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Field Report

Persecution of Rüppell's fox in central Saudi Arabia

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Abstract

Sightings of Rüppell's fox hanging from road signs in central Saudi Arabia probably indicate persecution by humans of this species. This is viewed as an added anthropogenic threat to the survival of the species from the Arabian Peninsula.

Introduction

Rüppell's fox *Vulpes rueppellii* Schinz, 1825 is a small nocturnal arid-adapted fox that occurs throughout the arid steppe and desert regions of the Arabian Peninsula (Gasperetti et al. 1985; Kingdon 1990; Nader 1990; Harrison and Bates 1991; Duckworth 1996; Cuzin and Lénain 2004; Geffen et al. 2004). Although with a widespread distribution, very little is still known about the species, especially population trends and threats, and it is currently listed as *Least Concern* (LC) by the IUCN (IUCN 2008) and is not listed by CITES (2008).

According to the IUCN (IUCN 2007) there is currently no effective legislation for the protection of native carnivores in Saudi Arabia and it is not illegal to shoot, poison or trap mammalian carnivores. However, hunting laws (Decree No. 457 and Decrees M/22, No.128) restrict such activities within the National Commission for Wildlife and Conservation Development protected areas network although none have been established with the protection of Rüppell's foxes listed as the main objective (IUCN 2007).

The aim of this paper is to include persecution by humans as a potential additional threat to Rüppell's fox in Saudi Arabia by providing evidence, albeit anecdotal, of such persecution from central Saudi Arabia.

Results

On 9 and 15 July 2008 I saw one and three adult Rüppell's foxes hanging by the neck

from vehicle signposts approximately 50km north of Riyadh, close to the King Khalid International Airport (Figures 1 and 2). The area is used by local youths for informal recreation as an area for dune bashing with 4x4 vehicles and quad bikes (Figure 3). The vegetation is sparse in the immediate area, consisting of dwarf shrubs (e.g. *Haloxylon salicornicum* and *Rhanterium epapposum*) and tufts of perennial grasses (e.g. *Panicum turgidum* and *Lasiurus scindicus*) in the general vicinity. The landscape consists of an intruding dune belt (where the dune bashing takes place) with gravel plains to the west and east thereof and the Tuwaiq Escarpment, a remnant Jurassic limestone massif, a few kilometres further eastwards (Child and Grainger 1990).

The first carcass remained on display until 15 July, together with the other three individuals, and all were removed, probably by municipal workers who clean the area, by 26 July 2008. All the carcasses displayed typical vehicle impact with crushed and/or flattened chests/abdomens, large patches of missing hair and covered in dried blood. No signs of death by alternative means - i.e. shooting and or bite marks - were observed.

Discussion

These Rüppell's foxes displayed from vehicle signposts confirm active persecution of the species in central Saudi Arabia. Such displays of predators (e.g. leopard *Panthera pardus*, wolf *Canis lupus*, striped hyena *Hyaena hyaena*) actively killed by humans are a common occurrence in the Peninsula (Nader and Büttiker 1980; Duckworth 1996; Monro 1997; Sher Shah 2007). It could not be determined if the foxes were accidentally killed whilst dune bashing in the immediate area, killed elsewhere and displayed here or caught elsewhere and released for active pursuit and killed locally. The accidental killing of Rüppell's foxes in the area is a possibility, although unlikely as this area is extremely well travelled with hardly any natural vegetation remaining in the "recreational" dune area (Figure 3). Accidental roadkill are also ruled out as this has not previously been viewed as a threat to the species (Cuzin and Lenain 2004) with the visible display of the carcasses being similar to that documented for other predators actively and not accidentally killed by humans.

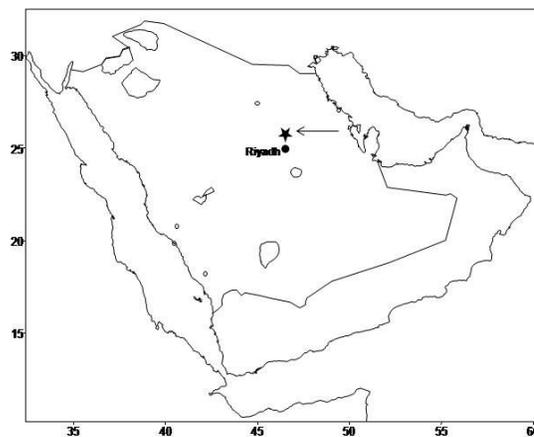


Figure 1. Location of the site where the Rüppell's foxes were observed killed north of Riyadh in Saudi Arabia.



Figure 2. Rüppell's fox hanging from a signpost north of Riyadh in central Saudi Arabia.

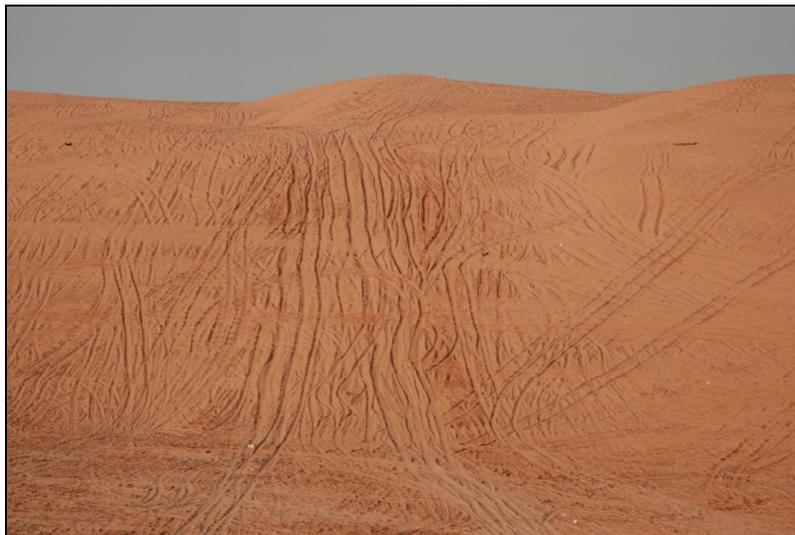


Figure 3. The immediate area where the informal recreation - dune bashing - takes place mainly by local youths.

Settled camel *Camelus dromedarius* and goat farms, numerous roving stray dogs with no known den sites from the immediate area also

make the presence of Rüppell's foxes unlikely in the immediate vicinity. The pursuit and active killing for "sport", albeit speculation

only, is supported by the fact that dogs were viewed being chased by vehicles and quad bikes in the same area.

The status of Rüppell's fox from Saudi Arabia is unknown, but it would be reasonable to assume that they are widespread throughout suitable habitat including the Rub al Khali (Empty Quarter) as records indicate. As any other carnivore they would be indiscriminately persecuted as livestock predators or included as collateral damage during the poisoning of carcasses targeting other predators, a major concern for the species. Although the IUCN classifies Rüppell's fox as *Least Concern* (IUCN 2008) their status in neighbouring countries is classified as *Endangered* in Oman (Fisher 1999) and *Vulnerable* in the United Arab Emirates (Hornby 1996; Cunningham 2004) and *Endangered* in the Abu Dhabi Emirate, with a perceived notion of a steady decline in numbers in the UAE (Drew and Tourenq 2005).

Previously published threats for Rüppell's fox include droughts and overgrazing with associated habitat loss, fragmentation and degradation, competition with red fox *Vulpes vulpes arabica* which are perceived to be increasing in numbers due to their commensalism with humans, competition with domestic dogs and cats, canine diseases and associated parasites, collateral damage whilst targeting other carnivores by poisoning and trapping and occasionally for food (Gasperetti et al. 1985; Yom-Tov and Mendelssohn 1988; Ginsberg and Macdonald 1990; Kingdon 1990; Drew and Tourenq 2005; Murdoch et al. 2007).

This added threat of what seems to be direct persecution and killing of Rüppell's fox as problem animal or for "sport" in Saudi Arabia - although only viewed on these two occasions - is disconcerting, especially for a species perceived to be in decline throughout its range and of which very little is known. Environmental awareness and education is imperative to ensure the survival of species, especially carnivores which are often instinctively viewed as pests or threats.

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