

**Research Activity Report**  
**Supported by “Leading Graduate Program in Primatology and Wildlife Science”**  
 (Please be sure to submit this report after the trip that supported by PWS.)

7 <sup>th</sup> /July /2018	
<b>Affiliation/Position</b>	Graduate school of Asian and African Area Studies / D3 in five year system of Ph.D. course
<b>Name</b>	Ryoma OTSUKA
<b>1. Country/location of visit</b>	
Bwindi Impenetrable National Park, Uganda	
<b>2. Research project</b>	
Research on Sustainability of Mountain Gorilla Tourism and Community Conservation in Bwindi Impenetrable National Park, Uganda	
<b>3. Date (departing from/returning to Japan)</b>	
13 <sup>th</sup> /May /2018 – 25 <sup>th</sup> /June /2018 (44 days)	
<b>4. Main host researcher and affiliation</b>	
Conservation Through Public Health (CTPH), Dr. Gladys Kalema-Zikusoka	
<b>5. Progress and results of your research/activity</b> (You can attach extra pages if needed)	
Please insert one or more pictures (to be publicly released). Below each picture, please provide a brief description.	
<p><input type="checkbox"/> <b>Introduction &amp; Aim of this trip</b></p> <p>During 13<sup>th</sup> /May /2018 – 25<sup>th</sup> /June /2018, this field work was performed in Bwindi Impenetrable National Park, Uganda. The main purposes of this trip were,</p> <ol style="list-style-type: none"> <li>1. To get supplement information for Human-Gorilla Conflict Resolution Program</li> <li>2. Collecting fecal samples of mountain gorillas for stress hormone study</li> <li>3. To understand the current situation of eco-tourism and habituated gorilla groups after the death of young silverback in last December, and to discuss about the term and condition of the study of new group which is undergoing habituation process.</li> </ol> <p><input type="checkbox"/> <b>Schedule</b></p> <p>13<sup>th</sup> /May /2018 - 14<sup>th</sup> /May /2018: Kyoto → KIX → DXB → EBB → Kampala          15<sup>th</sup> /May /2018: UWA / UNCST          16<sup>th</sup> /May /2018: Travel to Bwindi          17<sup>th</sup> /May /2018 - 21<sup>st</sup> /Jun /2018: Field Work in Bwindi          22<sup>nd</sup> /Jun /2018: Travel to Kampala          23<sup>rd</sup> /Jun /2018: Kampala → CTPH → EBB → DXB → KIX → Kyoto</p> <p>KIX (Kansai International Airport), EBB (Entebbe Airport), DXB (Dubai International Airport), UWA (Uganda Wildlife Authority), UNCST (Uganda National Council for Science and Technology)</p> <p><input type="checkbox"/> <b>Achievement</b></p> <p>I. Follow up research of HUGO (Human-Gorilla Conflict Resolution Program)          I conducted open-ended interviews with HUGO members in order to understand current situation of their activity. In addition to that, I interviewed some NGO staff members who know really well the situation before HUGO started. I'm still trying to get some reports or meeting notes related to the HUGO program especially the ones written in an early stage of this program.</p> <p>II. Regarding use of drones in Uganda          The drone I tried to bring was confiscated at the Entebbe Airport. I talked with UWA and UNCST staff and confirm the procedure required when you want to bring drones in Uganda for research. I got it back before I left Uganda at the custom of Entebbe airport.</p>	

**Research Activity Report**  
**Supported by “Leading Graduate Program in Primatology and Wildlife Science”**  
**(Please be sure to submit this report after the trip that supported by PWS.)**

**III. Sampling of feces for Stress hormone study in mountain gorillas in Bwindi**

I tracked gorillas with UWA rangers 6 days per week (30 days out of 36 days of stay in Bwindi). Tracking started from 7:30 and ended 16:00. 169 fresh fecal samples of known individuals were collected from nests and trails in non-invasive way. I got additional 91 samples for the series of experiment from samples which I have collected. The target groups were Mubare and Rushegura groups and I tracked them 10 days and 20 days separately. After the sample collection in the field, I extracted 1.00 g of feces in 25ml tube (with 8.0ml 90% ethanol) by hand-shaking (5 min) horizontally. Then they were kept for 40 minutes on the bench. 0.8ml of the supernatants were transferred into 2.0 ml tubes and dried at room temperature. They were preserved in a dark room at room temperature until the shipment. Samples were shipped after getting MTA (Material Transfer Agreement) with UWA and Export Permit from UNCST. The data which seem to affect gorillas' stress levels such as temperature, humidity, inter-group interactions, body condition (injury, wound etc.), chasing event (by HUGO and UWA trackers) and tourists number per group per day were recorded. The collected samples will be analyzed in WRC (Wildlife Research Center of Kyoto University) using EIA. We will analyze the data using GLMM (Generalized Linear Mixed Model) with Gaussian distribution and AIC model selection.

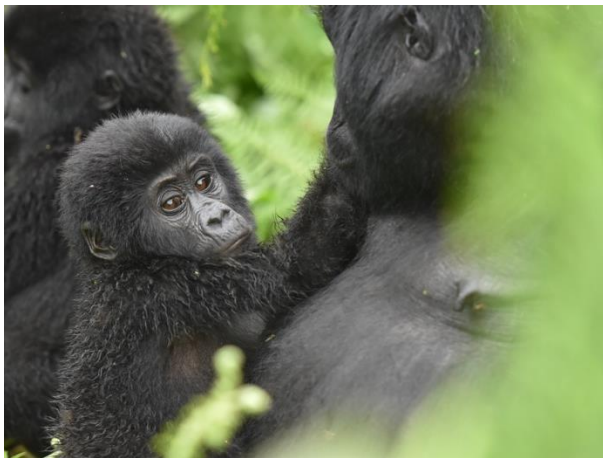


Photo1. Mother and Infant after breast feeding



Photo2. Mnn (AdF) in R group



Photo3. Kbd (AdF) in R group

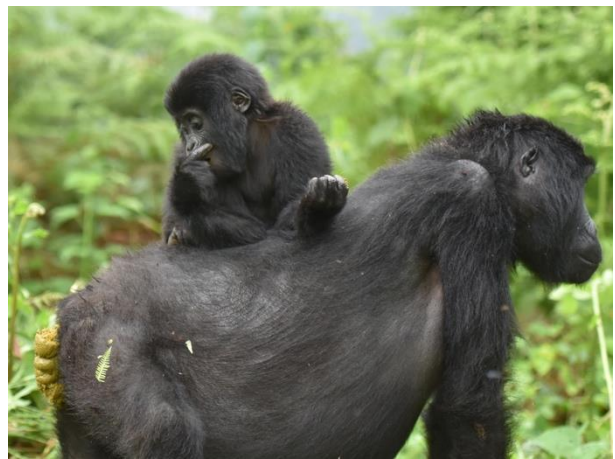


Photo4. Infant feeding on mother's fresh feces

**6. Others**

This field work was supported by PWS. I am deeply grateful to Conservation Through Public Health (CTPH) for being our research partner. Appreciation goes to Uganda Wildlife Authority (UWA) and Uganda National Council for Science and Technology (UNCST) for permits to conduct this study and facilitate transfer of materials.