

# The secret lives of city's domestic cats

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Think of cats as cute purring bundles of fur? Think again. That mouse carcass Kitty presents you with is just the tip of a very bloody iceberg. When researchers attached kittycams to domestic cats, they found a secret world of slaughter.

They may appear to be catnapping most of the day but are efficient hunters, especially at night. Their targets are a wide range from reptiles, small mammals, amphibians and invertebrates with a conservative estimate of 31.7 million prey items each year.

Based on three studies, from Vredehoek to Simon's Town, from Hout Bay to Edgemoor, three young researchers working towards post-graduate degrees at the University of Cape Town's (UCT) Fitz-Patrick Institute of African Ornithology have researched the effect of domestic cats on wildlife in greater Cape Town and around Table Mountain. They are now writing up their findings.

"With an estimated house-cat population of 384 000 in 2014, at a density of 100 to 300 per square kilometre, cats are taking more wildlife than was previously believed," said Dr Rob Simmons who supervised the studies.

"The early estimates of Sharon George in 2010 were probably too conservative because they didn't include the animals that cats ate or left behind in the field," said Dr

Simmons who lives in Constantia.

He explained that the study had attempted to answer two questions not previously tackled on the African continent: what impact domestic cats have on mammals, birds and reptiles in and around Table Mountain; and second the distance and range of their foraging. To do so they divided up the cats into urban and rural cats because they differ in their foraging behaviour.

Dr Simmons said most research on this topic has previously been done in Australia, New Zealand, Great Britain, America and Canada, "Where there's not a whole lot of wildlife left, compared to Africa."

He said the biodiversity impact of cats cuts across an enormous prey spectrum and is a leading cause of deaths, comprising 10.8 million mammals, 2.4 million birds, 10.4 million reptiles, 2.8 million amphibians and 5.3m invertebrates. Local prey mammals include golden moles, indigenous mice, shrews and vlei rats, as well as squirrels, while the reptiles and amphibians include frogs, geckos and snakes; invertebrates include spiders and scorpions.

The birds include doves and common starlings, which are an alien species, there are also endemics (occurring only here) such as grassbirds and sunbirds.

Dr Simmons said the idea for the study came about when he was living in Windhoek and his daugh-

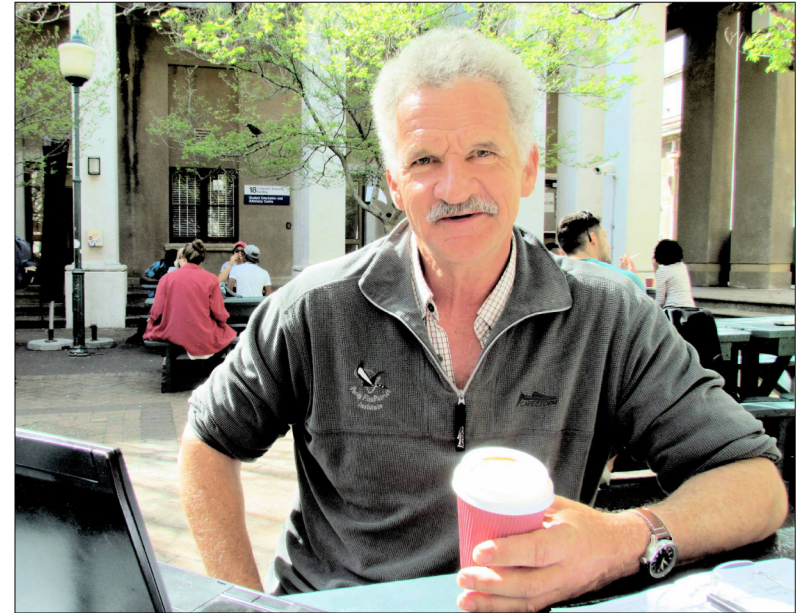
ters' friend asked why there were so many skinks in their garden. He asked the young naturalist if she kept cats in her garden to which she said yes, "several". This raised the issue with colleagues and cat owners and led to him seeking answers as to the overall impact that domestic cats had on urban gardens and wildlife.

When he came to UCT in 2004, and was supervising MSc students he took on the opportunity of investigating the hidden lives of cats.

The pilot study began in 2010 when Ms George advertised for volunteers in the Cape Community Newspapers, which publishes the Constantiaberg Bulletin.

Dr Simmons said she encountered some hostility from cat owners because they thought their feline family friend may be shot. And while dogs may be man's best friend, it takes a while for cats to train humans to provide for their needs and not expect anything in return. Anyone who has ever become a willing slave to a demanding feline will know exactly what Dr Simmons means.

Eventually going door-to-door, among other methods, Ms George recruited 78 furry subjects for her study. She was chiefly interested in the frequency that prey was caught and what type of prey, if any, was brought home. She also monitored them over a six-week period by following the cats with miniature GPS satellite loggers that tracked them



■ Dr Rob Simmons has supervised three studies, the first of their kind in Africa.

day and night as they roamed away from their homes.

Her findings yielded some interesting results with a quarter of the cats not hunting at all. "Those that did hunt were mostly the younger generation. By the age of 13 they usually stop, knowing they're being fed, possibly only killing a bird if it jumps in front of them," said Dr Simmons.

From the rate at which the prey was returned and with an estimated house-cat population of 195 000 in 2010, Ms George was able to calcu-

late that the remaining three-quarters of domestic cats that hunted in greater Cape Town accounted for the deaths of 5.7 million prey items a year. These ranged from marbled geckoes – a favourite because they are easy to catch and taste good – to snakes and bats. "This does not take account of feral cat populations," said Dr Simmons.

# Study on cats

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Other findings were the difference in foraging behaviour between urban and rural cats.

They also found a tendency for urban-edge cats to travel further, about 18km a day, whereas urban cats travelled about 13km. The study also found that urban-edge cats often ventured into the national park.

The most comprehensive study was undertaken by Frances Morling in 2013 and 2014. She fitted 25 cats, including her own, Garfield and Ginny, that live with her parents in Bergvliet, with kittycams with each owner, “slave” putting a miniature video camera mounted on a break-away collar on the cat and letting it out, then removing the camera and downloading the footage each morning or evening. Recording the cat’s outdoor activities – where they were going and how successful they were – she ended up with 700 hours of footage to be analysed by volunteers.

Ms Morling compared prey kills with a control group not wearing the kittycams and found there was no effect of the cats on prey-capture rates.

Of the 62 recorded kills, the cats brought home only 18 percent of what they killed, and left 82 percent to be eaten or to rot where they died. This meant that the 5.7 million prey estimate of the earlier study became 31.7 million after calculating that the average household has 2.3 cats.

Asked what cat owners can do to reduce the wildlife carnage, Dr Simmons recommended bells on an expandable collar. He said a study done in New Zealand showed a reduction of up to 60 percent of prey caught by belled cats.

He also encourages cat owners to prevent their cats from going out at night. Another suggestion being implemented in Australia is to create a buffer around reserves.

“Our conclusion from this pilot study is that urban-edge cats are having a bigger impact on wildlife than their urban sisters, and they’re having a larger than expected impact on the wildlife around Cape Town,” said Dr Simmons.