

Long-term research, conservation, and sustainability in protected areas

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KENYA



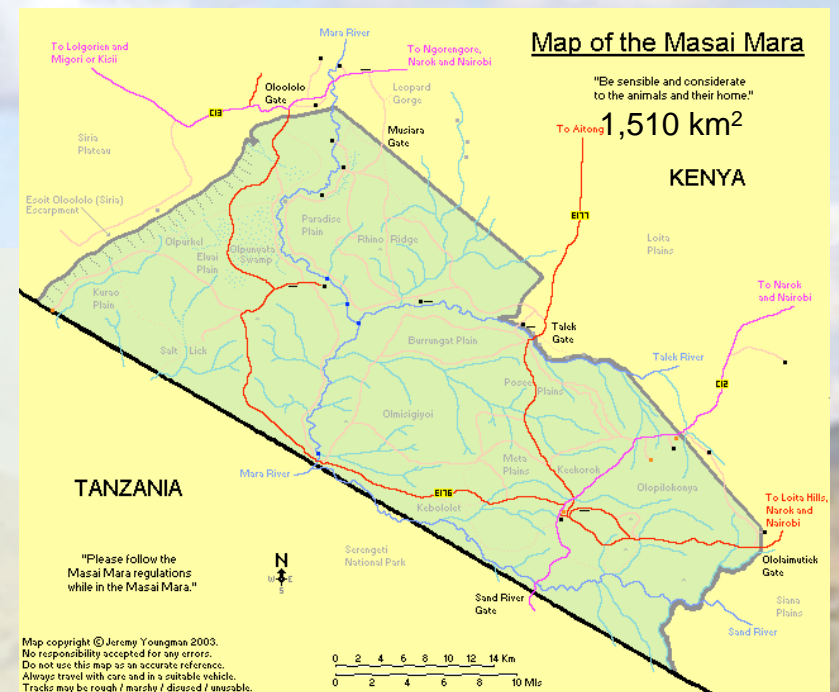
Only 12% of Kenya is protected by KWS for wildlife conservation

- 45.5 million people
 - 42% between ages 0 and 14
- 40th fastest growing population (2.27% growth rate 2014)
- Cultural heritage: 52 Tribes
 - Maasai = 0.7% of Kenya's population
- Natural heritage
 - Abundance of biodiversity: 450 sp.
 - The Big 5
 - The Great Migration: Maasai Mara
 - Seat of hominin evolution



Presentation Aims

1. Protection of Maasai Mara
 - Model: UNESCO
2. Integrating research and conservation
 - Model: Kibale Chimpanzee Project
3. Engaging and educating local people
 - Model: Kasiisi Project



UNESCO World Heritage Candidacy

- Maasai Mara placed on Tentative List in 2010
 - Serengeti given status in 1981
- Benefits of obtaining status
 - International attention and ecotourism
 - Research and funding
 - World Heritage Foundation funds
 - Geneva Convention and local protection
 - List of World Heritage in danger as a tool for state pressure
 - UN affiliation and governmental cooperation
 - Local pride and conservation awareness



Challenges for Obtaining Status

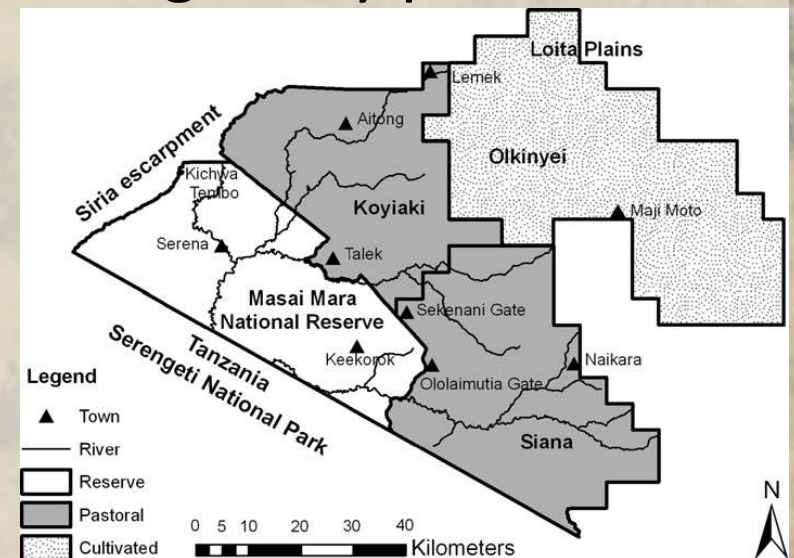
- Expert systems and top down bureaucracy with little knowledge of local practices, usage and needs
- Privileging of natural heritage over cultural heritage
 - Fortress conservation models
- Increase in unsustainable tourism
 - World Heritage Tourism “hop-on-hop-off style” with little economic effect locally

Research in relation the Maasai Mara as World Heritage

- Under what circumstances is WHS beneficial/detrimental?
- Investigate UNESCO's heritage system pertaining to the status of the Mara
 - Why Sergenti and not the Maasai Mara?
- Capacity building promotes sustainable natural and cultural heritage management in the Mara

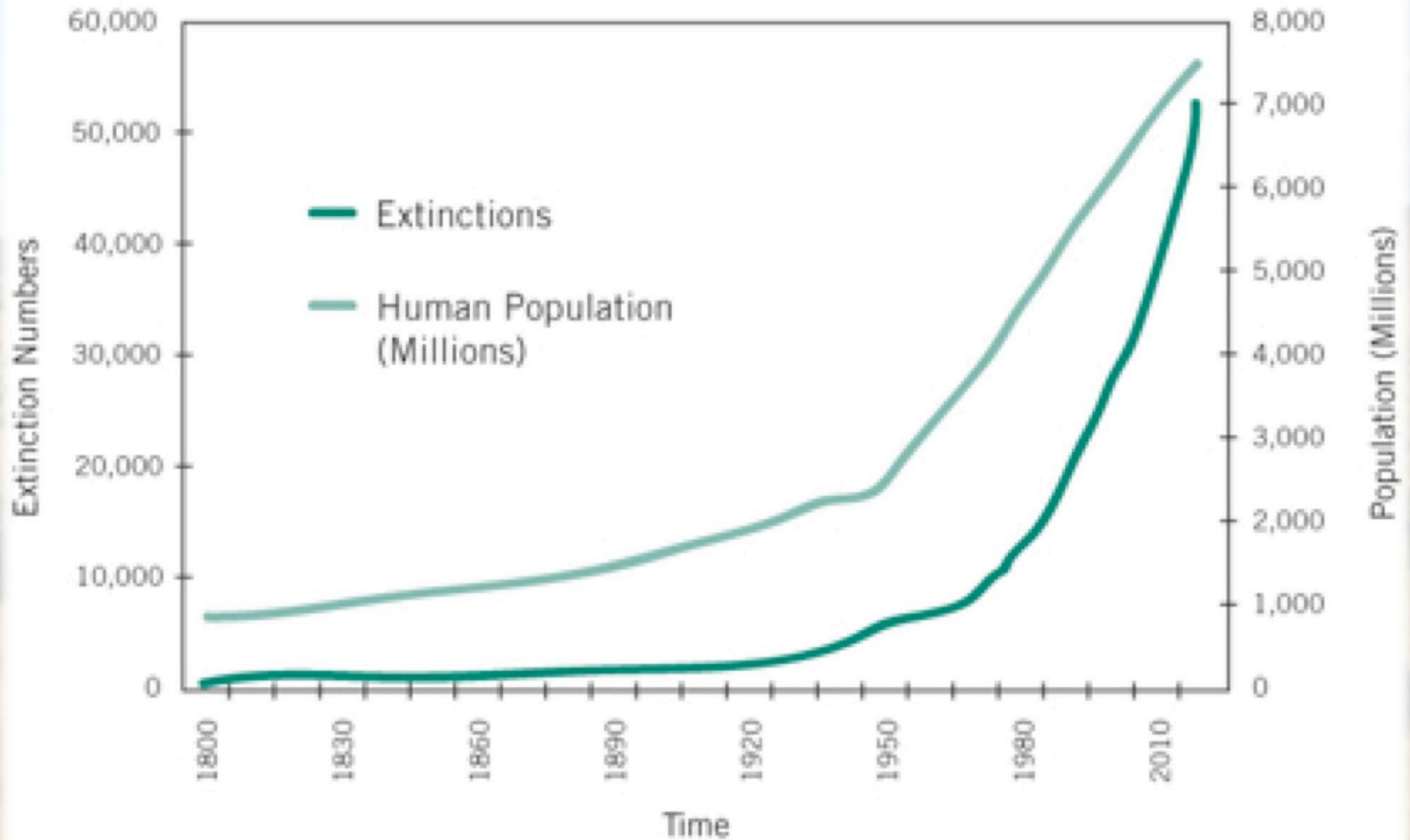
Growing human population puts intense pressure on Maasai Mara

- Growing human population around the Mara
- Expanding farmlands and livestock grazing encroaches on the reserve (Butt et al. 2009, Norton-Griffiths et al. 2008)
 - Limiting wildlife dispersal and migratory patterns
- Illegal use of Mara especially common in dry season (Reid et al. 2003)
- No physical barrier



From Bhola et al. (2012)

Species Extinction and Human Population



Scott, J.M. 2008. *Threats to Biological Diversity: Global, Continental, Local*. U.S. Geological Survey, Idaho Cooperative Fish and Wildlife, Research Unit, University Of Idaho.

The Human – Wildlife Conflict



- 70% of wildlife range outside of protected areas
- Spatial overlap results in:
 - Crop raiding and property destruction
 - Human attacks and disease transmission
- Results in negative attitudes toward wildlife and protected areas (Okello & Wishitemi 2006) and poaching
- Must avoid fortress conservation
 - “Good animals, bad natives”

Benefits of the Mara to Local People

- Major source of water
- Maasai Mara provides increased:
 - Ecotourism
 - Problem: Increased human footprint in area
 - Revenue
 - Problem: Locals rarely see any reserve money (Otieno 2003)
 - Employment
 - Problem: Temptation to collaborate with poachers

How can long-term research help?

- Protected parks with active law enforcement benefits forest and wildlife biodiversity

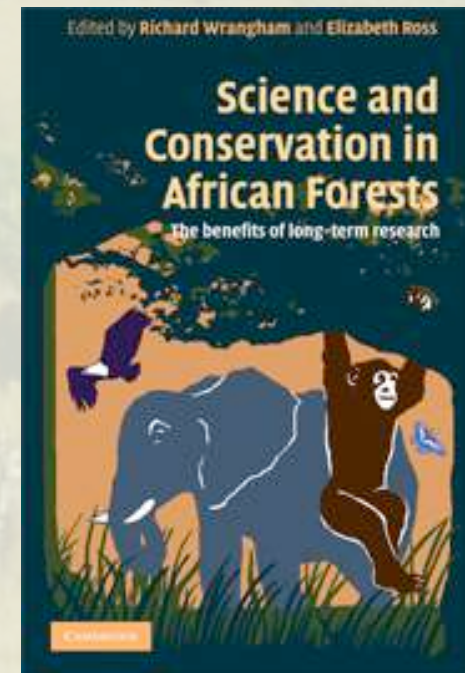
(Bruner et al. 2001; Geldman et al. 2013; Tranquilli et al. 2011)

- Long-term research provides added benefits

(Campbell et al. 2014; Laurance 2013; Wrangham & Ross 2010)

- Species and habitat conservation
- Sensitization in local communities
- Local sustainability through community-based conservation

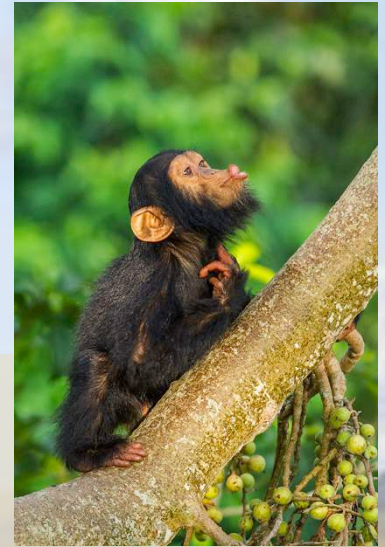
- Positive relationship between research and conservation





KIBALE CHIMPANZEE PROJECT

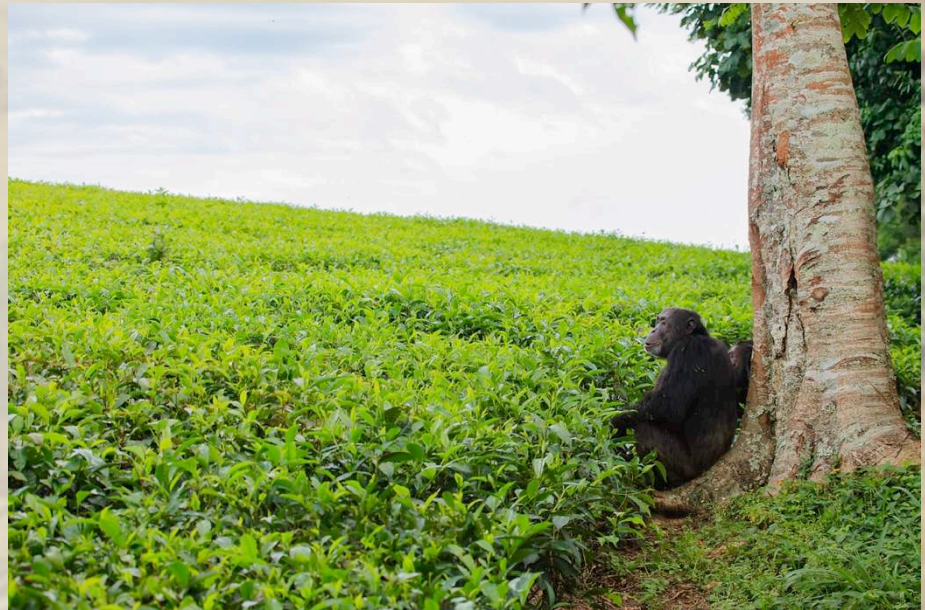
A Case Study



- KCP est. 1987: Kanyawara community (~60 chimps) followed 365 days/year

- KCP promotes:

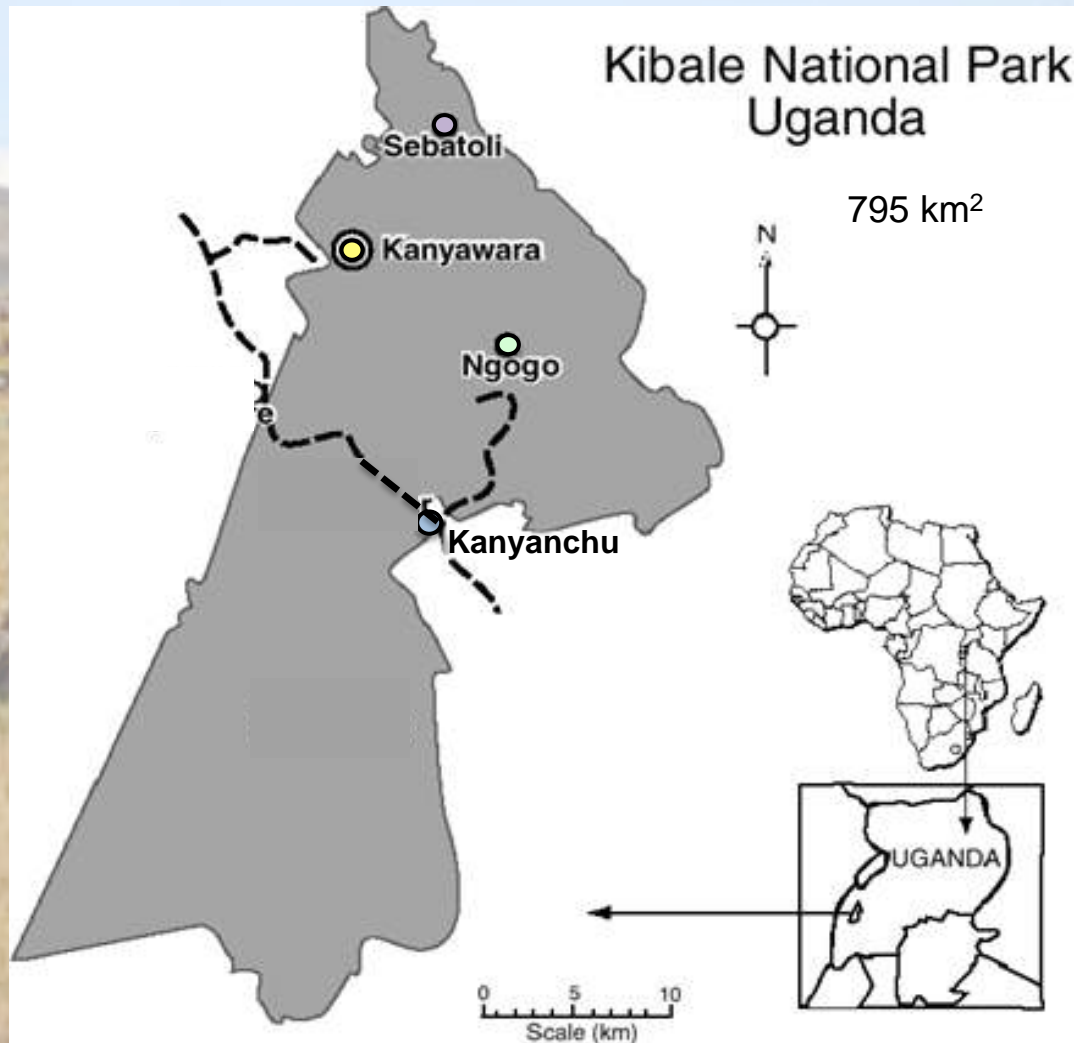
- Research
- Habitat protection
- Species conservation
- Education



- KNP is home to the largest population of eastern chimpanzees (1200+)

Kibale National Park

Gazetted in 1982; Est. in 1993



Like the Maasai Mara, KNP is:

- A protected area
- Rich in biodiversity
- Surrounded by farmlands and dense human populations
- Experiencing intense human-wildlife conflict issues



© Ronan Donovan

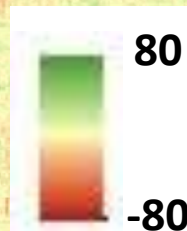
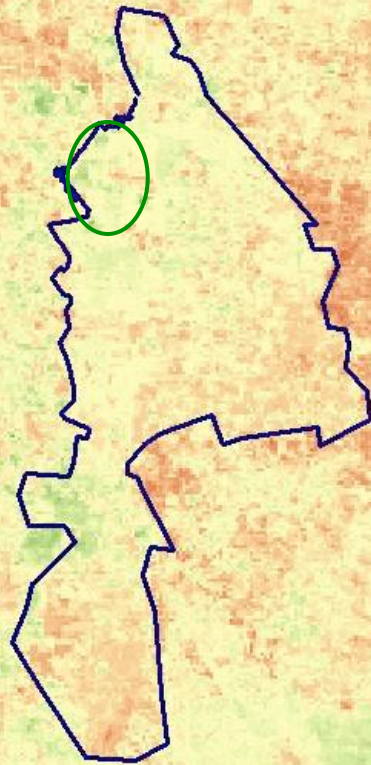


Deforestation in KNP

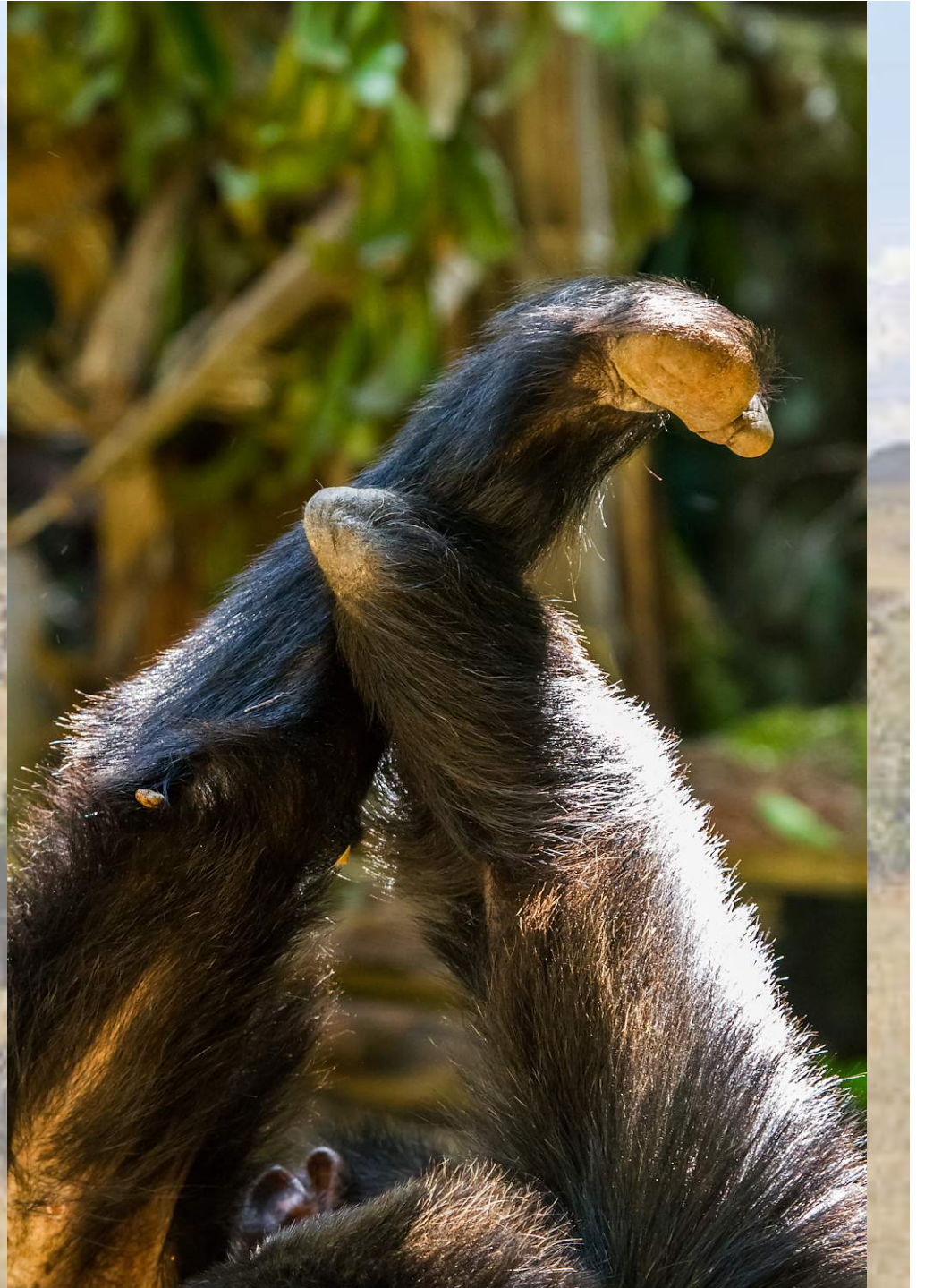


Tree Cover Changes 2000-2010

- Kanyawara: 4.1% increase
- KNP: -2.9% decline
- Outside park (w/i 15 km): -3.0% decline







KIBALE CHIMPANZEE PROJECT

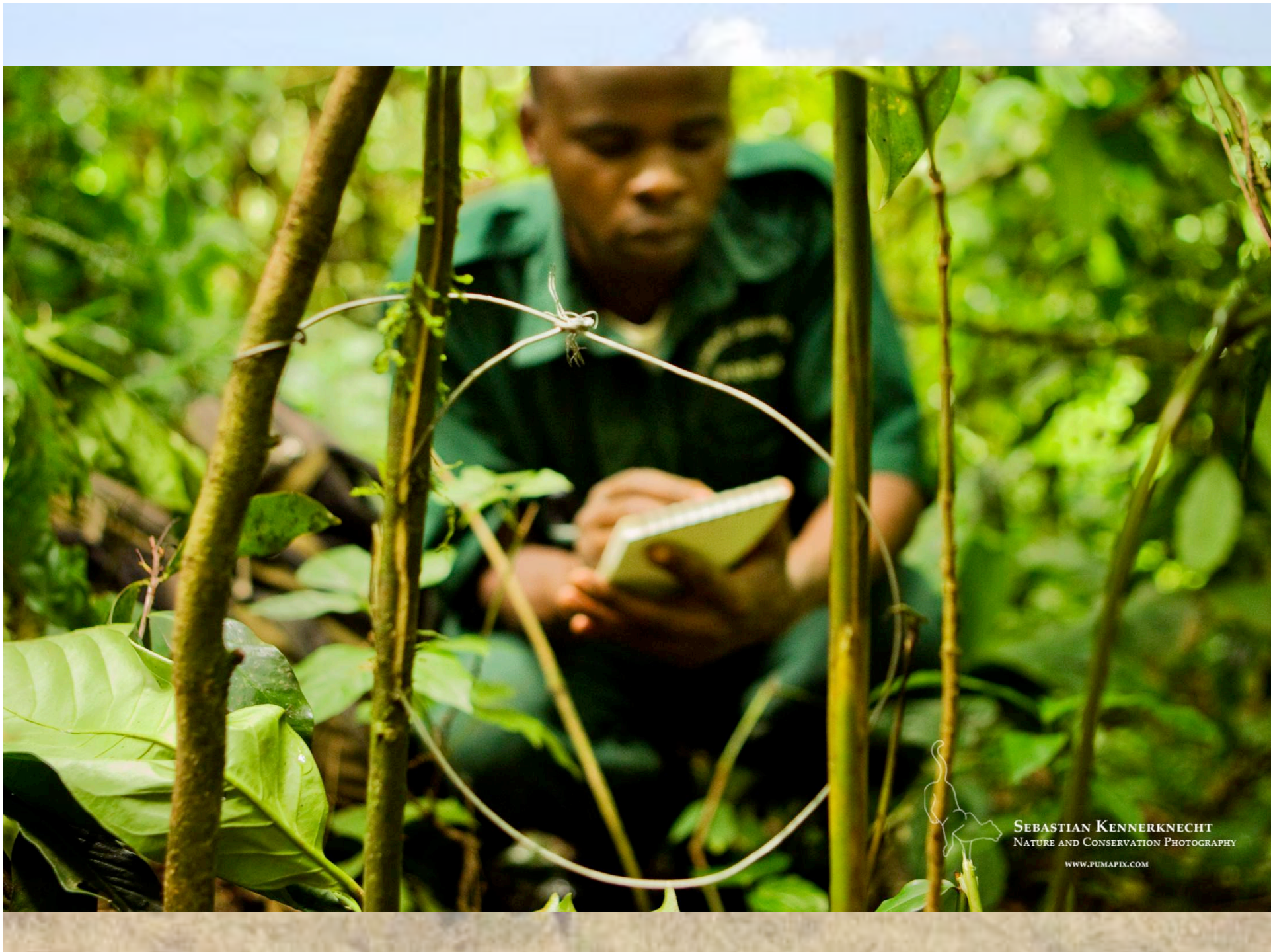
SNARE REMOVAL PROGRAM



- KSRP est. 1997 in collaboration with UWA
 - 6 Ugandan Rangers and a Conservation Education Coordinator



KSRP is funded by Jane Goodall Institutes in Austria, Netherlands, and Switzerland



SEBASTIAN KENNERKNECHT
NATURE AND CONSERVATION PHOTOGRAPHY

WWW.PUMAPIX.COM



Even though snares are intended for ungulates, other animals get caught and often die

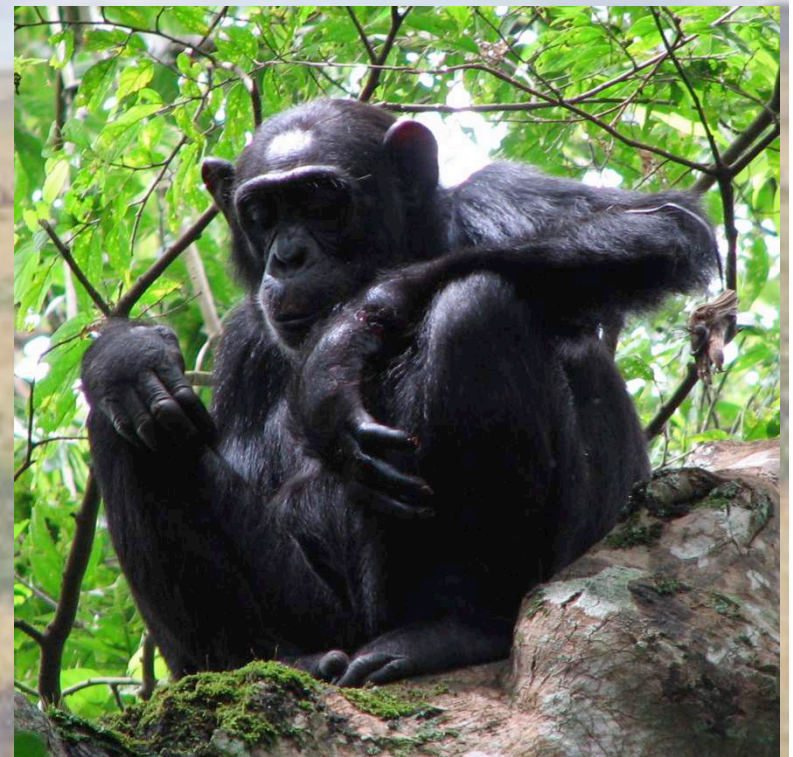




© David R. Mills/Panthera/WCS

Snare traps are Landmines in the Forest

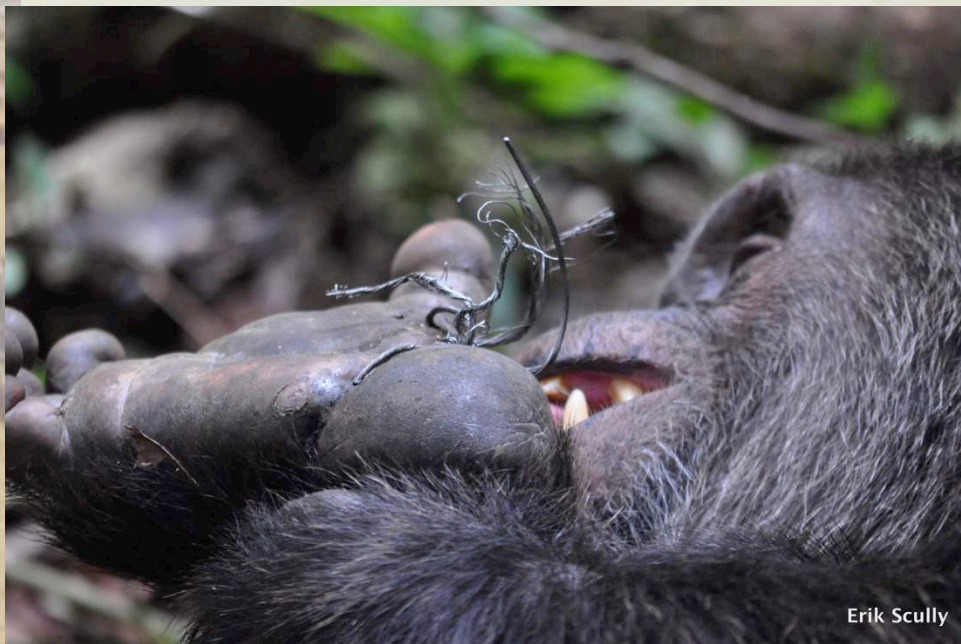
- ILLEGAL and dangerous to all animals, including chimps
- Estimated 1/3 of chimps in Uganda have snare injuries
(Amati et al. 2008; Plumptre et al. 2010)
- An estimated 15,000 snares are set in KNP at any given time
(Wrangham & Mugume, 2000)



© Kyleb Wild

Despite their strength, chimpanzees cannot break free

- More than HALF of the Kanyawara chimpanzees have been snared, including past, present, immigrants, and emigrants



- Snare injuries commonly result in missing, bent, or paralyzed digits (49%) OR hand/foot amputations (30%)



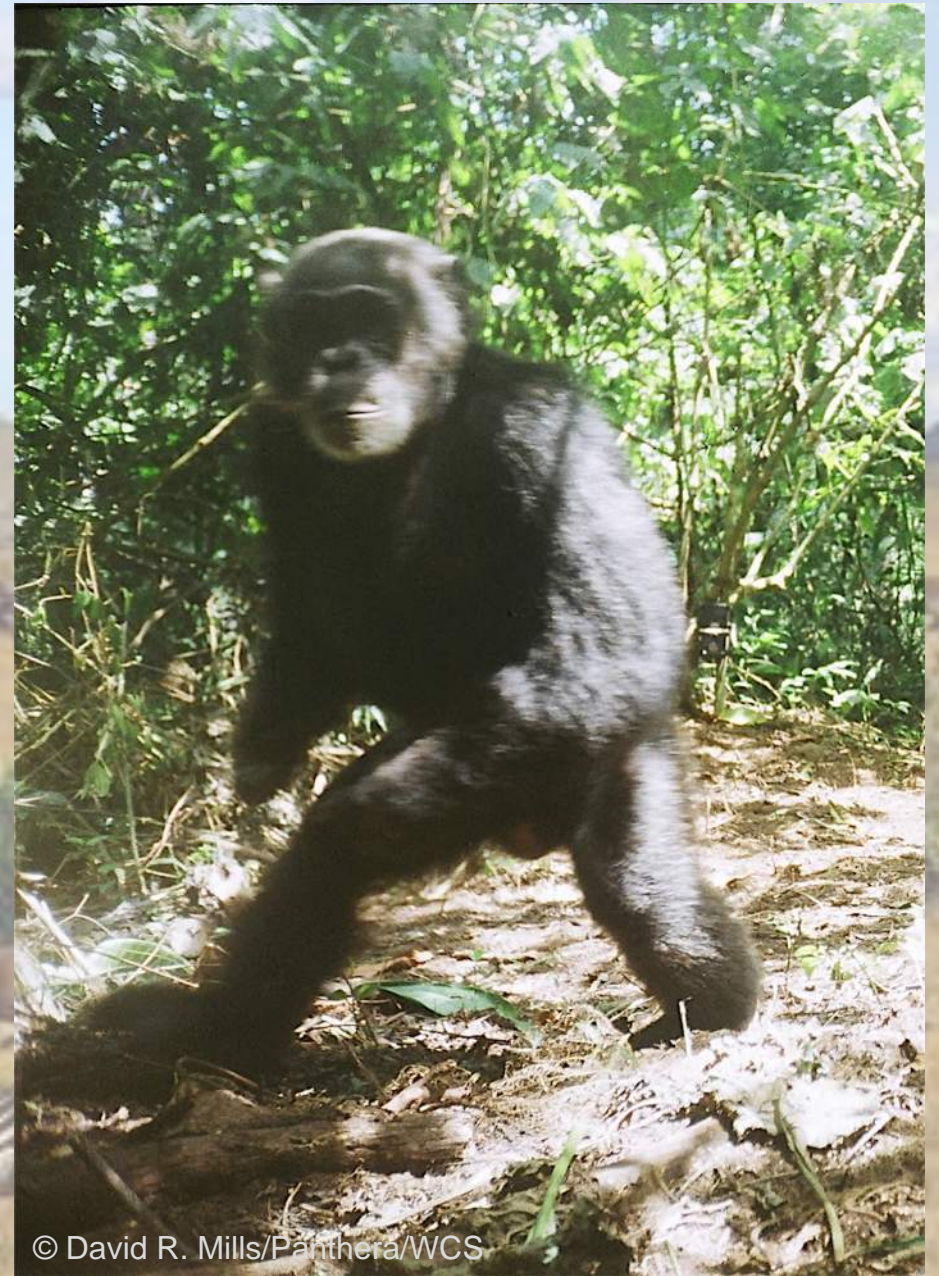
- Snare injury can even result in death



Peter C. Kjærgaard

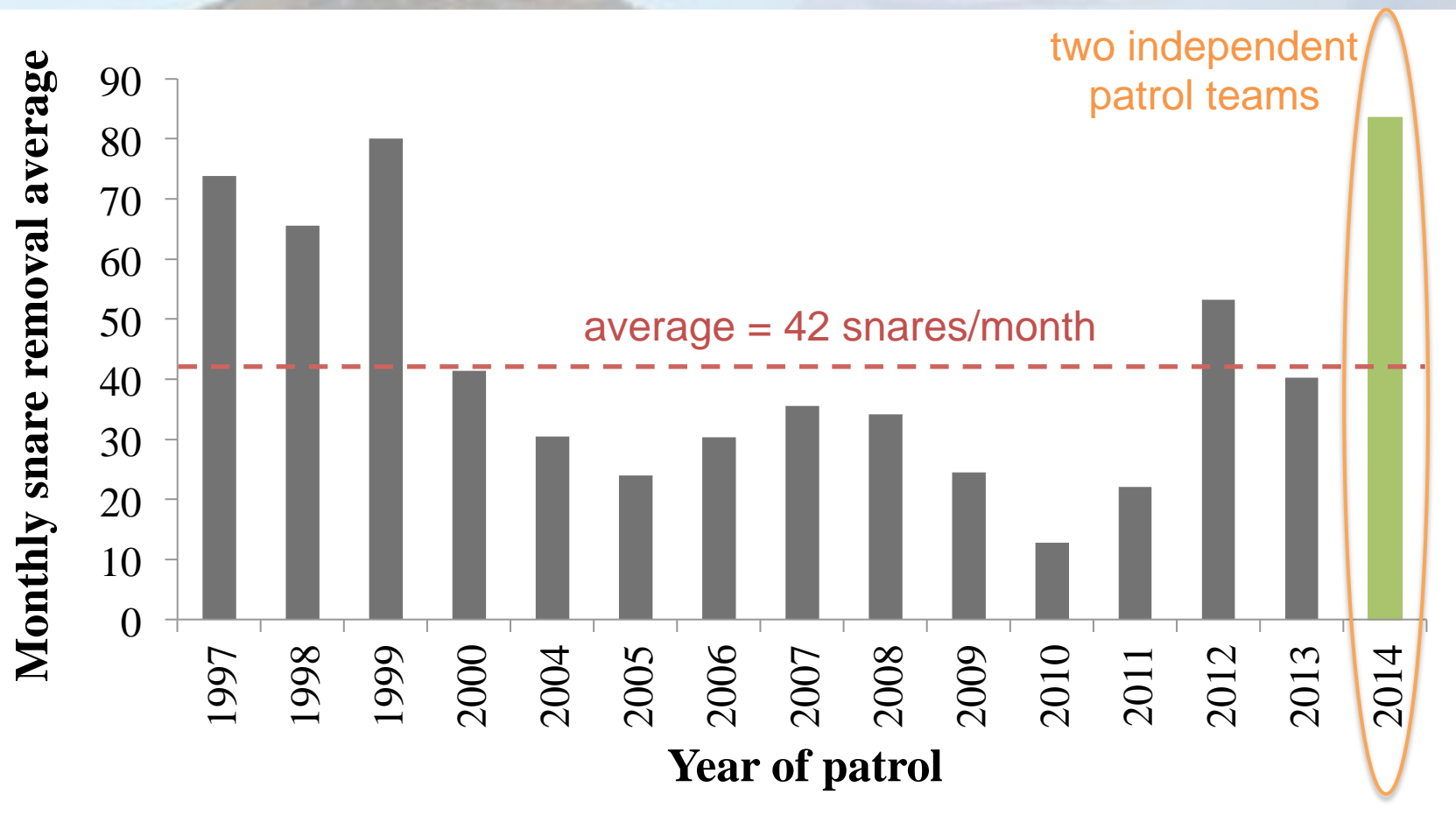


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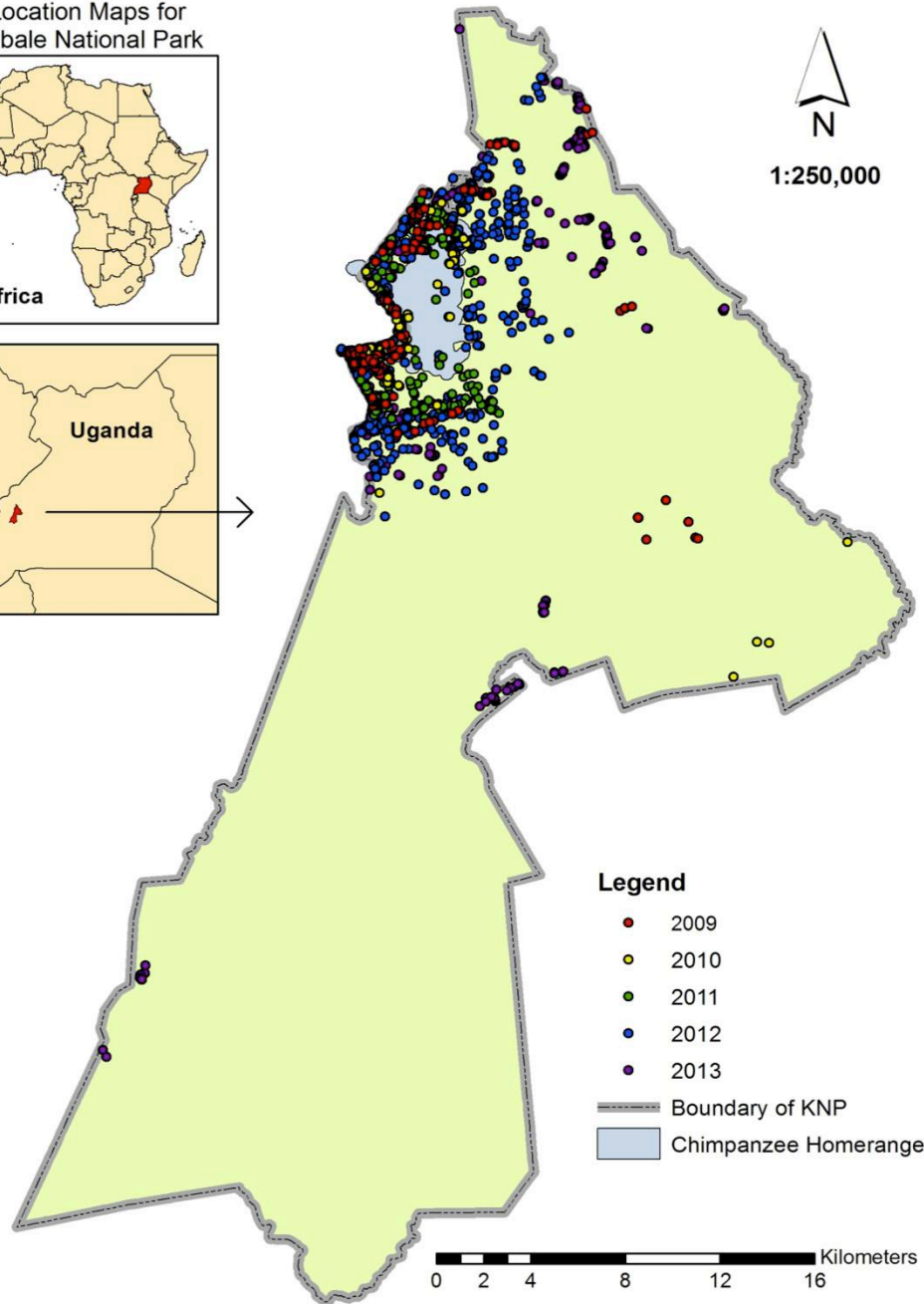
KSRP has removed over 6500 snares from KNP since 1997



Location Maps for
Kibale National Park



N
1:250,000



Legend

- 2009
- 2010
- 2011
- 2012
- 2013

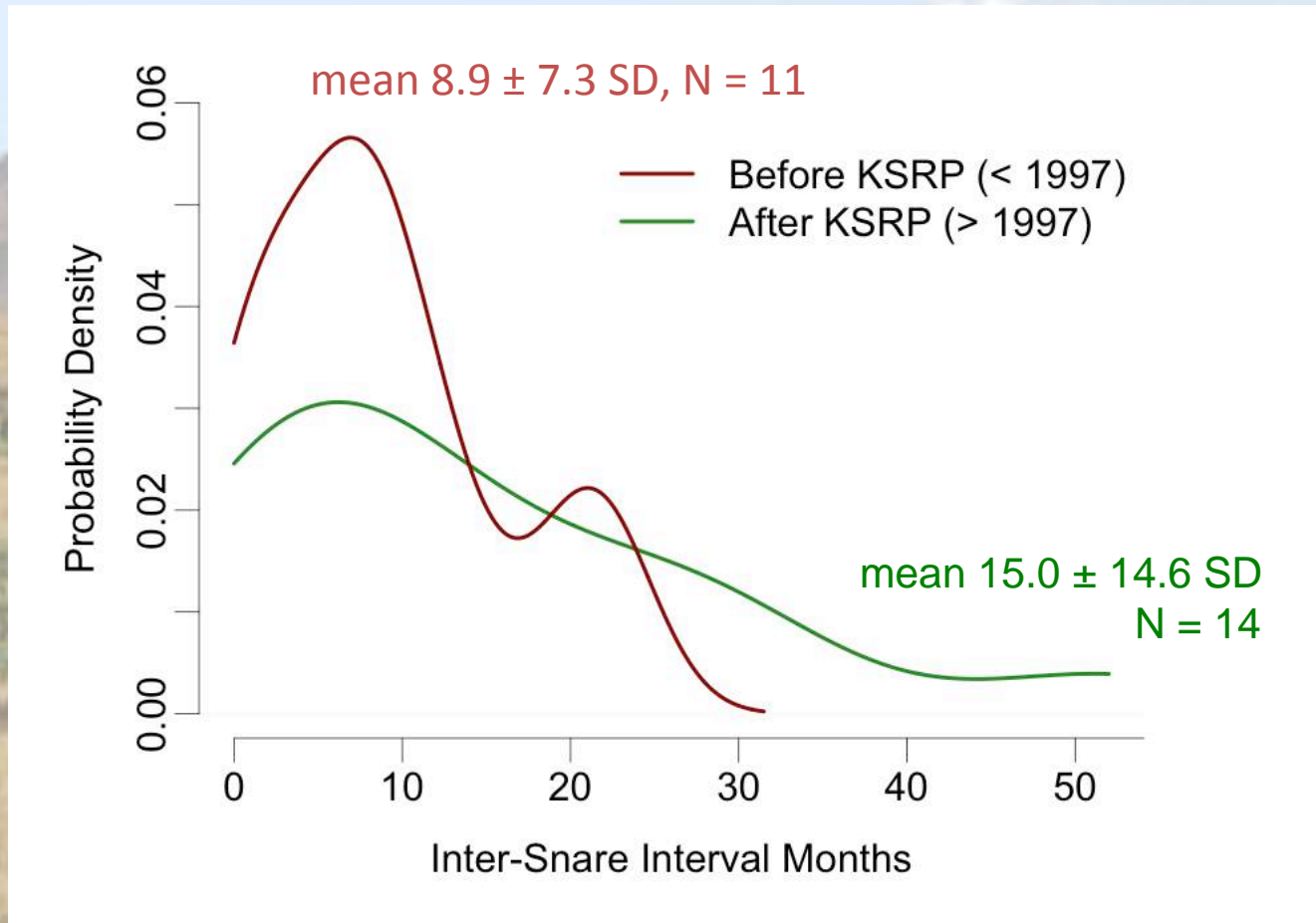
--- Boundary of KNP

Chimpanzee Homerange

0 2 4 8 12 16 Kilometers

**Feb 2009 –
Dec 2013
distribution of
snares (N = 1741)
removed by
KSRP**

Inter-snare interval increased following the initiation of KSRP patrols



Note. The figures only represent chimpanzees with known snare dates ($N = 25$). Individuals with existing snare injuries prior to 1987 are not included. Data from 1990 to present.

An Intervention Success Story

Special Snare Injury
12 years old, Jul 2012



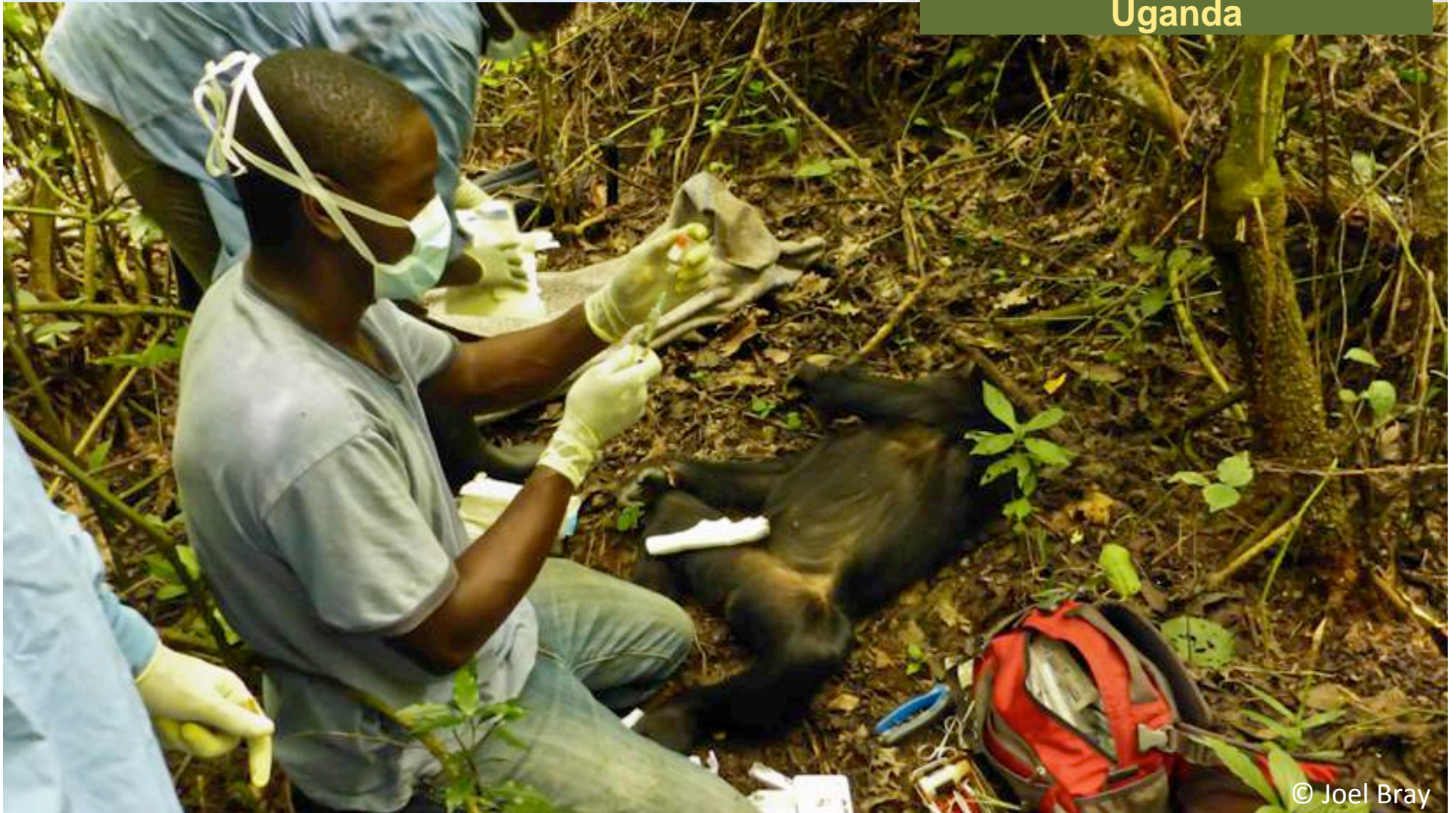
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Special Snare Intervention

12 years old, Jul 2012



the Jane Goodall Institute
Uganda



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Special Snare Intervention

12 years old, Jul 2012



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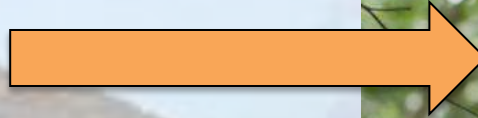
Special Snare Intervention

12 years old, Jul 2012

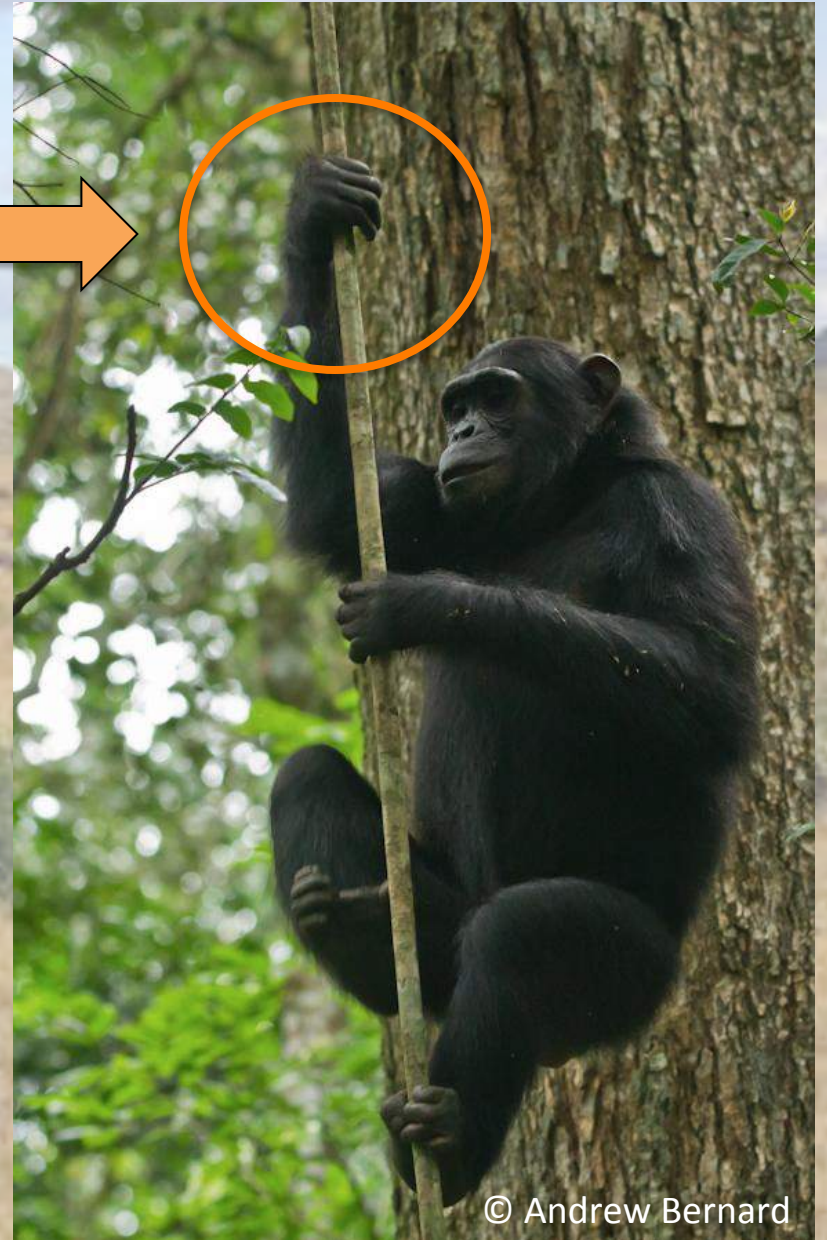


Special Update: Oct. 2012 (snare injury: 3 months old)

Gripping
branch



October 2014: Special gives birth to Stella









Bushmeat in Kibale NP



Conservation plan for the Maasai Mara:

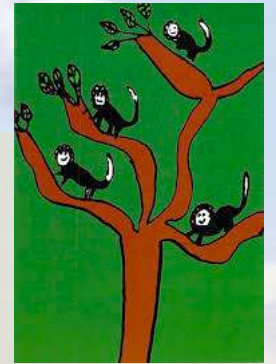
Develop an active community-based conservation program

- Equal part of research program
- Work collaboratively with local law enforcement and authorities
- Provides additional jobs
 - Competitive salaries and benefits
 - Recruit poachers = convert to ex-poachers
- Provide continuing education opportunities
 - Sensitize local communities to wildlife and PA
- Must include a long-term action plan



The Kasiisi Project

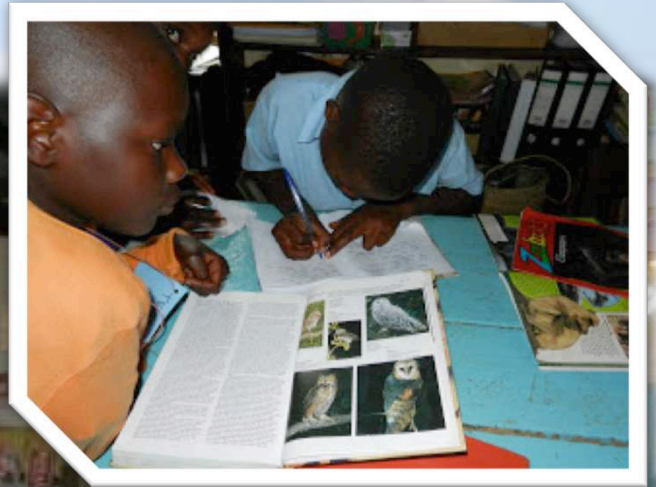
- Kasiisi Project
 - 14 schools w/i 5 km of KNP
 - Kibale Forest Schools Program
- Focus on conservation education
 - Wildlife clubs
 - Provide other needs that benefit students







Libraries





The Porridge Project



Girls Program



Ronan Donovan

Improved Cook Stove Project



Football Tournaments



Bicycle Program



Sustainable Agriculture





Kasiisi Project Farm

Turning human-wildlife conflict negatives into educational opportunities



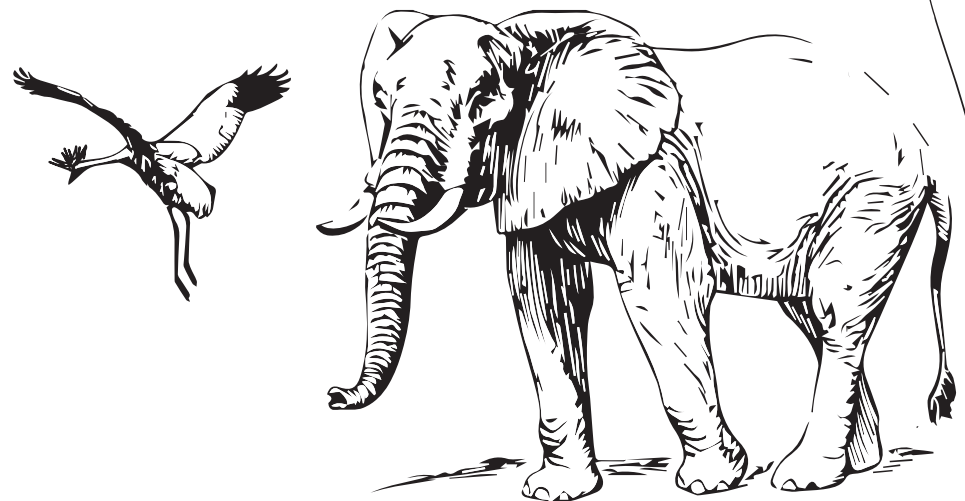
Wildlife Clubs

- After school activity program
- Empowers students
- Unifies students towards common goals
- Creates a community
- Challenges students to educate their families and friends

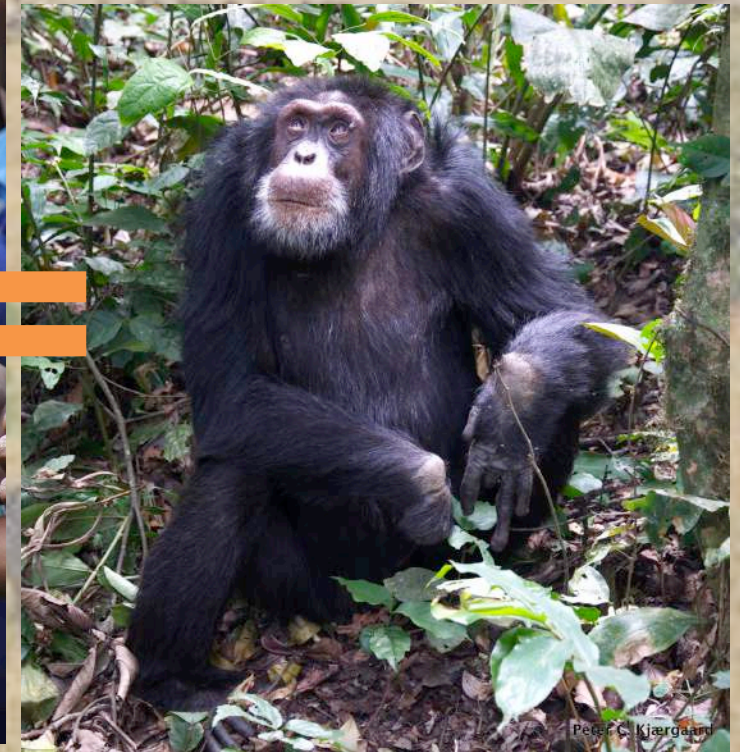
MEMBERS ARE COMMITTED TO CONSERVATION

THE 10 COMMANDMENTS OF CONSERVATION

1. We will protect all wildlife
2. We will protect the forest giving animals a safe home
3. We will not poach wildlife with traps or weapons
4. We will not eat bushmeat
5. We will not illegally cut down trees or take plants from the forest
6. We will respect the local authorities
7. We will learn as much as we can about the forest and wildlife
8. We will sensitize our communities and families about conservation
9. We will care for the environment by using sustainable practices
10. We will teach our children about these conservation commandments



Snare Care Bracelets



Peter C. Kjaergaard

Art

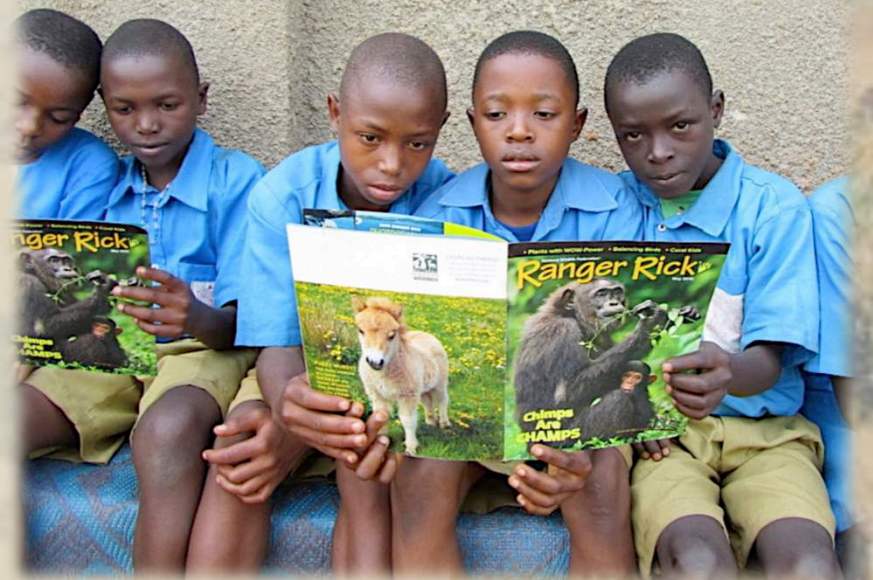


Conservation & Research Talks



Educational Videos & Magazines

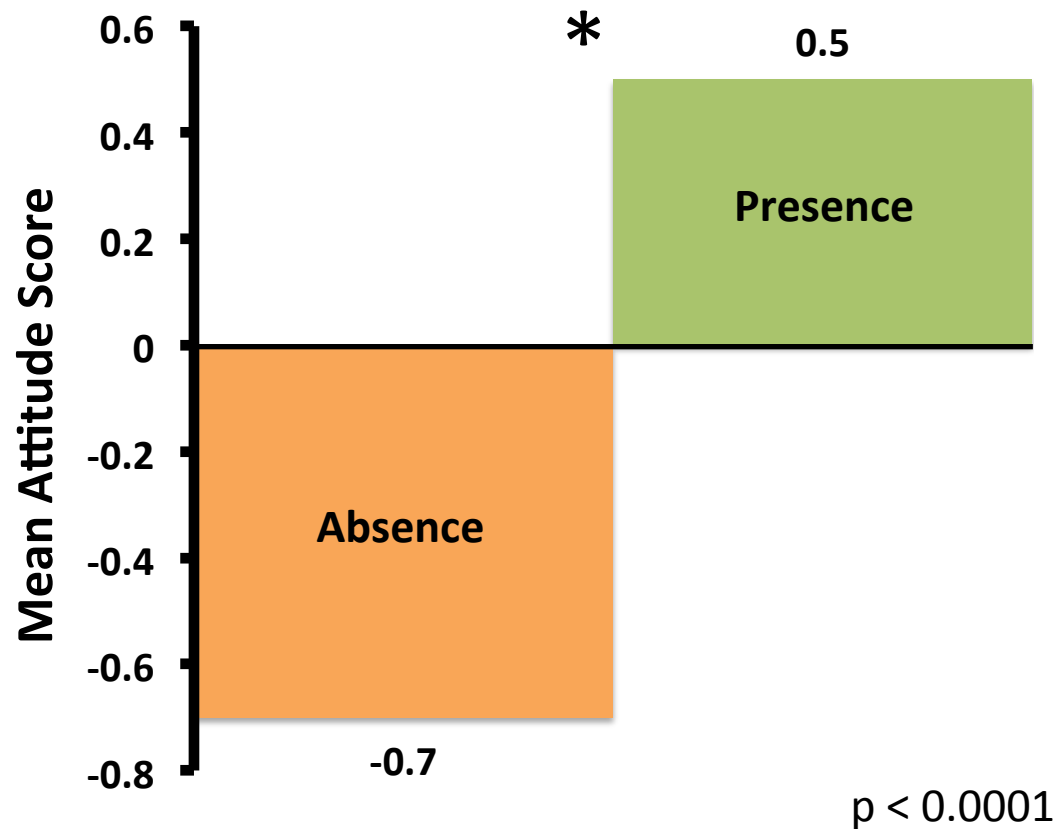
- Starring local people, peers, and animals
- Ranger Rick
- KSRP mini-documentary
- Nature for Kids
 - Deforestation
 - Snaring
 - Bushmeat



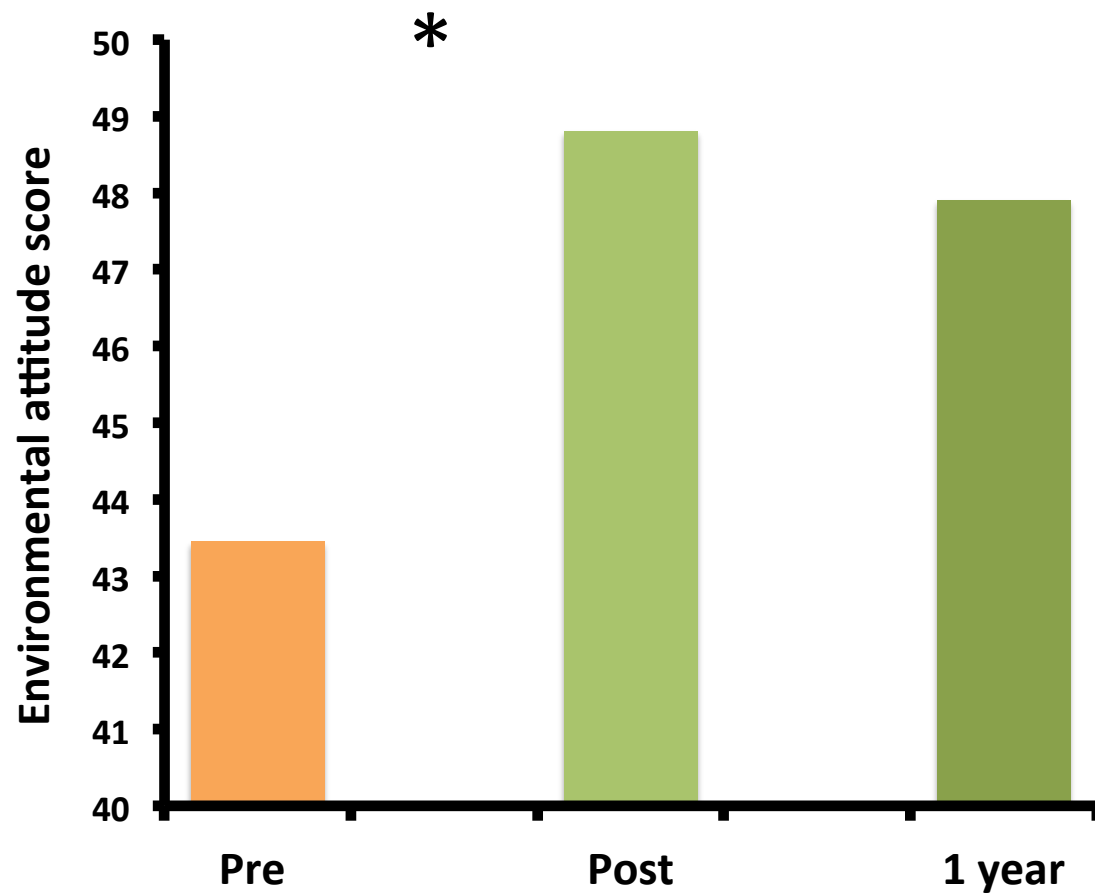
Conservation Debate Cup (KCP sponsored)



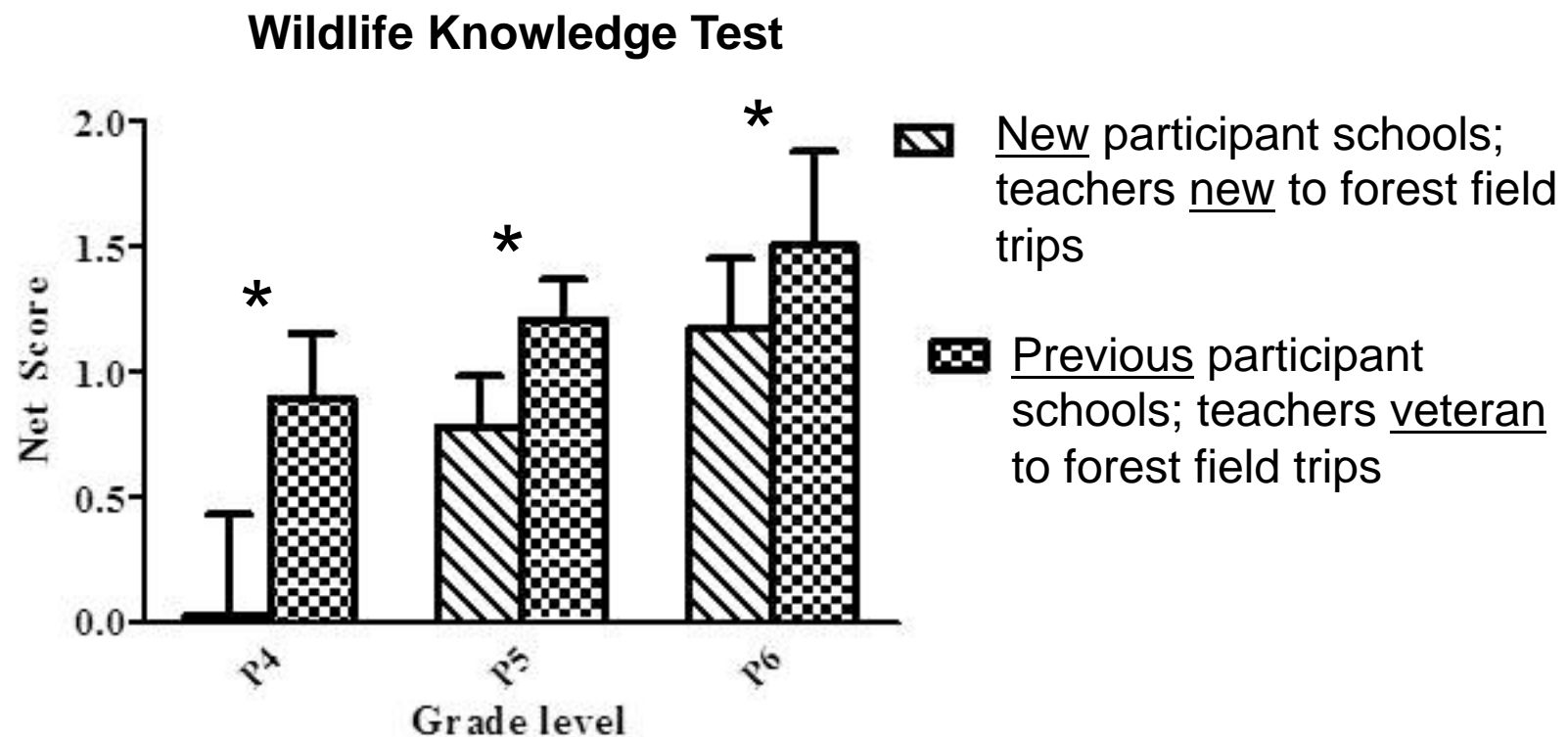
Schools with active conservation education programs have more positive attitudes towards chimpanzees



Field trips positively influence teachers' environmental and conservation attitudes

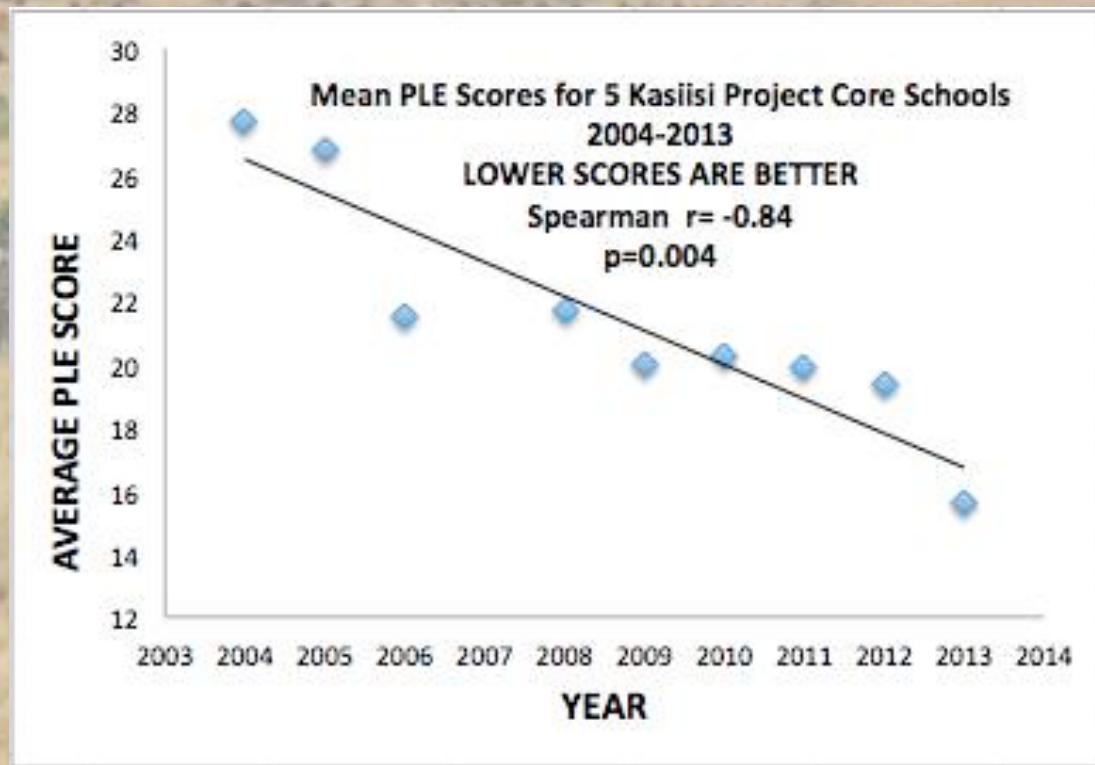


Teacher participation in field trips had a positive effect on the knowledge of their school's students



Educational advantage extends beyond conservation

Kasiisi project schools significantly out-perform peer forest schools on average by 20%



Education plan for the Maasai Mara:

Local Involvement and Educational Outreach

- Must first fulfill a local need
 - Improve schools
 - Build latrines
 - Provide clean water
 - Address sustainability issues
- Add conservation education on the back-end
 - Wildlife clubs
 - Field trips
 - Make students into peer-teachers

**CULTURAL
SENSITIVITY**

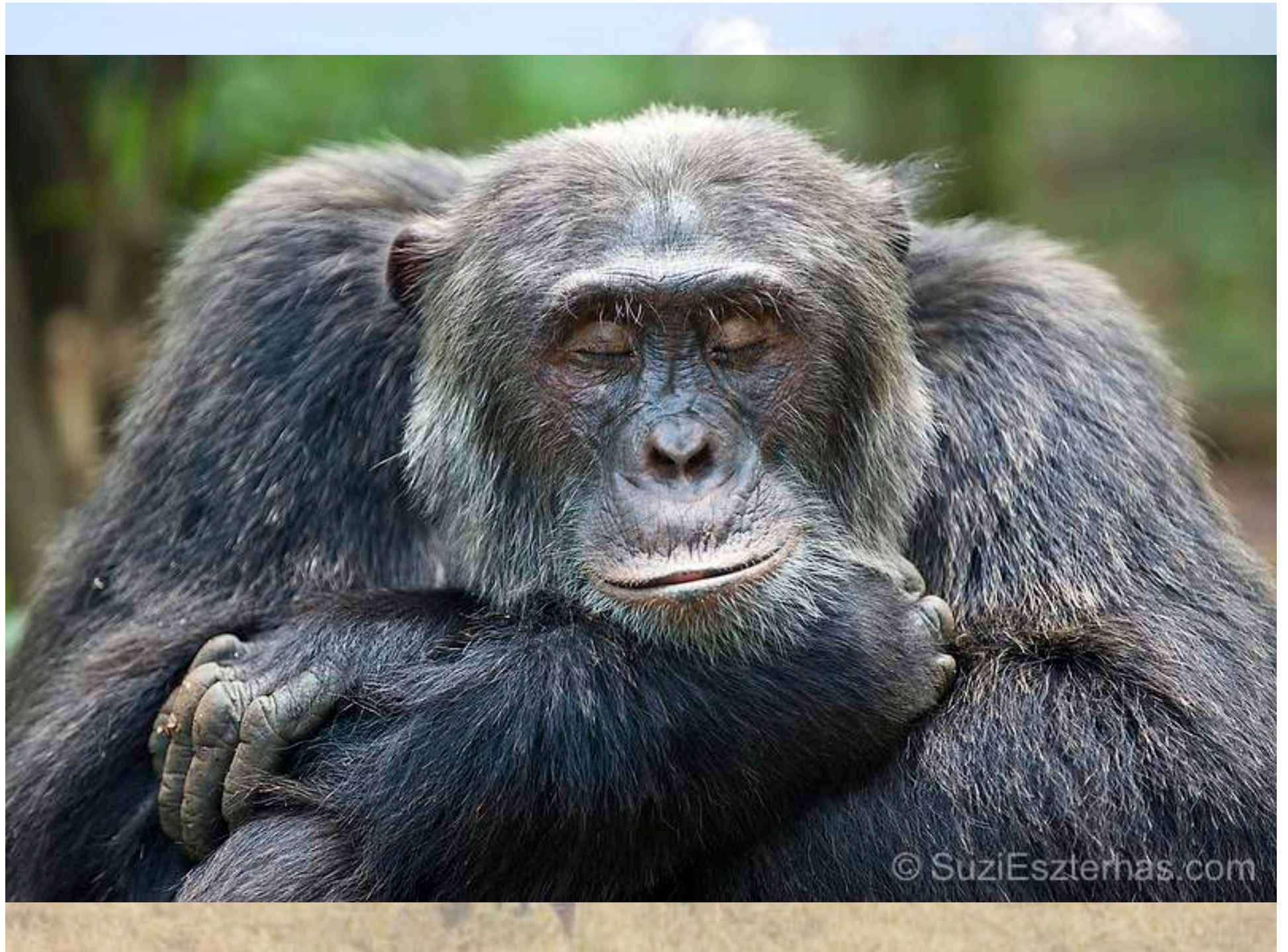
Conclusions

1. Long-term research often supports local conservation of:

- Habitat
- Wildlife
- Local cultures



2. When establishing a new long-term research site in the Maasai Mara, researchers must also prioritize community-based conservation and education program development



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Thank You



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Acknowledgements

Thank you to the following organizations for Research Permission.



Makerere University
Biological Field Station



Uganda National Council for Science & Technology

Thank you to the following foundations, organizations, & institutions for Funding.



Jane Goodall Institut - Austria



the Jane Goodall Institute
Uganda



Jane Goodall Instituut Nederland



American Society of Primatologists



International
Primatological
Society

RESEARCH EDUCATION CONSERVATION

Please visit our website:

[www.kibalechimpanzees.wordpress.com/
snare-removal-program](http://www.kibalechimpanzees.wordpress.com/snare-removal-program)