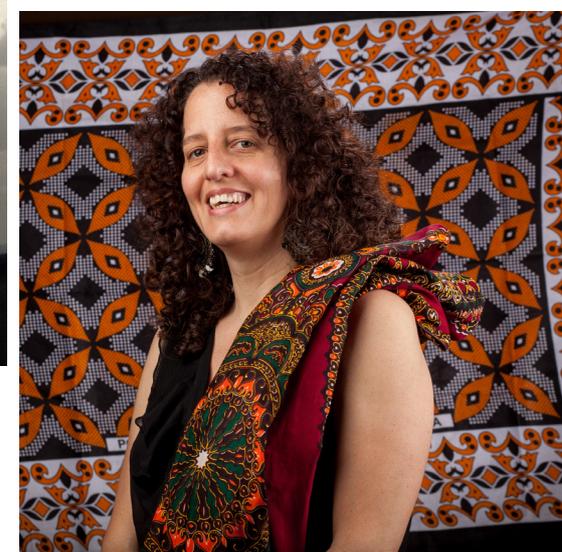


RESEARCH SPOTLIGHT



Biology grad student's research on human-elephant conflict recognized by Student Research Conference and WKU Fund

Thanks to the WKU Fund, students like Lynn Von Hagen were recognized for groundbreaking research projects at WKU's 47th Annual Student Research Conference. Von Hagen was one of 59 student researchers out of 400 participants who received an award sponsored by the WKU Fund in March.

Raised in Mt. Juliet, Tenn., Von Hagen is a non-traditional graduate student who currently makes her home with her husband in Old Hickory, Tenn., but she lives in Bowling Green during the week, where she is completing graduate school and studying elephant behavior and conservation.

"I have been interested in conservation since I was a teenager, with an extra interest in elephants and their behavior," she said. "One of my goals is to inspire other older students to return to pursue their dreams

as I have. It's never too late!"

Her thesis project, which won in the Natural Sciences Graduate Papers section of the competition, is titled "An exploration of chili pepper (*capsicum* spp.) fences as a crop raiding deterrent method to alleviate human elephant conflict (HEC) in the Kasigau Wildlife Corridor, Kenya," and it is part of her overall graduate thesis on human-elephant conflict. She is currently working at the Kasigau Wildlife Corridor in Kenya as part of an eight-month collaboration project with Dr. Bruce Schulte, Head of WKU's Department of Biology, and they two were awarded a grant through the International Elephant Foundation to support the work. The study is part of a long-term project supported in part by the Earthwatch Institute, an advocate and organizer of citizen science.

"Human elephant conflict occurs whenever humans and elephants come into contact and compete over resources," Von Hagen explained. "Crop raiding is the most common form and can result in an elephant destroying an entire farmer's field in one evening. This creates a loss of livelihood for rural people, who are often struggling to feed their families and rely on their crops as sustenance and income."

This conflict creates tension that can sometimes result in violent retaliation against elephants, and farmers can often be harmed or killed trying to defend their field. Researchers continue to look for deterrent measures, which can prevent elephants from plundering crops. "Our study, in conjunction with Wildlife Works and Earthwatch, will compare deterrent methods, such as chili pepper fences and a new

metal strip fence, in a paired control field experiment,” Von Hagen said. “I am also conducting a lab experiment that could help quantify the amount of capsaicinoids, the active ingredient in the chili pepper fences and the focus of my research presentation, that are lost over time, which could affect the efficacy of the fences.”

During her time in Kenya, Von Hagen will also be cataloging the elephant groups in the area, and attempting to identify crop raiders, as well as performing wildlife surveys to determine if there are any indicator species that may signify crop raiding fluctuations. She will also be looking at damage to trees caused by elephants and determining any temporal correlations with crop raiding.

“Working with Dr. Schulte has been a dream,” she said of her mentor. “He is excellent at developing his students as scientists, writers and conservationists. “He will be joining the project for part of the time I will be in Kenya, and he has and will be instructing me closely from afar the remainder of the time.”

“Lynn is an intelligent, compassionate, diligent, enthusiastic and personable non-traditional student,” Dr. Schulte said. “She has been and will continue to be a wonderful ambassador for WKU during her research study in Kenya on human elephant conflict. Lynn has a bright future as a conservation biologist.”

Another alumnus, Simon Kasaine ('11), a native Kenyan who received his M.S. under the direction of Dr. Michael Stokes, will also be involved as a collaborator with Von Hagen and Dr. Schulte on the project in Kenya.

With plans to complete her thesis in the spring of 2018, Von Hagen hopes to become an international conservation biologist, working with species and ecosystems that are experiencing difficulties due to anthropogenic activities and climate change. “This research has enriched my life in ways I never thought possible,” she said. “It has allowed me to pursue my childhood dreams and adult aspirations, and it will forever make WKU an important part of that journey.”



About the WKU Fund:

The WKU Fund sponsored each of the 59 sessions of the Student Research Conference. The WKU Fund is privately supported and is part of the WKU Foundation. The WKU Fund supports innovative initiatives that help students persist, achieve and graduate.