'Ghostly' Saharan cheetah filmed in Niger, Africa

One of the world's most elusive cats has been photographed by a night time camera trap, after a year-long search for the animal. The ghostly image of the Saharan cheetah has excited conservationists, as perhaps fewer than 10 of the cats survive in the deserts of Termit, Niger, where the photograph was taken.

Almost nothing is known of the Saharan cheetah, except that it endures extremely high temperatures and appears to survive without a permanent source of water.

Scientists working for the Saharan Conservation Fund (SCF) took the image as part of the Saharan Carnivore Project, an effort launched in conjunction with the University of Oxford, UK, four years ago to research and document larger predators roaming one of the world's most inhospitable habitats.

SCF researchers, led by John Newby and Tim Wacher, focused their attention on the Niger's Termit Massif and the neighbouring Tin Toumma desert. These areas have become the most important remaining refuges for wildlife in the entire Sahara.

Although conservationists have been working in or around the massif since 2000, they have only observed cheetahs there three times, and the cat has not been photographed. That was until a camera trap, set by SCF researchers, captured an eerie image of a Saharan cheetah passing by at night.

"The cheetahs of Termit Massif are extremely shy, rarely revealing themselves to researchers and few visitors go there," the SCF's Thomas Rabeil told the BBC.

Saharan cheetahs remain an enigma, even to scientists who specialise in studying rare cats. For example is it not yet known if Saharan cheetahs are more closely related to other cheetahs in Africa, or those living in Iran, which make up the last remaining wild population of Asiatic cheetahs.

Saharan cheetahs appear to have different colour and spot patterns compared to common cheetahs that roam elsewhere in Africa. However, "very little is known about the behavioural differences between the two cheetahs, as they have never been studied in the wild," says Dr Rabeil. "From observations of tracks and anecdotal reports they seem to be highly adaptable and able to eke out an existence in the Termit and Tin Toumma desert."

Experts believe the Saharan cheetah has found a way to survive in a habitat where there is no permanent source of water. In doing so the animals endure exceptionally high summer temperatures.

Attempts to track Saharan cheetahs also suggest that the cats roam considerable distances in a bid to hunt prey, which might include addax, dama and dorca gazelles or Barbary sheep. That makes finding and following the cats almost impossible.

"Project personnel have gone to extraordinary lengths to try and observe these animals directly, resorting to extended surveys on camel-back," Dr Rabeil told the BBC. "On one such eight-day journey recently a cheetah eluded researchers, leaving clearly identifiable tracks behind but changing direction and using the desert geography to maintain its enigmatic, elusive reputation," he said.

Saharan cheetahs are thought to range in six countries: Algeria, Togo, Niger, Mali, Benin, and Burkina Faso. But the total population may be fewer than 250 mature individuals. The first ever camera trap photograph of one was only taken last year in Algeria.

More than 50 cheetahs are thought to live there, compared to 10 or fewer in Niger.

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