conservation Area and in Kibale Conservation Area increased three-fold as compared to reports from

previous years. Notable is that most of these areas do not conduct routine snare patrols and as such the hazards are left to their unsuspecting victims. This stance was further exacerbated by the reduced activity especially at tourism sites as tourism was suspended in



*BCFS Field Assistant displaying a blue duiker that had been rescued from a snare trap during snare patrol sessions in Budongo Forest Reserve*

the wake of COVID-19. This meant that there was minimal or no chimpanzee monitoring and/or trekking which resulted in the chimpanzees at such sites gradually losing their habituation status. The reduced levels of chimpanzee habituation impeded veterinary interventions, as it became more difficult to locate the chimpanzees, but more so, the increased levels of shyness to human presence hampers veterinary at-

tempts to intervene and rescue snared chimpanzees. For instance, in Kanyanchu Chimpanzee Community in Kibale conservation area, six chimpanzees were reported with snare injuries but only one intervention was successful in 2020. The debate on the role of policing on forest conservation can be rekindled by observed patterns of illegal activities in the wake of the COVID-19 pandemic.





*A field team led by BCFS Veterinarian in Southern Sector of the Albertine Rift removing a snare wire from a chimpanzee in Kibale National Park*

Chimpanzee health from respiratory zoonosis was a major concern this year for BCFS and other partner research and tourism sites in the Albertine rift region, particularly with concerns of the risks and potential consequences of COVID-19 on chimpanzee conservation.

This was founded as the possibility of the cross transmission of COVID-19 to the wild apes could have unfathomable impacts considering that the chimpanzees in the Albertine rift have in the recent past suffered respiratory infection outbreaks that claimed a number of chimpanzees' lives. Fortunately, the lessons and knowledge learnt from the past respiratory illnesses and health monitoring efforts in the wild have informed the conservation pathways. In 2020, there were generally reduced incidences of respiratory illnesses, a relatively low individual intensity of infection, and no death directly associated with respiratory illness. Whereas it may be argued that tourist and research activities reduced, enhanced field practice to avoid the risks contributed greatly to managing these risks, and remain important lessons and practices moving forward to enhance chimpanzee conservation and manage the risks of respiratory illnesses.

**Proxy monitoring:** A number of baboons in Kibale National Park were seen with lesions around the nose and mouth. For some of those affected, their nasal septum was entirely lost, with individuals showing difficulty in feeding and bore a foul smell. These baboon lesions appear macroscopically different from the seasonal face lesions that had been reported in some Kanyawara and Ngogo chimpanzees in the recent past. The cause of these lesions, and the risk they pose to conservation of primates are important questions that need to be addressed.





*Blue Monkey eating colobus*

## Research

### *Work during odd times*

With the risks of the novel corona virus in primates not explored then, precautionary approaches were the most rational. As human presence in primate habitats and human proximity to primates is expected to pose a risk of exposing primates to COVID-19. In Uganda, government restrictions and regulations on tourism and research sites and the nation as a whole necessitated that sites halted most of their activities or only carried out their tasks to a scale that was acceptable to minimize the risks. For BCFS the need to manage the risks as well as guard our long-term research interests was eminent. For months, only a few staff contributing to critical data collection and monitoring resided at the station to minimize contact with the communities. Also, the hours spent in the forest monitoring primates especially the chimpanzees were halved and mostly focused on health monitoring. Individual researcher data collection especially on chimpanzees was halted. All staff had

to wear masks, regularly wash hands/sanitize and had their temperatures measured on a daily basis, part of the standard operating procedures at primate conservation sites.

As the nationwide lockdown started to ease out, we were able to recover and resume much of our long-term data collection, securing our long-term research interests. Particularly, amphibian data collection in areas within the communities was disrupted, as a result of restrictions by curfew hours. Also, weather data collection was disrupted, owing to the fact that some of the staff, especially in partner institutions, who supported this data collection had been laid off or on furlough. We however managed to secure all the long-term phenological data collection, and continued primate behavioral data collection, but focusing on health monitoring as the main goal. While data collection for individual research projects at BCFS was paused or disrupted with the outbreak of COVID-19 in early 2020, many other aspects of our research continued with a number of exciting new findings published. In chimpanzee research, our participation in an important cross-site comparison showed that cortisol, a hormone with



important implications for life-history and health, appears to be sensitive to the specific socio-ecological environment of different chimpanzee populations. Budongo chimpanzees in particular showed a very variable pattern, suggesting that behavioural strategies for raising their offspring may differ between Budongo mothers, and across different periods, more so that in other chimpanzee populations (Tkaczynski et al., 2020 Journal of Human Evolution). In part, this may be linked to the high levels of intra-community infanticide we see in Budongo, which were described in a summary of cases over the past 24-years (Lowe et al., 2020, Primates).



Our studies of primate communication continued to highlight the similarities between humans and chimpanzees among others. It was shown that chimpanzee lip-smacking – a common orofacial signal that accompanies grooming – shares the same rhythm characteristic of all spoken human languages (Pereira et al., 2020 *Biology Letters*). While other work explored chimpanzee greeting calls and their functions (Fedurek et al., 2020, *Animal Behaviour*), the vocalizations of young infant chimpanzees (Dezecache et al., 2020 *Journal of Language Evolution*), and demonstrated how we can use machine learning to explore vocal behaviour (Dezecache et al., 2020 *Animal Cognition*).

Interdisciplinary work across our studies of amphibians and forest management showed a clear pattern of decreasing amphibian species diversity with increasing logging activity, even where this occurred historically – an important indication of the long-term impacts of forest management (Lukwago et al., 2020 *Forest Ecology and Management*). Mawa and colleagues showed

the importance of active Collaborative Forest Management (CFM) strategies, which allow registered local community groups to co-manage specific areas of state forests. Charcoal processing, typically driven by local-area residents, was only found in areas where CFM was absent or inactive (Mawa et al., 2020 *Sustainable Forestry*). These studies particularly show the importance and positive outcomes of involving communities in joint forest management.

Finally, we reported a very rare observation of monkeys feeding on another primate species, with the report that Blue monkeys had fed on a black-and-white Colobus infant (Akankwasa et al., 2020 *African Primates*), highlighting their dietary diversity and raising many more questions for research.



## Community based conservation

Following the first reports of COVID-19 victims in Uganda, the need to contain the disease and minimize chances of community spread of the novel virus was eminent. Government of Uganda put in place a number of measures among which was the regular sharing of information about the virus through various avenues to educate the population about COVID-19, how it spreads, the symptoms and preventive measures to avoid its spread. This was an opportunity for BCFS too to also engage and sensitise communities neighbouring the Budongo Forest Reserve by reinforcing government's message about COVID-19 more so in a way to highlight the challenges at the

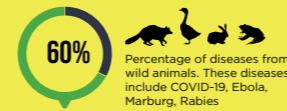
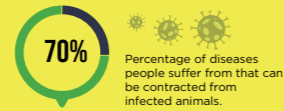
human-wildlife interface. Considering that people were now more psychologically geared to pay more attention to their health, this was an opportunity to create more awareness about the threats posed by zoonotic diseases to both humans and wildlife.

BCFS published at least 1000 posters and over 1000 fliers including some in local languages (specifically Swahili and Lunyoro) themed around COVID-19 and measures to minimize the spread of zoonotic diseases at the human wildlife interface. Whereas the fliers targeted individual homesteads, the posters targeted public areas such markets, trading centers, hospitals, public offices and schools among other public places.



## Guidelines to minimize the spread of diseases in communities at the human-wildlife interface

### DID YOU KNOW



### DISEASE SPREAD



Through direct or indirect contact with an infected animal



Through the air



By disease carrying vectors such as mosquitoes, houseflies and ticks



Ingesting contaminated food or water

### PREVENTION

#### WASH YOUR HANDS

Wash hands with soap and water (germs that cause diseases)



#### AVOID THE FOREST WHEN SICK

Avoid the forest when sick (a person's immunity is compromised when sick and the possibility of contracting more diseases from wildlife habitats is high)



#### WASH & AVOID SPITTING

Wash your face before entering the forest and avoid spitting in the open. (Germs in these areas could be washed into water resources among other disease transmission points)

#### REMOVE CLOTHES & FOOTWEAR USED IN THE FOREST

On returning to the community immediately remove clothes and footwear used in the forest. (These are carriers of disease causing germs)

#### 05 BOIL & COOK FOOD PROPERLY

Always boil drinking water and ensure food is properly cooked



#### 06 DON'T EAT WILD ANIMALS

Avoid consuming wild game



#### 07 SEEK MEDICAL ATTENTION

Report and seek medical attention in case of illness. (Symptoms may include; fever, cough, flu, diarrhoea, vomiting, headaches, body aches and general body weakness)



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Quite a chunk of these have been distributed across a number of forest edge communities and we hope to continue to replenish communities with these materials as need may arise. This is aimed at providing constant reminders to communities about the good practices to minimize disease transmission at the human wildlife interface as zoonotic diseases remain a challenge.

Since communal gatherings were halted as standard operating procedures (SOPs) enforced by the government in the fight against COVID-19, the fear of it spilling into the chimpanzee populations further dictated our suspension of the community outreach programs (even after the easing of some of the restrictions) till we could strictly adhere to SOPs for BCFS staff. Thus, unlike the previous years, we had very little direct interactions with local communities in terms of livestock treatments, school out-reach programs and community meetings. However, we were available on call for livestock treatment sessions following reports of disease and deaths in various homesteads. We were propelled to investigate the cause-effect relationship of the disease in the communities (especially those

neighbouring the forest reserve) as part of our disease surveillance program. Most sick animals were found to have heavy burden of helminthiasis and tick-borne infections. Treatment was administered and improvement was reported by the farmers within that same week. Livestock treatment remains an important strategy we pursue to improve household income and reduce dependency on forest resources, while minimizing disease risks in the human settlements where forest wildlife make contact.

As the schools started to reopen in the later half of the year, local primary schools that BCFS collaborates with were experiencing challenges of maintaining good sanitation which is critical in the fight against COVID-19 and other diseases. The increased use of soap for effective frequent hand washing poses a financial challenge for many rural schools. Facilitating schools to build capacity to make soap and minimize costs goes a long way in facilitating schools to operationalize the SOPs for schools. We therefore worked with other stakeholders, to create capacity for soap making, to enhance the capacity of the schools to implement the SOPs.





*Renovation of camp infrastructure especially the housing facilities was priority in 2020*



*We were also excited to have a new addition to our vehicle fleet*



# BUDONGO

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