

Gombe, chimps, disease, tourism, and the road ahead

Dr. Anthony Collins, Director, Baboon Research, Gombe Stream Research Centre, Tanzania

Gombe and its Chimpanzees

- In 1940s Gombe chimpanzees were at risk from influx of Burundi emigrants settling and destroying forest.
- Established as Game Reserve in 1943, to preserve the chimps.
- Made famous by Jane Goodall's discoveries about chimpanzees from 1960 onwards, becoming Gombe National Park (GONAPA) in 1968, but without tourism.
- The Park is very small (35 km², now with 20 km² lake area added), and very narrow, all edge (nowhere more than 1.5 km from the border).
- Chimpanzees have declined from about 150 in 1964 through 1980, down to 84 by December 2020.
- Reproduction is very slow (1 infant every 5 years) but deaths have been more.

Main cause of decline: disease.... In two

ways.

- SLOW RATE: from time to time individual chimps fall ill and die, while others disappear presumed dead. Illnesses were seldom diagnosed in the past, but now veterinarians of GONAPA & Jane Goodall Institute (JGI) perform some post-mortems and provide newer evidence.
- EPIDEMICS: every 7-10 years there have been epidemic die-offs of up to 9 chimps in short periods of 2-4 weeks.
- These are usually respiratory infections, which spread rapidly and affect many members of the community. Those whose coughing descends to the chest are the ones most likely to die.
- Compared to common respiratory infections, which may affect 1-2 chimps at a time, it is likely these epidemic infections are pathogens of which the chimps had no previous experience nor acquired immunity: the pathogens are new and must have been introduced.
- The most likely vectors of these new infections are people, either local people, or more likely researchers from abroad, or tourists (who are more numerous and come from a variety of places).

Precautions against respiratory infections

- Since 2000, GONAPA and JGI have agreed precautions against such infections.
- Nobody with cold or cough allowed into the forest.
- People keep safe distance from chimpanzees – 10m for tourists, 7m for researchers who have quarantined one week, and wear masks.
- Tourist groups are limited in number per day, group-size (5 plus guide), and time with chimps (1 hour).
- These precautions if carried out conscientiously are a good protection.

Deaths in 2019 compare with COVID-year 2020

- 2019:
 - 4 births: vs 1 infant killed, 1 died ill, 1 adult male disappeared. Net gain 1
- 2020
 - 1 birth, 4 deaths (3 respiratory 1 unknown), 2 died malaise. Net loss 5
 - In detail: in February-March 2020, 18 chimps out of 55 were affected by respiratory illness, and three died from it, possibly four.
 - This was at the same time as the worldwide onset of COVID-19, some felt that these simultaneous chimp illnesses may have been COVID. However there was no evidence at all to support it, especially the timing, and much evidence against.
 - Conclusion: 2020 March was a standard respiratory epidemic unrelated to Corona.
- 2021. No deaths yet known this year

Corona as a threat to Gombe chimpanzees: precautions taken by Gombe Stream Research Centre (GSRC)

- GSRC stopped all fieldwork for ten days.
- Majority of staff sent on home leave: kept skeleton staff of 9.
- Fieldwork resumed cautiously after ten days, to assess chimp health, and was later restored in stages, some staff returning by quarantine, others later with COVID-testing.
- Quarantine measures agreed with GONAPA:
 - Masks and safe-distance rules for all employees.
 - Hand-sanitizers.
 - Health inspection for tourists on arrival.
 - Maximum ten tourists per day.
 - Disinfected shower water for tourists
- Outcome: until today June 24th no sign of COVID among the chimpanzees, nor even respiratory illness this year 2021

Tourism at Gombe:

- park opened for tourism in 1978, it has increased year-by year.
- National Parks revenue is not direct to the Park but is cycled through TANAPA central budget, the park funded quarterly from there.
- Gombe's tourism assists local economy in the usual way, especially transport and hotels and local businesses.
- However almost none of the villagers next to the park do business in tourism, except some boat-drivers (the park is not reachable by road), but none of the rest benefit directly.
- Tourists at first were mainly foreigners, but in last five years many Tanzanians also come, at cheaper E African different rate.

TOURISM and COVID:

- In W Tanzania COVID-19 was recognisable not by signs of disease and human deaths, but by depressed tourism and local economy.
- The government did not suspend tourism at Gombe (unlike Gt Ape tourism at other african sites), but tourists stopped coming.
- Warden i/c/ Tourism, Pellagy Marandu, reported that no tourists from Europe, Asia nor America visited Gombe at all for the first three months, dropping tourism income by 80 %. (*rep. Prosper Kwigize*).
- Ironically COVID, by causing a drop in tourism, simultaneously benefitted the chimps, by reducing their daily risk of being infected by humans.
- Meanwhile, the standard Gombe health regulations against respiratory disease were already appropriate against COVID, requiring only to be enforced with vigilance.
- Through 2021, tourism has resumed including many visitors from abroad. Some have been tested against COVID, others have been vaccinated, but we still fear their presence is a risk to the chimpanzees.

COVID precautions ahead:

- JGI staff continue field research but strictly observing IUCN Guidelines on COVID-19 for African Apes
- Help is at hand via IUCN SGA Great Ape specialist group in the form of the project '[Protect great apes from disease](#)', led by researchers at Univ of Exeter (UK), and Conservation through Public Health (Uganda)
- They point out that responsibility to protect great apes is shared by several different actors: as prioritised by online survey they are:
 - Conservation-area management
 - Tourists The project has an excellent educational website for tourists
 - Tour companies
 - Tour guides The project is developing training materials
 - The Government

The challenge is to transmit the website to the tourists in advance of travel.

www.protectgreatapesfromdisease.com

POACHING and COVID-19 at GOMBE

- It was predicted that people who lost income from tourism and other business because of COVID would turn to poaching as a means of survival or profit.
- The case study of Gombe does not support this. In recent years poaching-pressure on Gombe is not severe: Buffalo and the Leopard are gone, historically some chimps have been killed outside the park, maybe one or two inside, two chimps were snared but not fatally (over 15 years ago), and the rumours of W Tanzania trade in baby chimps out through Burundi was 30-40 years ago.
- However the logic would predict that hunting for meat to sell locally, especially bushbuck and bushpig, may have increased.
- The warden i/c Protection, Goliath Mtawa, said there was no evidence of opportunistic poaching due to reduced protection. In fact he managed to continue with tightly planned patrols on a narrower budget, later helped by extra funds from JGI.
- Likewise there was no evidence that villagers who relied on tourism, (who were few anyway) had switched to poaching; though some boat-drivers went out of business.
- However, perhaps more due to depressed economy, some farmers switched over to charcoal-burning outside the park, as had been seen in Kenya.

HOW TO PROTECT WILDLIFE IN THE LONGER-TERM:

a) INVOLVE THE COMMUNITY, SO THAT THEY ALSO BENEFIT.

- Jane Goodall observed that no-one can ask people to sacrifice anything to conserve natural resources when they are desperately poor. Indeed poverty is one of the main destroyers of the environment.
- Community projects adjacent to reserves and relict forests can favour conservation by giving people a stake in such a way that they also benefit. Such programs are active in Uganda, for example the AFROKAPS/Kasiisi project next to Kibale.
- While Tanzania National Parks do not share their income directly with adjacent villages, yet TANAPA has a department of Community Relations specifically for environmental education, which also supports Income Generating projects (TIGP: around Gombe mainly beekeepers & fishermen) and Community Initiated projects (SCIP: mainly schools and staff-quarters).

COMMUNITY INVOLVEMENT: Lake Tanganyika catchment reforestation and education – holistic programs TACARE.

- JGI's community conservation program began around Gombe National Park in 1994, and has since been expanded (as GGE, GMU, and now LCWT programs with USAID funding) to cover 104 villages in openland habitats of other chimps, distinct from the National Parks. Environmental education underlies all their activities, which include reforestation, agro-forestry, sustainable agriculture, community health especially of women, family-planning, micro-credit programs for small businesses and women's groups, scholarships for girls, and, crucially, land-use planning. More recently they include good-governance, and the issue of climate change. Forest Monitors survey the village forests and report positive or negative changes by ODK, and satellite imagery has been a major conservation-monitoring and predicting tool.
- The holistic model has been applied, with local adaptations, in other countries including Uganda and DRC.

COMMUNITY INVOLVEMENT: educating and empowering youth- Roots & Shoots

- Young people are the future custodians of the environment, so that environmental education for sustainable stewardship is the goal of the volunteer youth groups Roots & Shoots in schools and elsewhere.
- These groups were founded in Dar es Salaam in 1991, now in every region of Tanzania and over 80 countries worldwide. Many former alumni are now rising to responsible positions in management, government, and politics in Tanzania.
- Roots & Shoots is also the environmental education tool used by the Community Conservation programs (e.g. USAID's program LCWT).

HOW TO PROTECT WILDLIFE IN THE LONGER TERM: b) ONE-HEALTH.

- Community based programs in an advanced form take human health and well-being and integrate them with animal health, both wild animals and livestock. 'Conservation through Public Health' pioneered this One Health approach for the gorillas at Bwindi, and is a powerful example.
- At Gombe, JGI has one veterinarian, and runs an EcoHealth program tracking health of chimps and other primates, by daily visual monitoring and non-intrusive health sampling.
- This is now expanding in collaboration with the GONAPA vet to include health of domestic animals around the park, and JGI-Tz recently collaborated with the Regional health authorities to raise COVID- and One-Health- awareness in the village-communities around the National Park.
- Our colleagues in the US are also forming a One-health Consortium to address comprehensive health issues in and around Gombe. Hopefully these will contribute to health of all, and also increase community buy-in to conserving the apes and their forest.