Man v.s. Wild: An Analysis of Language Used Regarding Human-Wildlife Conflict in the Kibale National Park Community, Western Region, Uganda

Sophie Perfetto
SIT Study Abroad

Follow this and additional works at: https://digitalcollections.sit.edu/isp_collection

Part of the African Languages and Societies Commons, African Studies Commons, Agriculture Commons, Animal Studies Commons, Biodiversity Commons, Environmental Health and Protection Commons, Human Ecology Commons, International and Intercultural Communication Commons, Place and Environment Commons, Social and Cultural Anthropology Commons, and the Zoology Commons

Recommended Citation
https://digitalcollections.sit.edu/isp_collection/3411

This Unpublished Paper is brought to you for free and open access by the SIT Study Abroad at SIT Digital Collections. It has been accepted for inclusion in Independent Study Project (ISP) Collection by an authorized administrator of SIT Digital Collections. For more information, please contact digitalcollections@sit.edu.
Man v.s. Wild: An Analysis of Language Used Regarding Human-Wildlife Conflict in the Kibale National Park Community, Western Region, Uganda

Sophie Perfetto
Academic Director: Dr. Oliver C. Nyakunga
Advisor: Dr. Oliver C. Nyakunga
Sending Institution: Carleton College
Major: English and Sociology/Anthropology

Submitted in partial fulfillment of the requirements for Tanzania: Wildlife Conservation and Political Ecology,
SIT Study Abroad, Fall 2021
Acknowledgments

Thank you to Dr. Oliver Nyakunga for her support and guidance throughout this process, and for allowing me to draw from her vast reserves of experience and academic knowledge; Kaiza Kaganzi for his advice, academic guidance, and constant encouragement; Oscar Paschal for his unwavering support, knowledge, experience, and constant good humor; Paul Musungu for his indispensable knowledge of and connections throughout Uganda, and his irreplaceable advice; Sibendirana Widluck for his invaluable assistance in initiating contact with communities, organizing focus groups, and acting as translator; Harriet Nakyesa for her efforts and support on my behalf, and lending her expertise in the region; and to my fellow students for their companionship, moral support, and advice.
# TABLE OF CONTENTS

Acknowledgments

TABLE OF CONTENTS

List of Tables and Figures

ABBREVIATIONS

Abstract

Part I: Introduction

   Background Information
   Problem Statement
   Scope of the Study
   Significance of the Study
   Objectives
   Study Questions

Part II: Literature Review

Part III: Methodology

   Study Area Description
   Study Site
   Study Design & Methods
   Sampling Techniques and Procedure
   Data Collection Instruments
   Data Analysis

Part IV: Results

   Defining “Problem Animal”
   Problems and Benefits Associated with the Park
   Use of Language and Community Perception
   Efficacy of Current Mitigation and Prevention Strategies

Part V: Discussion, Conclusions, and Recommendations

   Summary
   Discussion
      Defining “Problem Animal”
      Problems and Benefits Associated with Living Near the Park
      Use of Language and Community Perception
   Conclusions
Limitations 39
Recommendations for Future Studies 40
Appendix 45
   Ethical Considerations 45
   Focus Group & Interview Questions: 45
   Work Plan and Timeframe 46
   Budget 47
List of Tables and Figures

1. *Figure 1.* Diagram of contexts within communities.  
2. *Figure 2.* The locations of the focus group.  
3. *Figure 3.* The locations of the focus group within context  
4. *Figure 4.* Map of Sebitoli region relative to Northern Kibale  
5. *Figure 5.* Map Kabarole district, which includes Mugusu  
6. *Figure 6.* Map of Districts that border Kibale National Park  
7. *Figure 7.* Graph displaying the number of reported benefits  
8. *Figure 8.* Perceptions of *Loxodonta africana*  
9. *Figure 9.* Perceptions of *Papio anubis*  
10. *Figure 10.* Perceptions of *Chlorocebus pygerythrus*  
11. *Figure 11.* Perceptions of *Panthera leo*  
12. *Figure 12.* Perceptions of *Lophocebus ugandae*  
13. *Figure 13.* Perceptions of *Pan troglodytes*  
14. *Figure 14.* Perception of *Cercopithecus ascaniu*  
15. *Figure 15.* Perception of *Piliocolobus tephrosceles*  
16. *Figure 16.* Perception of *Colobus guereza*  
17. *Figure 17.* Perception of *Tragelaphus sylvaticus*  
18. *Figure 18.* The Average Number of Years Spent Living
## ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBC</td>
<td>Community-Based Conservation</td>
</tr>
<tr>
<td>HHC</td>
<td>Human-Human Conflict</td>
</tr>
<tr>
<td>HWC</td>
<td>Human-Wildlife Conflict</td>
</tr>
<tr>
<td>Kibale</td>
<td>Kibale National Park</td>
</tr>
<tr>
<td>PA</td>
<td>Protected Area</td>
</tr>
<tr>
<td>SWCCC</td>
<td>Sebitoli Women’s Conservation and Culture Center</td>
</tr>
<tr>
<td>UWA</td>
<td>Uganda Wildlife Authority</td>
</tr>
</tbody>
</table>
Abstract
If humans are to live sustainably and in harmony with wildlife in the vicinity of Protected Areas, policy makers, and government authorities need to make informed decisions with consideration to the needs of local communities. For this to happen, policy makers must understand the perceptions of local communities and take local perspectives into account. As language is at the root of perception, language was studied in the context of its role in shaping local perceptions of human-wildlife conflict and consequential conflict mitigation strategies. Six communities around the Northern region of Kibale National Park, Uganda, were studied, with sites located in the Mugusu sub-county, Sebitoli Park region, and Kyenjojo district. The main problems that communities around Northern Kibale currently associate with living near the Park and wildlife are crop-raiding, hunger or famine, poverty, death, disease, lack of education, and lack of development. Results additionally indicate that language is being used in these communities to redefine human-human conflict as human-wildlife conflict and to reframe wildlife as a symbol for conflict between human stakeholders. Moreover, community responses indicate that the current mitigation strategies used in the area are not effective and the current rate of conflict is not sustainable. Policymakers must understand the problems facing these local communities to create and implement effective mitigation methods. Further research is needed to supplement this study in additional locations and with the addition of individual interviews along with focus group discussion.

KEY WORDS: human-wildlife conflict, language, crop-raiding, Kibale National Park, problem animal
Part I: Introduction

Background Information

The Uganda Wildlife Authority defines a “problem animal” as “any wild animal that poses a threat to human life and or property outside protected areas and with due regard to its conservation status have been declared as such by law.” Additionally, the Authority defines “vermin” as “wild animals that are destructive, annoying or injurious to health and with due regard to their conservation status have been declared as such by law” (Uganda Wildlife Authority 2020). “Problem animals” and “vermin” are both terms used to describe a type of human-wildlife conflict in which the animals are blamed as the source of conflict.

Human-wildlife conflict can arise in areas of overlapping human and animal habitation, where there is potential for competition over access to and use of resources (Kolinski & Milich 2021; Lee 2017). This kind of conflict can manifest itself in many forms, including animal-perpetrated crop-raiding and human-perpetrated revenge killings, and even extend to illness and collisions (Messmer 2009). Human-wildlife conflict can arise due to an increase in the human population, which often results in human encroachment and expansion into wild habitats (Messmer 2009; White and Ward 2010). Recently this has been identified as a particular issue in sub-Saharan Africa, where there is greater pressure on natural resource use (White and Ward 2010).

Conflict predominantly occurs in the vicinity of Protected Areas (PAs) (Treves et al. 2006). Especially in communities that engage in agriculture, the effects of human-wildlife conflict can be devastating, as households can lose their only sources of income and food. Humans will often retaliate against the perceived source of conflict, i.e., the animals, with far-reaching impacts on biodiversity and the ecosystem (Kolinski & Milich 2021).

Despite its widespread use, the term human-wildlife conflict is often used as a cover for conflict between groups of humans with competing interests, known as “stakeholders;” this type of conflict is otherwise called “human-human conflict” (Hill 2017; Treves et al. 2006). Community perceptions of wildlife are largely dependent on how the stakeholders are affected (Messmer 2009). In human-human conflict, animals or wildlife can symbolize a convenient scapegoat.
or enemy. Through categorization and alienation, language allows wildlife to be transformed into an amorphous enemy. Native and threatened species can be redefined as natural (i.e., biological) pests when they threaten species introduced by humans or human interests more broadly (Messmer 2009).

Solutions to human-wildlife conflict often can be categorized into two approaches: mitigation, which seeks to offset the impact of conflict, and prevention, which seeks to prevent the conflict from occurring. Mitigation attempts mainly involve developing ways to reduce the impact of wildlife on human stakeholders without necessarily recognizing or considering the underlying social or political conflicts (Hill 2017). Prevention includes taking several steps to stop human-wildlife conflict at the source. In many areas, education is at the heart of effective prevention, as education is a first step towards changing negative perceptions of wildlife and protected areas. Education additionally can connect communities with resources for constructive solutions to HWC.

**Problem Statement**

The terms “problem animal” and “vermin” are emotionally charged and contain strong negative connotations. However, there is very little research available regarding what effects the use of these “negative emotion” terms—and language more broadly—have on perceptions of HWC and consequentially on mitigation strategies, or their purpose in a socio-ecological context. One potential motivation for using negative-emotion words to create a narrative of human-wildlife conflict might be that framing conflict between human interests as human-wildlife conflict disguises the original issue and diverts attention to a convenient scapegoat, thus drawing scrutiny away from political or economic factors (Brightman 2017; Lee 2017). Negative language legitimizes wildlife as “the enemy,” and justifies opposition (Lee 2017).

As people turn the blame for human-human conflict or human-related issues to wildlife, they form a negative opinion of wildlife and can become less motivated to participate in conservation (Hill 2017). This can additionally lead to a retaliatory response from humans and escalate the perceived conflict. The language that people use to describe conflict with wildlife (“pest,” “vermin,” “problem animal”) is an integral part of the narrative of human-wildlife conflict.
(Lee 2017). When given these labels, animals begin to take on symbolic meaning and roles don’t necessarily reflect reality.

In Uganda, few studies have been done investigating perceptions of human-wildlife conflict, and none are readily available on the language used as part of an examination of narratives of human-wildlife conflict and resulting mitigation strategies. Studies by Gibbes et al. 2012 and MacKenzie et al. 2019 include case studies in Kibale National Park examining local community perceptions of wildlife conflict; however, these studies did not investigate the use of language. This study supplements the data from the Gibbes et al. 2012 study and the MacKenzie et al. 2019 study with different locations within the Northern part of Kibale National Park and a slight shift of focus to include the relationship between language, perception, and behavior in the form of mitigation and prevention strategies.

With this research gap, I intend to investigate local perceptions of and responses to “problem animals” in communities surrounding Uganda’s Kibale National Park Community. Specifically, I intend to examine the use of language employed when discussing human-wildlife conflict, and how language, through emotional influence, impacts perception and mitigation strategies.

Scope of the Study

This study was conducted over fourteen days and was primarily based in the communities of the Sebitoli and Mugusu regions of Kibale National Park. Focus groups were conducted among the park-adjacent communities. The research was conducted entirely in communities within 5km of Kibale National Park. Data collection focused on local perceptions of problem animals, human-wildlife conflict, and mitigation strategies, with special attention paid to the language used and the type of connotations attached to emotion-inciting words (positive, negative, neutral, etc.)

Significance of the Study

Effective, long-term implementation of mitigation and prevention strategies for human-wildlife conflict depends upon the ability to engender support and cooperation from the local communities who will have to bear the brunt of the costs and potential impacts that may be incurred (Treves et al. 2006;
White and Ward 2010; McKenzeia et al. 2019; Messmer 2009). Because local communities often have to work in tandem with branches of the government and NGOs for the implementation of mitigation strategies, need to be able to understand the local perspectives of human-wildlife conflict (White and Ward 2010); this knowledge of how local communities perceive wildlife conflict is also vitally important to the conceptualization and successful enactment of mitigation strategies.

Humans must find a way to address human-wildlife conflict and establish a culture of tolerance with ourselves and nature, especially considering that human-wildlife conflict is increasing globally and even more so around PAs, often adding pressure to reduce or eliminate PAs (McKenzieia et al. 2019; White and Ward 2010; Treves et al. 2006). According to multiple sources, human-wildlife conflict is increasing, especially near protected areas (Messmer 2009; White & Ward 2010; MacKenzie et al. 2019; Treves et al. 2006). The continued existence of a growing number of species of animals and plants depends in large part on their ability to co-exist with humans (Treves et al. 2006). The success of mitigation programs largely depends upon the ability of those implementing the strategies to understand and incorporate the attitudes of the competing stakeholder groups, especially where it concerns local communities (Messmer 2009). If conservationists can understand how people perceive wildlife and wildlife-based conflict, they will better be able to implement mitigation strategies that the community will embrace.

Language is at the root of perception. Both individual and community perceptions of HWC are determined by a complex set of social and biophysical factors (Treves et al. 2006). Language and the use of words to convey an array of impressions, feelings, and opinions, is at the heart of all social communications. Language enables the speaker to apply a number of pressures upon the recipient, and impart a wide range of emotions, including fear and hope, thereby shaping the perceptions of individuals and communities. It is crucial to study the language used in relation to conservation and wildlife conflict, as in the words of Lee 2017, “language is as important as action, and, indeed, empowers action.”

As language and perception shape one another, it is important to understand the language used when discussing HWC to comprehend the issue of HWC itself. This study provides an analysis on the use of language when
discussing HWC as part of a larger goal of understanding the complexities of HWC. By comprehending local perceptions of HWC, the conservation community can strive to create a culture of empathy and create constructive and mutually beneficial solutions to conflict.

Objectives

General Objective: To assess local perceptions of and responses to “problem animals” in communities surrounding Uganda’s Kibale National Park.

Specific Objectives:

I. To formulate a definition of “problem animal” from a local perspective;
II. To identify perceived benefits and problems that accompany living near the Park;
III. To examine the language used when discussing human-wildlife conflict;
IV. To evaluate local responses and current mitigation strategies.

Study Questions

In this study, the questions asked are:

I. How do people within the communities of Kibale National Park perceive their interactions with wildlife?
II. What are the benefits and problems that communities associate with living near the Park?
III. How do they define “problem animals”?
IV. What types of language and rhetoric do they use when discussing HWC?
V. What purpose does using specific types of language (e.g., emotion-inciting language) serve for a community experiencing HWC?
VI. How effective are the current mitigation strategies?

Part II: Literature Review

Globally, crop-raiding is a devastating problem for subsistence farmers and their livelihoods (Raphela and Pillay 2021). This is especially true in developing African countries that experience a high proportion of crop-raiding
and other forms of HWC. Much human-wildlife conflict arises from differences in the objectives of varying stakeholder groups. This is especially true where wildlife is a resource that stakeholders can exploit for economic or cultural benefit, or where the goals of conservation are in opposition to human development and growth (White and Ward 2010). Human-wildlife conflict exists on several levels, with both shared and separate contexts that need to be considered as part of mitigation strategies. Lee 2017 provides a visual representation of circles of hierarchy displaying how stakeholders interact in their various contexts (Figure 1). This diagram helps to illustrate the motivations of various stakeholder groups; as conflict is often between stakeholders rather than between humans and animals, it is important to understand and recognize stakeholders’ perspectives and actions. It is additionally important to understand these interactions to comprehend perceptions of wildlife, and therefore to prevent or resolve conflict. Attitudes towards wildlife and Park initiatives heavily influence how willing communities will be to work towards coexistence with wildlife, rather than conflict (Hill 2017).

Figure 1 (Lee 2017). Diagram of contexts within communities with regards to perceptions of wildlife and HWC.

Throughout much of Africa, including the entirety of East Africa, elephants \textit{(Loxodonta africana)} are viewed as especially dangerous crop-raid-ers; not only do they eat crops, they can also destroy them by traveling through fields (Hoare 2015). An encounter with an elephant can prove fatal to a subsistence farmer trying to guard crops. In areas with high levels of crop-raiding elephants, common mitigation methods include the use of apiaries, fences, trenches, scare-
shooting by wildlife authorities, compensation schemes, and translocation of specific “problem animals” (Hoare 2015).

In Uganda, a large proportion of the population lives in rural areas and engages in subsistence farming. For these farmers, their income and source of food depend almost entirely on the crops that they grow themselves (Gibbes et al. 2012; Hartter and Goldman 2011; Treves et al. 2006). Uganda is a diverse country with a variety of habitats ranging from the rainforests of Kibale National Park, the savannahs and grasslands of Queen Elizabeth National Park and Murchison Falls National Park, and the high-altitude mountain region of Mount Elgon National Park and Rwenzori Mountains National Park (Gibbes et al. 2012; Struhsaker 1997). With such a wide range of habitat, diversity comes a wide range in the diversity of flora and fauna: Uganda contains all of Africa’s “big five” animals-- elephants, lions, rhinoceros, buffalo, and leopards-- along with an astonishing diversity of notoriously crop-raiding primates. Kibale National Park alone contains thirteen species of primates, including the endangered red colobus and chimpanzee (Struhsaker 1997). With such a high number of documented crop-raider species, including African elephants, the communities surrounding Kibale National Park are at a heightened risk of experiencing the devastating effects of HWC.

MacKenzie et al. 2019 conducted a study using three surveys in 2006, 2009, and 2012 on the percentage of households claiming benefit v.s. problems from living in proximity to Kibale. They found that the percentage of households claiming benefits has decreased, while the percentage of households claiming problems has increased. They additionally found a positive relationship between perceived benefit from Kibale and participation in the factors of PA-based employment, tourism, revenue sharing, and resource access. They found that people who had issues with problem animals had a higher tendency to view living in proximity to Kibale negatively. MacKenzie et al. additionally discuss conservation strategies and outcomes within the context of local perceptions of the advantages or disadvantages of living near Kibale.

A study by Struhsaker 2005 examines human-wildlife conflict as it pertains to primates in Kibale National Park. Struhsaker provides an overview of information for Kibale National Park and outlines information on Kibale’s climate, soil, flora, and fauna with the intent to provide context for understanding
the impact of logging and human activity, a form of HWC. In describing the flora diversity, Struhsaker notes that human activity is heavily influential, indicating a mutually affected relationship between humans and the wildlife in the Park. Additionally, Struhsaker reports the unusual diversity and density of primates, which are known to be frequent crop raiders. Especially notable is the high number of endangered red colobus monkeys residing in Kibale; increased conflict between humans and endangered species could lead to species extinction.

Part III: Methodology

Study Area Description

Uganda is a developing country in Eastern Africa covering 241,037 km². Upwards of 80% of Uganda’s land is used for small-scale farming, with population growth increasing the pressure for natural resources. Unsustainable logging and conversion of forest into land used for farming continue at an increasing rate. The Albertine Rift region, part of which is in Uganda, is one of the most threatened diversity hotspots in the world due to resource extraction (Gibbes et al. 2012).

Kibale National Park covers an area of 795 km² in Western Uganda, within the diversity hotspot of the Albertine Rift. The majority of the population around Kibale are subsistence farmers, with the landscape predominated by farms (Hartter and Goldman 2011). Crops include bananas, maize, beans, and cassava, along with the occasional cash crop. There are two main ethnic groups in the area: the Bakiga on the Eastern side, the Batoro on the Western side, where the majority of this study will be conducted (Gibbes et al. 2012). Kibale is famed for its primate population, hosting thirteen species of primates, for its floral diversity, and for its array of charismatic megafauna such as elephants, leopards, and lions (Struhsaker 1997). Kibale was originally established as a forest reserve in 1932 before being made a National Park in 1993 (Hartter and Goldman 2011).

Study Site

Respondents will come from villages in the Sebitoli, Mugusu, and Kyenjojo regions near Kibale National Park (Figures 2 and 3). The ranger assisting with the study recommended the sites for their proximity to the park and
the accessibility of the communities. He additionally initiated contact with the communities and organized focus groups. While there is no readily available information published on the small, rural, and often isolated villages in these areas that were included in the study, the districts themselves and their ecosystems are somewhat more documented.

**Figure 2.** The locations of the focus group communities in the Northern region of Kibale National Park as seen in Google Maps. The blue “pins” mark the study sites.
Figure 3. The study sites in the Northern region of Kibale National Park are shown in relation to the whole of Kibale on Google Maps. Blue ‘pins’ mark the study sites.

Sebitoli (Figure 4) is a region in the Northern part of Kibale National Park-- around 12 km from the city of Fort Portal-- that is known for its chimpanzee populations. The Sebitoli region contains a largely fragmented habitat, part of which is regenerating and is continuously being transformed by the high human population in the area. Agriculture consists of tea and eucalyptus plantations, along with private subsistence gardens (Bortolamiol et al. 2014). Sebitoli has been identified as a site experiencing considerable human-wildlife conflict, with both crop-raiding and poaching reported (Foundation Ensemble 2014). The first focus group was with the Sebitoli Women’s Conservation and Culture Center, in the Kaswa parish of the Sebitoli region. These women farmed their gardens as a form of subsistence farming, but the SWCCC group focuses on organizing communities and providing education on human-wildlife interactions and resources to alleviate the effects of conflict. The fifth focus group was held near Sebitoli in the Kabarole district in a small rural community near the Kahangi estate. This community is located along the park, with an abrupt divide between tea plantations and dense forest. The sixth focus group was also held in this area, in a town known locally as Kyawankada. Similar to the Kahangi community, the
Kywankada community presses up against Kibale National Park and experiences near-constant crop-raiding.

Figure 4. Map of Sebitoli region relative to Northern Kibale, Kibale National Park, Uganda, and Africa (Cibot et al. 2015).

Mugusu is a sub-county in the Kabarole district of the Western region, containing 4 parishes and 43 villages (Figure 5). The Mugusu sub-county is 11km south of Fort Portal and borders Kibale National Park, making it a suitable site for an examination of human-wildlife conflict (Human Rights Focus 2021). Little research has been done in the area regarding community relationships with the Park. The second focus group was in the Mugusu sub-county in the village of Kasunga, within the Busoro sub-county of the Kabarole district. The community consists of subsistence farmers who cultivate a variety of crops, including tea, maize, and beans.
Figure 5. Map Kabarole district, which includes Mugusu sub-county (Kisakye et al. 2018).

Kyenjojo district borders Kibale National Park in the North, and contains 18 sub-counties, 109 parishes, and 853 villages (Kyenjojo District Local Government 2021). Similar to Mugusu and Sebitoli, the Kyenjojo district, especially the rural areas bordering the park, have high levels of human-wildlife conflict among the communities of subsistence farmers (Figure 6). The third focus group was held in the town of Kinyantale in the Kyenjojo district. The community consists of subsistence farmers who planted tea, maize, and beans. Similarly, the fourth focus group was held in the Kyenjojo district in the town of Munobwa. This town shares much in common with the third focus group site, consisting of subsistence farmers adjacent to the park.
Study Design & Methods

The study is composed of focus group discussions within the communities. The researcher conducted focus group discussions over 14 days, with a total of 78 respondents from multiple locations (villages) bordering the Northern part of Kibale National Park. Respondents were represented across a variety of factors, including occupation, area of habitation, age, and gender, among others. The ranger who assisted with the study organized focus groups with the chairmen of the individual communities. Participation was entirely voluntary. The researcher asked thirteen standard questions on a variety of topics to facilitate conversation, along with additional questions as the discussion warranted. The researcher additionally asked the respondents to share their opinions on a range of specific animals [see appendix for questions]. The goal sample size was n > 50 participants in order to have enough responses to be representative of the greater community in the Northern Kibale National Park region.

Sampling Techniques and Procedure

To understand the context of human-wildlife conflict in the Northern Kibale National Park region, previous studies and literature were reviewed prior
to the beginning of data collection. The study used non-probability sampling consisting of convenience sampling. A non-probability sampling includes using subjective methods to decide what portion to include from the population (Lavrakas, 2008). Convenience sampling, a type of nonprobability sampling, functions by choosing respondents who can provide convenient sources of data (Lavrakas, 2008). While non-probability sampling generally and convenience sampling specifically are often considered to be faulty methods of data sampling, it was necessary for this study given the rural nature of the communities and the respondents’ occupations, which usually was subsistence farming.

A ranger accompanied the researcher into the communities and villages, where we had been in contact with the community chairman. The chairman would find available participants for the study and ask them to participate; this was necessary as the majority of community members were working in the fields and could not take time off. The respondents who were willing and able to participate were often subsistence farmers on a break from working in the fields or were not working that day for various reasons. I included respondents irrespective of gender, age, activity, or any other outward categorization. However, this method of sampling might have led to a sample bias as many of the participants volunteered to participate in the study or were asked by the community leader. People who could not take time off from working in the fields were also excluded from the sample; participation was limited to those who could take an hour or more out of work, usually in the crop plantations, to speak with the researcher. To compensate the focus group participants for their time, the researcher provided a large bar of soap to each respondent.

The sample size was 78 respondents (n=78), which was greater than the goal of at least 50 respondents (n>50). The population density around Kibale National Park is estimated to be around 252 per square km (Kolinski and Milich 2021), but no recent censuses are reporting the human population. Moreover, any census numbers are likely to be inaccurate. This makes it difficult to be certain whether the sample size is in fact significant. However, the majority of the study’s analysis will be qualitative rather than quantitative, so statistical significance is somewhat less crucial to the success of the study.
Data Collection Instruments

Materials include:
❖ Recorder
❖ Paper and notebook
❖ Pen and pencils
❖ Translator
❖ Focus Group Questions
❖ Compensation for Participation
❖ A computer for analysis and write-up

Data Analysis

Data analysis includes a combination of three analytical methods: content analysis, quantitative analysis, and descriptive analysis. Content analysis involves coding respondent answers into meaningful categories so the researcher can incorporate more variables for analysis (Lavrakas 2008). The analysis is primarily qualitative with some quantitative analysis regarding the number of respondents who gave certain answers, represented through percentages. For example, the analysis includes a quantitative analysis of how respondents ranked the given animals from those viewed most negatively to most positively. The percentages were calculated by dividing the number of respondents or communities, depending on the question, by the total number of respondents or communities. For example, if 10 of the 78 respondents reported liking the color yellow, 12.8% of the respondents have reported liking yellow. Similarly, if 3 out of 6 focus groups reached consensus on an answer, such as their community experiencing poverty, that would mean 50% of communities reported experiencing poverty. The qualitative analysis displays the relationships between certain variables. The content analysis will similarly provide connections between factors and find common components between respondents. The qualitative analysis primarily includes descriptive reporting on the results, with an effort made to draw meaningful conclusions on the community perspectives and compare responses.
Part IV: Results

Defining “Problem Animal”

In the focus group discussions, participants were asked near the end of the session to describe what the term “problem animal” means to them. The participants usually conferred for a minute before answering with some iteration of, “Problem animals are animals that bring ---.” The first focus group answered, “Problem animals are animals which bring disease, famine, death, and poverty.” The second focus group answered, “Problem animals are any animals that feed on crops, destroy everything, cause famine and hunger, prevent our community from making progress, and prevent our children from receiving education.” The third group responded simply, “Animals that crop raid, bring poverty, death, and famine.” The fourth group answered similarly, stating, “Any animal that crop-rails, destroys everything, brings hunger, famine, and poverty.” Somewhat poetically, the fifth group responded, “Animals that come like thieves when we are not watching, eat our crops, destroy everything.” And finally, the sixth focus group described problem animals as, “Animals that come and destroy every crop we have planted, leaving hunger and poverty.”

Among these seventy-eight people, there seems to be some consensus about what a problem animal is: from the local perspective of communities bordering the Northern part of Kibale National Park, a problem animal is an animal that eats their crops, destroying everything, and cause poverty, famine, disease, lack of education, and even death. The members of these communities feel they can trace the root of most of their problems back to a problem animal. The issues that communities most reported associating with the park and wildlife were, in order of most to least frequently reported, (a) crop-raiding, (b) hunger or famine, (c) poverty, (d) death, (e) disease, (f) lack of education, and (g) lack of development.

Problems and Benefits Associated with the Park

Communities reported on average 4.8 types of benefits as a result of living near the park and 10.6 types of problems as a result of living near the park, for roughly a 1:2 benefits: problems ratio (Figure 7). The benefits participants reported receiving from living near Kibale can be divided into two main
categories: income and resources. The income category includes the benefits of receiving money from tourism in the form of revenue sharing policies, even if these are rarely upheld, employment in park management and services, and compensation from UWA for damages caused by animals from the park, also rarely upheld. The resources category includes the ability to collect free firewood, medicinal herbs, and other non-native species for miscellaneous purposes.

83% of communities reported tourism being a positive result of living near the park, or more specifically, the money that tourists bring. The remaining 17% of communities reported that while there were tourists in the area, their community saw none of the money from them. While Uganda does have a policy of revenue sharing where a portion of profits from the National Parks is allotted for the communities near the park, only 33% of the communities reported receiving this revenue-sharing money from the government. Only one community did not report rainfall for crops as a benefit of living near the park. 100% of respondents reported receiving medicinal herbs from the park, while 74% reported collecting free firewood from the park. It should be noted that it is legal to collect firewood from dead trees and branches, and from non-native or invasive species. Only 33% of communities reported being able to get jobs working in a park-related industry, with many respondents complaining that jobs were primarily given to transplants from non-local communities. Most communities (66%) reported UWA’s presence as providing some benefits, including financial aid, educational programs, and support in implementing mitigation strategies; however, 83% of communities additionally reported UWA’s involvement as negative in that they do not provide enough help and do not give promised compensation.

The problems that participants attribute to the park can be divided into five main categories: problems stemming from wildlife, poverty, UWA, non-community members, and natural disasters. While wildlife is its category, it is worth noting that the respondents described all of the other categories as stemming from wildlife or proximity to the park. The wildlife category includes crop-raiding, animal attacks, including fatalities, no rest from guarding crops, and wildlife-borne diseases. The poverty category includes hunger and famine as a result of crop-raiding and HWC and no money for education. The UWA category
includes a lack of compensation for crop and livestock losses, UWA not providing enough support in defending from crop-raiders and dangerous animals, and policies that favor the park over communities and people. The non-community members category includes poachers, criminals who hide in the park, and jobs being given to non-local transplants. The final category of natural disasters includes flooding and landslides.

For problems associated with living near the park, 100% of communities reported crop-raiding to be an issue, along with resulting famine and hunger; 100% of communities additionally reported experiencing poverty. All of the respondents in this study associate the hunger and poverty that plagues their communities with the park and the wildlife from the park, with one being a direct result of the other. 66% of communities reported not having enough money to send their children to school, and many participants attributed this directly to poverty caused by problem animals. Only 16% of communities did not report disease to be a problem that they associate with the park: 84% of communities associate diseases such as malaria and Lyme disease with living near Kibale. Perhaps most disturbingly, 100% of communities reported premature death as a result of living in proximity to the park generally, and problem animals specifically; similarly, 100% of communities reported having known someone killed by an elephant in the recent past.

Additionally, 75% of participants reported not getting sleep due to having to sleep in the fields at night to guard their crops against crop-raiders. Only 7% of participants reported receiving enough assistance from UWA in what many participants termed the “fight” against problem animals and crop-raiders. Additionally, 52% of participants reported feeling that the existing policies favoring the park over the people are a problem for their community; examples of these policies included the policy where farmers are fined over one billion UGX when one of their livestock animals escape into the park, while they receive no money when animals from the park destroy their crops. While UWA’s policy is to compensate communities for losses caused by crop-raiders, 93% of participants reported not receiving compensation for damages to their safety, livelihood, or property as a result of human-wildlife conflict. 66% of participants report feeling afraid of being attacked or killed by an animal from the park as they go about their daily activities.
Figure 7. Graph displaying several reported benefits against a number of reported problems associated with living in proximity to Kibale, separated by focus group. Communities reported on average twice as many problems from living near the park than benefits.

Use of Language and Community Perception

In 100% of focus group discussions, at least one participant used the phrases “problem animal,” “pest,” or “vermin” unprompted. Additionally, in 100% of focus group discussions, the word “fight” or “fighting” was used to discuss the community’s relationship with wildlife in Kibale National Park. This supports the conclusion that the people in these communities use negative-emotion words and “battle” words to legitimize problem animals as an enemy opposing the success, wellbeing, and development of park-adjacent communities and the people in these communities. This is not to say the problems facing these people are not real or to minimize the role that crop-raiding and wildlife conflict plays in the creation of community-wide poverty and hunger. Rather, by re-labelling animals as crop-raid ers and problems that fight against the interests of the communities, the people of these communities can distance themselves from viewing these animals as an important part of the natural world who have an equal right to land and resource use, and re-classify them as “thieves who destroy everything.”
As part of the study, one of the focus group questions involved giving the participants a range of animals to label as “strongly positive,” “positive,” “neutral,” “negative,” or “strongly negative.” In no particular order, the list of animals respondents was asked to identify include: elephants, Ugandan mangabeys, olive baboons, chimpanzees, red-tailed monkeys, hippos, crocodiles, vervet monkeys, black and white colobus monkeys, Ugandan red colobus monkeys, lions, leopard, buffalo, warthog, and bushbuck. The animals identified as the biggest “problems” were elephants (*Loxodonta africana*) and olive baboons (*Papio anubis*) (Figures 8 and 9), each being identified by 60% of respondents as “strongly negative” and 40% as “negative.” Vervet monkeys (*Chlorocebus pygerythrus*) were also identified as among the worst problem animals, with 16% of respondents labeling them as “strongly negative” and 83% labeling them “negative” (Figure 10).

**Figure 8.** Pie chart depicting the percentage of responses for perceptions of elephants (*Loxodonta africana*), across all focus groups.
Lions (*Panthera leo*) were the next most negatively rated animal, with 66% of respondents identifying them as “negative” and 33% of respondents identifying them as “neutral” (Figure 11). It is worth noting that lions are rarely found in Kibale National Park but can still be found in the area, especially when using the Kibale wildlife corridor to travel to and from Queen Elizabeth National Park. Despite the majority of respondents never having encountered a lion before, they still rated lions as mostly negative given, as one respondent shared, the lions’ reputation as “a man-eating beast.”

Ugandan mangabeys (*Lophocebus ugandae*) and chimpanzees (*Pan troglodytes*) were both rated 50% negatively (Figure 12 and Figure 13).
However, chimpanzees were rated 50% positively while mangabeys were rated 33% positively and 16% neutral, making community perceptions of chimpanzees slightly higher than community perceptions of mangabeys.

**Figure 12.** Pie chart depicting the percentage of responses for the perception of Ugandan mangabeys (*Lophocebus ugandae*) across all focus groups.

**Figure 13.** Pie chart depicting the percentage of responses for the perception of chimpanzees (*Pan troglodytes*) across all focus groups.

Red-tailed monkeys (*Cercopithecus ascani*) and the endangered Ugandan red colobus monkey (*Piliocolobus tephrosceles*) were both identified equally as “negative,” “positive,” and “neutral,” with a rating of 33% in each category (Figure 14 and Figure 15). Negative perceptions in endangered and endemic species such as the Ugandan red colobus are especially dangerous as people will not want to protect or preserve an animal that they see as bad.
Figure 14. Pie chart depicting the percentage of responses for the perception of red-tailed monkeys (*Cercopithecus ascanius*) across focus groups.

Figure 15. Pie chart depicting the percentage of responses for the perception of Ugandan red colobus monkeys (*Piliocolobus tephrosceles*) across focus groups.

The two most positively perceived species of animals from this sample list were Eastern black and white colobus monkeys (*Colobus guereza*) and bushbucks (*Tragelaphus sylvaticus*) (Figure 16 and 17). Each of these species was identified by 83% of participants as positive and by 16% as negative. Only members of one community reported witnessing these species’ crop-raiding. Both of these species were only reported to be crop- raiders by a community in the Sebitoli region of Kibale.
Figure 16. Pie chart depicting the percentage of responses for perceptions of Eastern black and white colobus monkeys (*Colobus guereza*) across all focus groups.

Figure 17. Pie chart depicting the percentage of responses for perceptions of bushbuck (*Tragelaphus sylvaticus*) across all focus groups.

Interestingly, crocodiles and hippos were both rated 100% neutral. This is notable because neither crocodiles nor hippos are found in or around Kibale, meaning the majority of the respondents had never before encountered one. This helps demonstrate how the perception of animals is strongly tied to how the stakeholders are affected by that particular animal. Hippos especially are notoriously dangerous and are responsible for several deaths in Uganda, with 500 people killed by hippos across Africa per year (Kushner 2021). However, because these particular communities were not directly affected by attacks or fatalities from crocodiles or hippos, the respondents rated both species as neutral.

Also of note, only 7.6% of participants reported having knowledge of protected animals being killed by humans; however, this number might be
underrepresented as participants may have been unwilling to admit to knowing illegal activities, especially in front of a ranger, or because killing protected animals is considered culturally shameful. The respondents that did share knowledge about protected animals being killed disclosed that in their communities it was a common practice when defending against crop raiders. This is especially concerning given the endangered or threatened status of many crop-raiding species.

**Efficacy of Current Mitigation and Prevention Strategies**

Respondents were asked to describe the mitigation and prevention strategies they use in their communities. 100% of participants reported guarding their crops against crop raiders, often for days on end. One respondent described, “Since August up to now, I have not slept in my own bed. I have spent every night in the field guarding my crops.” Other participants shared similar stories, relating how it has been weeks or months since they have had a proper night’s rest in bed. The physical and emotional toll this kind of round-the-clock alertness exacts is staggering. While guarding crops, 83% of communities reported using fire as a tool to scare animals.

Aside from physically guarding crops, 68% of participants reported using apiaries as a form of mitigation; one community specialized in the use of apiaries, and every member of that community participated in the production and upkeep of the beehives. Apiaries are designed to keep crop-raiders, and most specifically elephants, from going into the crop fields. However, one member of the community who primarily uses apiaries described that “The animals learn and adapt just as we do. The first time the elephants encountered the bees, they ran away. But now the bees don’t bother them as much.” Respondents in other communities echoed this statement, explaining that the apiaries are less effective than they used to be.

100% of communities reported using drums to scare crop-raiders as a mitigation strategy. 100% of communities also reported using trenches as a mitigation strategy. Drums, similarly to apiaries, are more effective the first few times the crop-raiding animals encounter them. As the animals grow accustomed to the sounds of drums, they are increasingly less deterred. Trenches, when implemented effectively, can be very successful in preventing crop-raiders such
as elephants from getting into the fields. However, another common thread amongst communities was the expression that the current use of trenches was mostly ineffective due to the counterproductive way they have been implemented by UWA. Aside from not being compensated for losses, the biggest source of frustration with UWA in the communities of this study was that UWA would (a) not upkeep and manage the trenches they built, or (b) would build a trench through part of one area and then leave it open in another. With the former problem, the issue is that UWA will fund and provide labor to build the original trenches, but will not then provide for their upkeep or maintenance. Over years and even decades, the trenches fall into disrepair and the community it is supposed to protect does not have the resources to fix the problem. One respondent explained that the only trench UWA had helped them build was approaching thirty years old and was not keeping elephants from crop-raiding. The latter problem is something that almost every community included mentioned as being an issue: UWA will dig a trench through the rainforest bordering the crop fields, but cannot build trenches through the frequent patches of swamp and marshland in the park, leaving a free opening for the elephants to enter the fields. In this context, the communities see the trenches as a waste of time and money as they don’t stop the elephants from crop-raiding. Despite experiencing problems with UWA’s implementation of mitigation strategies, 100% of communities still reported coordinating with UWA rangers when confronted with a crop-raider or other problem animals.

Only 33% of communities reported using fences as part of their mitigation efforts. Elephants can easily step over or crush most fences. Even smaller crop-raiding species such as vervet monkeys can go over or under fences, especially if they are not well maintained. 50% of respondents expressed a desire for UWA to invest in electric fences around their communities, which they believe would be more effective at keeping crop-rafters away. However, electric fences are expensive and even more difficult to maintain than regular wire fences. Additionally, electric fences would only even be possible in areas with a strong electrical infrastructure, which many rural communities in Uganda do not have.

Respondents were subsequently asked to evaluate from their perspective whether these strategies have been effective or not. Only 19% of participants
reported that the current prevention and mitigation strategies are effective. Many respondents qualified this statement with, “If we had more methods….” or “If UWA provided more funding….”; the respondents, despite feeling that the current strategies were not working, did not want to present a negative attitude or give up hope that these methods could work. Additionally, respondents were asked to assess whether they felt the current rate of HWC is sustainable--emotionally, physically, and financially. Similar to the perceptions on the efficacy of mitigation methods, only 19% of participants reported that the current rate of conflict can be sustained by their communities. Given the high amounts of physical, emotional, and financial stress that the current human-wildlife conflict situation exerts on these rural communities, the overwhelming majority of respondents expressed that as things are now, the rate of conflict is not sustainable. However, as with the discussion of strategy efficacy, they emphasized the belief and hope that conflict can be sustainable under the right management and with enough resources.

It is important to recognize that the members of these communities want very badly to exist in harmony with nature and to co-exist with the parks. 100% of participants expressed a desire to live peacefully with wildlife, and 100% of communities reported participating in conservation in some form. For example, 66% of respondents reported taking part in tree-planting initiatives within and around the Park. Also worth noting is that 100% of participants reported a self-perception as having a positive role in human-wildlife conflict. This also helps demonstrate that the people in these communities want to help solve the issue of HWC and are willing to take steps to ensure that happens; often, these communities just do not have the education and resources to be able to take steps towards a productive, mutually beneficial future with the Park.

Part V: Discussion, Conclusions, and Recommendations

Summary

For humans to live sustainably with wildlife in the vicinity of Protected Areas and without the devastating impacts of conflict, government authorities, on a local and national scale, need to understand the local needs of communities and make informed decisions with due consideration to these communities. Policy
makers must understand the perceptions of all stakeholders involved, especially local communities, and act with input from representatives of Park-adjacent communities. As language is at the root of perception and empowers action, this study examined language in the context of its role in shaping local perceptions of human-wildlife conflict and resulting conflict mitigation strategies. With input from six communities around the Northern region of Kibale National Park, this study was able to form a consensus of how the communities in this region of Kibale perceive wildlife and the Park. The most pressing problems that communities around Northern Kibale currently associate with living near the Park and wildlife are crop-raiding, hunger or famine, poverty, death, disease, lack of education, and lack of development. Results additionally indicate that language is being used in these communities to redefine human-human conflict as human-wildlife conflict and to reframe wildlife as a symbol for conflict between human stakeholders. Moreover, community responses indicate that the current mitigation strategies used are not effective and the current rate of conflict is not sustainable. Policymakers and Park officials need to understand the problems facing these local communities to create and implement effective mitigation methods. Further research is needed to supplement this study in additional locations and with the addition of individual interviews along with focus group discussion; future studies should also try to avoid using a Park ranger as a translator.

Discussion

Defining “Problem Animal”

To reiterate the consensus definition of “problem animal” from the communities of Northern Kibale, “a problem animal is an animal that eats their crops, destroys everything, and causes poverty, famine, disease, lack of education, and even death”. This definition is similar to the definition given by the Uganda Wildlife Authority (2020) but differs in the personal nature of the definition. The participants of this study were specific with the problems that “problem animals” cause rather than listing anonymous “threats.” That the problems expressed through this definition are also mostly human-caused problems between human interests reaffirms the conclusions drawn by Hill 2017, Treves et al. 2006, and Messmer 2009 regarding most HWC caused by a conflict.
between conflicting human groups. For example, the members of these communities see their poverty as a direct result of wildlife and the park; however, poverty in many instances is a result of failings on the part of the government due to corruption and greed— in order words, poverty is a result of competing for human interests rather than crop-raiding animals. The same can be said for the “lack of education,” “disease,” and “famine,” issues as they relate to underlying problems with the national and local healthcare, educational, and social support systems.

With these communities viewing problem animals as the source of all of their problems, the implication is that they are more likely to view wildlife with animosity and escalate the conflict. This is not to downplay the devastating effects that crop-raiding has on these communities; rather it is to acknowledge that wildlife is not the root of the problem, but rather ineffective government and conflict between humans being redirected onto wildlife. For endangered species, conflict with humans is particularly destructive as angry humans will seek to solve their problems by eliminating the perceived source— wildlife and wild areas. This is counterproductive in situations where the root of the problem lies with competing interests between stakeholder groups. Kibale National Park contains several endangered flora and fauna, including the charismatic chimpanzee and African forest elephant. It is crucial to address the conflict between competing human stakeholders and redirect blame away from protected areas and wildlife.

Problems and Benefits Associated with Living Near the Park

The results of this study agree with and supplement the results of MacKenzie et al. 2019, which found that the percentage of households claiming benefits from living near Kibale has decreased with time; additionally, they found that the average number of benefits per household has decreased. The MacKenzie et al. 2019 study was based on data from three surveys in 2006, 2009, and 2012. Part of their findings included that people who had issues with problem animals tended to view living near the park more negatively and report more problems, both of which are consistent with the findings of this study. The overwhelming majority of the respondents of this study had been living near the park for at least ten years, and many for over 20 years (Figure 18). Across all
focus groups, the average number of years that respondents had lived near Kibale was 31.7 years. Given the relatively long amount of time that the respondents of this study have lived near Kibale, and within the context of MacKenzie et al. 2019’s study, it makes sense that they are reporting more problems than benefits. This study additionally supplements data from the Struhsaker 2005 study, which specifically examines conflict with primates within the context of primate conservation status.

![Bar Chart: Number of Years Spent Living Adjacent to Kibale National Park](chart.png)

**Figure 18.** The Average Number of Years Spent Living Adjacent to Kibale National Park, Across All Focus Groups

That this study concurs with the results of MacKenzie et al. 2019 and Struhsaker et al. 2005 point to the implication that HWC around Kibale National Park is getting worse. As the human population continues to grow and competition for resources becomes more intense, wildlife will be harder pressed to survive as the object of blame for the conflict. As this study found an average ratio of 2:1 problems: benefits reported as a result of living near the Park, and with MacKenzie et al. 2019’s results that the gap between the number of problems and benefits is growing, communities are increasingly discontent with the Park and wildlife. People are not going to be motivated to conserve what they see as a problem. As community support is essential for resolving HWC, it is important to prioritize the needs of the communities so they will want to be engaged in conservation.
Use of Language and Community Perception

That 100% of focus group members used the phrases “problem animal,” “vermin,” or “pest,” along with the word “fight” to describe HWC points to the conclusion that the people in these communities do in fact use negative-emotion words and “battle” words to legitimize wildlife as an enemy opposing the success, wellbeing, and development of park-adjacent communities. Reiterating the words of Lee 2017, “language is as important as action, and, indeed, empowers action.” Recategorizing animals through language legitimizes action taken against wildlife and the Park. Additionally, by re-labeling animals as crop-raiders and “problems” that oppose the interests of the communities, the people in these communities can distance themselves from viewing these animals as an important part of the natural world who have an equal right to land and resource use, and reclassify them as “thieves.” The results of this study agree with the Brightman 2017 and Lee 2017 studies, both of which address the issue of HHC being redefined as HWC. Lee 2017 especially addresses the issue of language and perception, explaining that language is directly tied to perception and as such is integral to narratives of HWC.

As previously discussed, using negative language legitimizes opposition against an enemy. In the case of HWC, this use of language has the implication of humans projecting roles onto animals, wildlife, and the Park where they symbolize the issues that communities struggle with, such as poverty and hunger. While the results of crop-raiding can be incredibly harmful to these communities, it is important to recognize the root of the problem as frequently being a conflict between human interests to resolve the problems in these communities. As language and perception shape each other, it is important to not project negative roles onto wildlife to ensure that the true issues are addressed and wildlife isn’t destroyed as a result of human problems. Additionally, as community-based conservation takes on a more prominent role around the world, it is crucial that communities perceive wildlife positively and are active in its conservation.

Efficacy of Prevention and Mitigation Strategies

With the overwhelming majority of participants reporting that the current mitigation strategies are not effective and that the current rate of conflict is not sustainable, the results of this study concur with the results of Messmer 2009.
Messmer 2009 explains that the success of mitigation strategies depends largely on the ability of those implementing the strategies (in this case, UWA) to understand and incorporate the perspectives of varying stakeholder groups (especially the perspectives of the local communities). The results of this study also agree with the conclusions of Hoare 2015, which describes mitigation strategies in East Africa, specifically in the case of African Elephants. The mitigation methods found by the Hoare 2015 study were strongly similar to the methods reported in this study. Hoare 2015 also reported a lack of efficacy of mitigation strategies.

That the communities of this study report that the current mitigation and prevention strategies are not working, and that they cannot be sustained, does not carry positive implications for these communities or the wildlife in Kibale. As stated previously, people who are experiencing conflict fatigue or anger with the Park will view wildlife more negatively and are more likely to escalate the conflict. Moreover, many communities expressed that for them to sustain the current rate of conflict without disastrous personal consequences, they require increased financial, educational, and overall support from UWA and the government. Specifically, these communities requested new and varied mitigation methods. However, to implement effective mitigation methods, people outside of these communities need to understand the problems facing them and the community perspectives on conflict. Per Messmer 2009, if conservationists can understand how people perceive wildlife and wildlife-based conflict, they will better be able to implement mitigation strategies that the community will embrace.

Conclusions

Communities around Northern Kibale currently associate the Park and wildlife with a number of severe problems and increasingly few benefits. Moreover, language is being used in these communities to redefine human-human conflict as human-wildlife conflict and to reframe wildlife as a symbol for conflict between stakeholders. While there is no simple way to solve the problem of negative perception and projection of malice onto wildlife, one recommendation that can be made based on the results of this is to increase the
welfare given to communities bordering Protected Areas, especially ones that experience high rates of poverty, such as the communities around Kibale. As the perception of wildlife is largely dependent on how stakeholders are affected, it is important to mitigate the perceived effects of wildlife conflict by investing in healthcare and educational infrastructure, along with upholding the Park policies of compensating farmers for losses and continuing to implement the policy of revenue sharing.

As current mitigation strategies are not sufficient to alleviate the stress of crop-raiding on communities, additional funding is needed to research and develop new mitigation strategies. It is also crucial for policymakers to understand the problems facing local communities to create and implement effective and sustainable mitigation strategies. To this end, policy makers and government officials must involve members of the local communities in decision-making processes and discussions involving Park policies. Given the current status of the relationship between UWA, local government, and local communities, this does not seem immediately likely but will be essential in the coming years.

Limitations

One limitation relates to sample size, specifically as it is difficult to gather a statistically significant sample in the short time the study was conducted. The difficulty of finding participants is in part due to the intensive, time-consuming nature of the respondents’ employment; the respondents were largely subsistence farmers who did not have time to talk to a researcher. It is also difficult to determine significant sample size in scattered and small communities in a region that likely does not have accurate census population numbers. On its own, the method of the focus group is somewhat limited as focus groups tend to favor publicly accepted views and widespread experiences; respondents might be less willing to share controversial opinions or knowledge of illegal actions. (Treves et al. 2006). Moreover, while necessary for this study, the sampling method of a non-random convenience sample is flawed as it can unintentionally lead to a sampling bias.

A factor that I suspect presents a major limitation is the study’s use of a
Kibale Park Ranger as a guide and translator. While unconfirmed, respondents likely withheld experiences, knowledge, or opinions that cast UWA in a bad light or describe an illegal event. Participants sometimes appeared reluctant to admit to any negative feelings towards UWA or knowledge of illegal events, even while others confirmed the presence of these opinions and events. Another limitation is that the ranger I worked with didn’t speak English fluently and often could not understand me. This led to many mistranslations, miscommunication, and instances of him asking respondents the wrong questions without meaning to. Moreover, the translations I was given were likely biased towards what the translator believed I wanted to hear.

**Recommendations for Future Studies**

Future studies looking to investigate human-wildlife conflict around Kibale National Park should supplement this study by expanding the sample size, visiting different communities outside of Northern Kibale, extending the period of data collection, incorporating the perspectives of rangers and other UWA officials, asking a wider range of questions, using multiple sources of data collection, and, if possible, using a random sampling method.
References

Suitable Habitats for Endangered Frugivorous Mammals: Small-Scale Comparison, Regeneration Forest and Chimpanzee Density in Kibale National Park, Uganda.


Harter, J., & Goldman, A. (2011). Local responses to a forest park in western
Uganda: Alternate narratives on fortress conservation. *Oryx*, 45(1), 60-68. doi:10.1017/S0030605310000141


Appendix

Ethical Considerations

One ethical consideration I encountered concerns focus group participants. As Treves et al. 2006 discusses in regards to a similar study they conducted in Kibale, people in rural communities who are affected by HWC frequently want some sort of tangible solution or reimbursement for their losses, rather than a nebulous explanation in the name of knowledge, research, or conservation. Open hostility can be a result, especially if locals feel the research might be used against them. In this study, it was important for me to both ensure that I am not harming the participants or using the research to their detriment, while also upholding the academic standard of presenting an “objective truth,” to the extent that such a thing exists. I recognize that this is not always an easy balance to strike, and something I have had to consider carefully.

Additionally, I obtained consent from each of the participants of this study. Each respondent provided verbal consent to participate and gave verbal consent to have their responses recorded and included in the results of this study. While translation issues occasionally made it difficult, I also made sure that participants understood what my project was about. I also was careful to compensate participants equally. To protect the participants' privacy and confidentiality, each participant will remain anonymous and no names will be disclosed.

Focus Group & Interview Questions:

a. What does a typical day look like for you?

b. How long have you or your family lived near Kibale?

c. Do your daily activities regularly bring you into contact with wildlife?

d. Can you list some areas of concern or satisfaction that you associate with wildlife, or living in proximity to wildlife?

e. What threats to your safety, livelihood, or property do you experience?

f. Rate each of these animals as “strongly positive, positive, neutral, negative, or strongly negative”: elephants, mangabeys, baboons, chimpanzees, red-tailed monkeys, hippos, crocodiles, vervet monkeys,
black and white colobus monkeys, red colobus monkeys, blue monkeys, lion, leopard, buffalo, warthog, bushbuck.

g. How do outside actors attempt to influence your interactions with wildlife?
   i. Do you view these interventions as positive or negative?

h. How would you describe a ‘problem animal’?
   i. How does your community handle conflict with wildlife?
   j. Do you see yourself as having a role in the conflict with wildlife?
   k. Do you feel that these prevention/mitigation methods are working?
   l. Is the current rate of conflict with wildlife sustainable?

**Work Plan and Timeframe**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Dates November 2021</th>
<th>Dates December 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accommodation in Fort Portal</td>
<td>arrive 15th, stay through the month</td>
<td>leave on 4th for Entebbe/Kampala</td>
</tr>
<tr>
<td>Data Collection in Kibale</td>
<td>17th through 31st</td>
<td>N/A</td>
</tr>
<tr>
<td>Buffer/ Cushion Period</td>
<td>16th</td>
<td>1st, 2nd, 3rd, 4th</td>
</tr>
<tr>
<td>Data Analysis &amp; Report Writing</td>
<td>N/A</td>
<td>4th through 12th</td>
</tr>
<tr>
<td>Accommodation in Entebbe/Kampala</td>
<td>N/A</td>
<td>arrive 4th, leave 17th (for the USA)</td>
</tr>
<tr>
<td>Final ISP presentation</td>
<td>N/A</td>
<td>13th and 14th</td>
</tr>
<tr>
<td>Final ISP submission</td>
<td>N/A</td>
<td>15th</td>
</tr>
</tbody>
</table>
## Budget

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit Cost (UGX)</th>
<th>Total Cost (UGX)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accommodation (Fort Portal)</td>
<td>40,000</td>
<td>800,000</td>
</tr>
<tr>
<td>Meals</td>
<td>15,000</td>
<td>525,000</td>
</tr>
<tr>
<td>Guide + Translator</td>
<td>50,000</td>
<td>350,000</td>
</tr>
<tr>
<td>Focus Group Participants</td>
<td>2,000</td>
<td>100,000</td>
</tr>
<tr>
<td>Local Leaders</td>
<td>5,000</td>
<td>15,000</td>
</tr>
<tr>
<td>Daily Transportation</td>
<td>14,000</td>
<td>98,000</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>1,888,000</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Leftover:</strong></td>
<td><strong>112,000</strong></td>
<td></td>
</tr>
</tbody>
</table>