



Jamie Paulse

COMBING THE GIRAFFE

Harriet Box asked Jamie Paulse about her MSc study on behaviour and feeding ecology of giraffe in the Klein Karoo

Peigner la girafe is a French expression that translates to 'combing the giraffe'. In essence, one is wasting one's time on a pointless task. While Jamie Paulse, an MSc graduate from the University of the Western Cape (UWC) and a junior lecturer and PhD candidate in Animal Science at the University of the Free State, did not entirely waste her time combing a giraffe, she did spend countless hours observing the animals feeding by day.

But the task was not pointless. Thanks to her study, game farmers in the Oudtshoorn area can determine how much food is available to ensure giraffes can survive there.

What did your study entail?

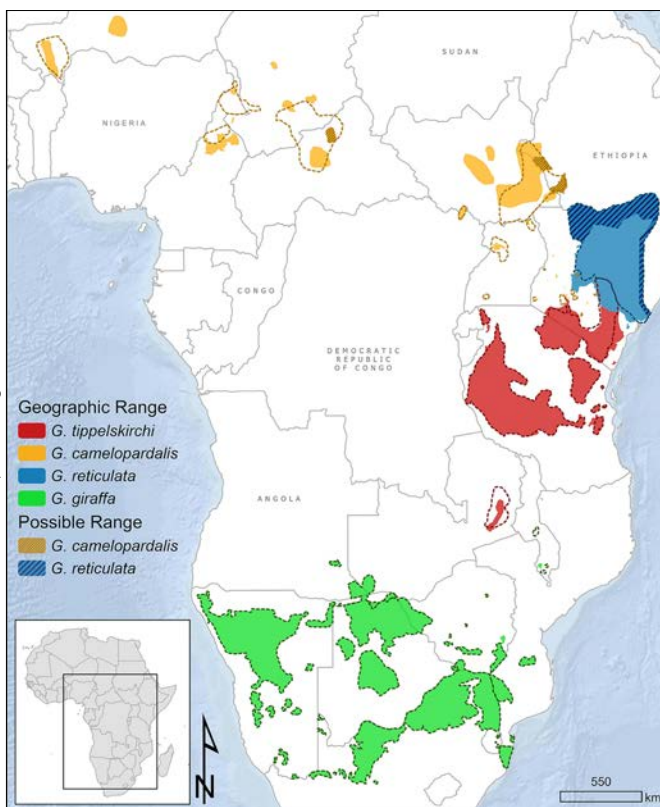
Giraffe are extralimital in the Western Cape, which means they do not occur in the region naturally. This is the key factor around which the study was conducted, since the effects of these animals on indigenous fauna and flora are not well known, particularly in a sensitive vegetation type such as the thicket vegetation of the Little Karoo.

In order for any effects to be investigated, knowledge of the behaviour and diet of the species is needed. The study therefore provided valuable baseline information for farmers and government or private conservation agencies to use in future impact studies, as well as long-term monitoring projects in the area.

In this study there were a few aspects that needed to be explored, which meant that it was split into three parts. The first part dealt with the activity budgets of giraffes. This was all about determining the time giraffes spend on different activities, such as foraging (eating), walking, defecating, ruminating or lying down. It was important to look at the giraffes' behaviour compared to their behaviour in their natural ranges.

The second part dealt with diet. We could see that the giraffes spent most of their time foraging, so we wanted to find out what plant species they ate. This was essential because we conducted the study in the thicket biome, which has vegetation very different to that found in their natural ranges.

The third part of the study looked at the browsing capacity – the food available – of each area we surveyed, and the goal here was to establish the density of giraffes the area could sustain. This was a vital component of the study, as farmers needed to know how many animals they could keep.



O'Connor et al. 2019. Mammal Review. <https://doi.org/10.1111/mam.12165>

The natural range for giraffe species in sub-Saharan Africa.



Clement Cupido



Clement Cupido

Long days were spent watching the giraffes and recording their activities. Chilly winter mornings were a particular challenge.

How did you go about it?

The study was done on two farms in the Little Karoo, more specifically in the Oudtshoorn area where game farms are becoming quite prevalent. Every season we observed giraffes for four days to monitor their activity and diets. This we did from sunrise to sunset – for us the cold winter in Oudtshoorn was particularly challenging!

We used the scan interval method, where we scanned the herd every five minutes and documented what each individual in the herd was doing. If an animal was foraging, we noted the species it ate, as well as the level it was feeding at.

What was the experience like?

It was quite intensive, especially the hours, but it was also exciting. To do fieldwork on a game farm all day, you get to see many kinds of animals and experience nature in a very different way. On one of the farms, there was a free-roaming leopard. There was one season where we didn't have an adequate vehicle, so we had to do the observations on foot. We could hear the distant growls of a leopard and even came across a venomous snake. It was definitely a scary but at the same time quite exhilarating experience.

Why did you choose your field of study?

My love for animals and the environment started at a young age, and my dream was always to become a vet. Unfortunately, due to my strong emotional attachment to animals and my inability to cope with blood, I could not pursue this career. So my passion steered me towards an undergraduate degree in conservation biology. My goal was only to obtain my BSc degree, but the exposure to various aspects of the environment – and my parents' consistent support – motivated me to continue with my studies.

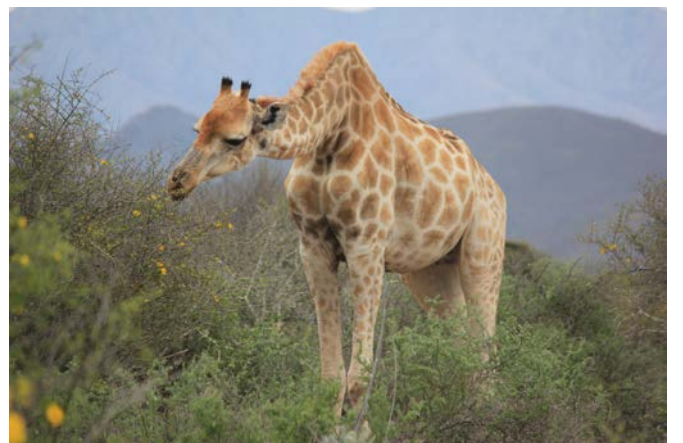
How did you decide on your MSc project?

After studying Biodiversity and Conservation Biology at UWC, I was employed as an intern through the Professional Development Programme of the Agricultural Research Council. I was based at UWC, and I was required to complete a master's degree. During this period, I was fortunate enough to work with my mentor, Dr Igshaan Samuels, and supervisor, Mr Clement Cupido. They told me about the need for research on the feeding habits of giraffe in the Little Karoo, because the animals were being introduced on private game farms there.

The fact that giraffes naturally occur in savannah-type areas but were being introduced into vegetation types such as



Clement Cupido



Jamie needed to familiarise herself with the plants in the area so she could identify the giraffes' food species.



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A number of private game reserves in the Klein Karoo are offering game drives and walking tours to view giraffe.

mixed thicket was quite interesting, and we were intrigued to see how they adapted to their new environment. At this point I decided to proceed with a master’s project to investigate this – it was the very first large-herbivore study to be conducted in the department.

What have you been doing since?

I graduated with a master’s degree (*cum laude*) in Biodiversity and Conservation Biology from UWC in April 2019. Since 2017, I’ve been employed as a junior lecturer in the Department of Animal Science at the University of the Free State in Bloemfontein. I am currently proceeding with my PhD at UFS, majoring in Grassland Science.

I am also working on a smaller project looking at the nutritional value of forage sampled from my study sites. I have been involved in various giraffe projects at UFS, such as the 50/50 clip focusing on the decline of natural giraffe populations in Africa.

I also had the privilege to be part of an international collaboration of scientists assisting a film crew documenting one of the largest successful capture, GPS collaring, and release of a wild giraffe population. The documentary, *Catching Giants*, won multiple prestigious awards at international film festivals.

Finally, what’s the secret of your success?

I was fortunate enough to be raised by two hard-working parents who provided me with all the opportunities I could have asked for. And I have learnt so much from my mentors, and am so privileged to have had them mould me into the academic I am today. Dr Samuels’ work ethic and persona taught me how to be hard-working, while Mr Cupido was a constant source of encouragement and taught me to constantly push through any obstacle. He also taught me how to deal with failure, which was not always one of my strong attributes!

This impacted my life in such a great way. It changed me into a confident academic, not afraid to tackle any challenge. I cannot thank them enough.

Harriet Box is the communications officer for Institutional Advancement at the University of the Western Cape.

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