

Occurrence of Ruppell's fox *Vulpes rueppelli* and Sand cat *Felis margarita* in Syria

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Ruppell's fox *Vulpes rueppelli* (Schinz 1825) and Sand cat *Felis margarita* (Loche 1858) were detected and identified several times during period May 2000 and December 2001 within a protected area of the central Syrian desert, in proximity of the ancient and world renown ruins of Palmyra (34.562° N, 38.280° E). The occurrence of both species was suspected in Syria, but not certain according to recent IUCN reviews (Cat Specialist Group 2002, Sillero-Zubiri *et al.* 2004).

The known distribution of Ruppell's fox comprises the whole Sahara, Arabia and Iran (Harrison & Bates 1991, Sillero-Zubiri *et al.* 2004). Being a more secretive species, the distribution of the Sand cat is less known: approximately, it overlaps with that of the Ruppell's fox, with more knowledge gaps, and with occurrence extending to the Caucasus (Harrison & Bates 1991, Nowel and Jackson 1996, Cat Specialist Group 2002).

The Syrian desert or desertic steppe (*al badia*, in Arabic) has undergone a severe and unprecedented degradation due to human activities during the past generation, which is still dramatically on going. Uncontrolled hunting and persecution of predators by mean of poisoned baits are still common practises. A long term and comprehensive fauna reconnaissance survey of the desert around the millenary oasis of Palmyra was carried out during period 2000-03 in the framework of a UN conservation project in assistance of the Syrian Minister of Agriculture and Agrarian Reform (MAAR).

This project aimed at developing the first Syrian desert protected area, named *al talila*, about 25 Km SE of Palmyra. This protected area, 220 Km², was established by MAAR in 1991: due to the strict protection tenure, it appeared as one of the last pristine corners of Syrian *al badia*. Habitat of *al talila* is hilly and undulating steppe, a mix of rocky and sandy, dominated by perennial dwarf scrubs, traditionally grazed by camel nomad pastoralists during winter time (Mirreh *et al.* 2001).

The difference in fauna occurrence and vegetation cover between the inside *versus* the outside of *al talila* reserve was startling during the study period. *al talila* reserve was quite abundant in ground beetles (*Tenebrionidae*), reptiles (lizards, geckos and snakes) and rodents (*Allactaga euphratica*, *Jaculus jaculus* and *Meriones libycus*). Habitat outside *al talila* reserve is mainly barren overgrazed rocky desert with very scant vegetation.

The wildlife team of this project has surveyed *al talila* reserve during the period May 2000 – December 2001, using a combination of systematic and opportunistic sampling approach. After having identified and described the main habitat types of the reserve, surveys were implemented by driving dirt tracks, covering most of the habitat types of *al talila*, with a 4x4 wheel drive vehicle.

These surveys were carried out at different times of the four seasons of the year, both during the day-time and during night-time by using a powerful spot-light. Identification was attempted using binoculars and telescopes. Two Trail-master camera trap devices were employed within the reserve during period December 2000 and December 2001, using rotten meat as a lure.

During study period, both the Ruppell's fox and the Sand cat were detected and readily identified at night, using optical instruments and the spot light. The Ruppell's fox was separated by the co-occurring *Vulpes vulpes* from the ear's larger size relatively to the rest of the body, longer legged, slimmer and longer muzzle and warier behaviour. Sand cat was separated from co-occurring *Felis silvestris lybica* by the general body built and size, pelage colour, and size and position of ears related to the rest of body.

Ruppell's foxes were detected a total of 6 times: it was seen inside the reserve on 23 August 2000, 8 September 2000, 15 September 2001, and photographed by Trail-master camera trap between 23 and 28 March 2001 (Photo 1); outside the reserve it was seen on 29 November 2000 and a dead individual was found on 15 February 2001. Sand cat was detected mainly within sandy habitats of *al talila*, dominated by dwarf perennial scrubs *Calligonum comosum* and *Stipagrostis plumosa*.

In total Sand cats were detected 4 times during the study period, only inside the reserve: it was directly seen on 18 July 2000, 9 November 2000, 15 September 2001, and it was photographed by Trail-master camera trap between 31 April and 5 May 2001 (Photo 2). Sighting of one Ruppell's fox was reported by Philippe J. Dubois on 22 April 2007 at *al talila* reserve (*pers. comm.*). Sand cat was reportedly seen in 2 instances during spring 2007 in *al talila* by a trained ranger (Ahmed Khader Abdalalh, *pers. comm.*).

Present documented record of occurrence of Sand cat appears to be the first definite one for Syria (Harrison and Bates 1991, Nowel and Jackson 1996, Bunaian *et al.* 2001 and Cat Specialist Group 2002). The recorded occurrence of Ruppell's fox also appears to be the first definite one for Syria, or at least for the central Syrian desert (Harrison and Bates 1991, Bunaian *et al.* 2001, Sillero-Zubiri *et al.* 2004), although indications of probable occurrence, derived from stuffed individuals, had been recently reported (Masseti 2001, 2004).

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Photo 1. Ruppell's fox photographed by Trail-master camera trap device between 23 and 28 March 2001 within *al talila* reserve, Palmyra, Syria.



Photo 2. Sand cat photographed by Trail-master camera trap device between 31 April and 5 May 2001 within *al talila* reserve, Palmyra, Syria.

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