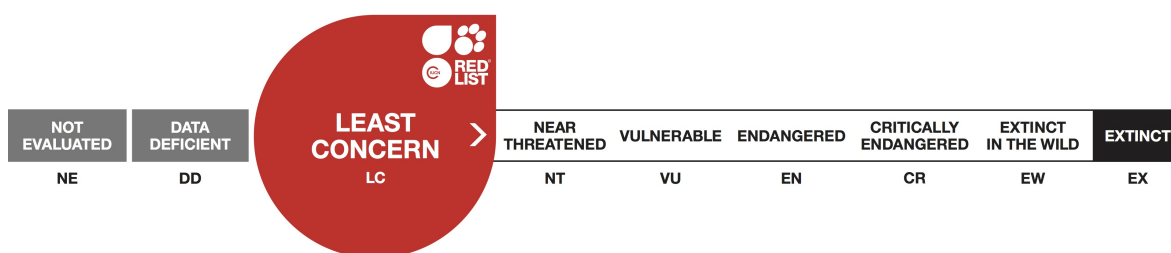


Vulpes rueppellii, Rüppell's Fox

Assessment by: Mallon, D., Murdoch, J.D. & Wachter, T.



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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Mammalia	Carnivora	Canidae

Taxon Name: *Vulpes rueppellii* (Schinz, 1825)

Synonym(s):

- *Vulpes rueppelli*

Regional Assessments:

- [Mediterranean](#)

Common Name(s):

- English: Rüppell's Fox, Rüppell's Fox, Rüppell's Sand Fox, Sand Fox
- French: Renard de Rüppell, Renard famélique

Assessment Information

Red List Category & Criteria: Least Concern [ver 3.1](#)

Year Published: 2015

Date Assessed: May 29, 2015

Justification:

This species is listed as Least Concern as, although there is no detailed information on its abundance, the species is widespread in desert and semi-desert regions of North Africa and across the Arabian Peninsula eastwards to Pakistan. Despite increasing pressure of urban development in some parts of its range, at present there are still plenty of arid, undeveloped areas remaining and there are otherwise no known major range-wide threats believed to be resulting in a population decline that would warrant listing in a threatened category.

Previously Published Red List Assessments

2008 – Least Concern (LC) – <http://dx.doi.org/10.2305/IUCN.UK.2008.RLTS.T23053A9411846.en>

2004 – Data Deficient (DD)

1996 – Data Deficient (DD)

1994 – Insufficiently Known (K)

1990 – Insufficiently Known (K)

Geographic Range

Range Description:

This species is widespread in desert and semi-desert regions of North Africa (north of 17°N) from

Morocco and Mauritania to Egypt and Somalia, in the mountains and fringes of the Sahara Desert (Cuzin and Lenain 2004, Cuzin 2013), including the Ahaggar mountains of Algeria, the Air Massif in Niger and regularly on the deposits created at the former lake margins of Greater Lake Chad in central Chad (T. Wachter pers. obs.). The only country for which there does not seem to be a definite published record is Mali, but it is very likely that they do occur. It is also thinly distributed across the Arabian Peninsula, being recorded from Oman, Saudi Arabia, United Arab Emirates and Yemen (Mallon and Budd 2011). They range northwest to Israel and Jordan and then eastwards to Pakistan (68°E; Cuzin and Lenain 2004). A record for Syria is the first confirmation of their presence in this country (Serra *et al.* 2007). Suspected historical expansion of distribution area is likely due to desertification, compensated by competition with the Red Fox due to new human settlements. It seems to avoid the extreme arid regions in the middle of the Sahara, being more abundant on the fringes, in mountain massifs and near oases.

Country Occurrence:

Native: Afghanistan; Algeria; Chad; Djibouti; Egypt; Eritrea; Ethiopia; Iran, Islamic Republic of; Iraq; Israel; Jordan; Libya; Mali; Mauritania; Morocco; Niger; Oman; Pakistan; Saudi Arabia; Somalia; Sudan; Syrian Arab Republic; Tunisia; United Arab Emirates; Western Sahara; Yemen

Distribution Map

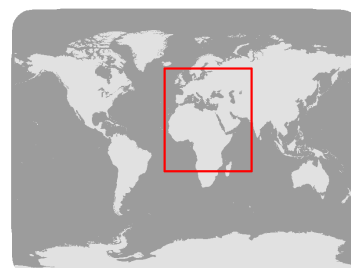


Vulpes rueppellii

Range

Extant (resident)

Compiled by:
International Union for the
Conservation of Nature



The boundaries and names shown and the designations used on this map do not imply any official endorsement, acceptance or opinion by IUCN.



Population

There is no estimate of total population size. Densities of Rüppell's Fox are usually low, but seem higher in areas where food is more freely available (for example, near human settlements; Valverde 1957, K. De Smet pers. obs.). In Mahazat as Sayd Reserve (2,244 km²) in Saudi Arabia, densities of 0.68/km² were recorded, but lower population estimates outside the fenced reserve indicate that the species may be vulnerable in the over-grazed, human-influenced landscape of central Arabia (Lenain 2000). In the same reserve, Olferman and Hendrichs (2006) trapped 150 Rüppell's Foxes during 12 trapping sessions producing an estimated density of 0.25-0.62/km² with corrected figures, for adults only, of 0.16-0.17/km².

Current Population Trend: Stable

Habitat and Ecology (see Appendix for additional information)

Their typical habitat includes sand and stony deserts. In United Arab Emirates, Rüppell's Foxes occur in a variety of desert habitats including sand sheets, sand dunes, gravel plains and inter-dune sabkhas (Murdoch *et al.* 2007). In Saudi Arabia, they have been found in open and stony habitats often with sparse vegetation cover, including a few herb and grass species (*Fagonia indica*, *Indigofera spinosa*, *Tribulus* spp., *Stipagrostis* spp. and *Panicum turgidum*) that receive little rainfall (~100 mm per year; Lenain 2000). In Mahazat as Sayd, Rüppell's Foxes showed a clear preference for open stony habitats (gravel or basalt) with short grass or low shrubs (Olferman and Hendrichs 2006). In the western empty quarter of Saudi Arabia, Rüppell's Foxes are the most frequently encountered carnivore, denning primarily in the firmer substrates of the interdunal gravel valleys, and penetrating to at least 100 km into the sand sea (T. Wachter pers. obs.). On the northern fringe of the Sahara, foxes may be found in similar areas receiving less than 150 mm annual rainfall. In Morocco and Western Sahara, the general habitat presents sparse to very sparse vegetation cover, dominated by small bushes and large grass tussocks (*Hammada scoparia*, *Panicum turgidum*, *Fagonia* spp.) mostly concentrated in wadis (with *Acacia* spp., *Argania spinosa*, *Balanites aegyptiaca*, *Maerua crassifolia* and *Capparis decidua* trees). In Niger (Dragesco-Joffé 1993) and Morocco (F. Cuzin pers. obs.), the species avoids large sand dune areas, where the Fennec Fox is the only other reported canid species; however, in Algeria, they also occur in large ergs (De Smet 1988). The Rüppell's Fox also lives in coastal areas, with extremely sparse vegetation and without any trees. It is able to survive in areas with little available water, as in central Saudi Arabia (Mahazat as-Sayd) on the fringes of the Arabian Empty Quarter (Lindsay and Macdonald 1986, Murdoch *et al.* 2007), in Algeria (De Smet 1988) and in Western Sahara, where observations do not show any relationship with the distance to the nearest available water (F. Cuzin unpubl.).

Rüppell's Foxes occupy home ranges that have been reported to average 30.4 km² in Oman (Lindsay and Macdonald 1986), and 16.3 km² (Olfermann 1996) and 10.2 km² (Lenain 2000) in Saudi Arabia. Foxes appear to form monogamous pairs that share a home range. Rüppell's Foxes overlap widely with Red Fox in many places, but seem to be better adapted to more arid areas that are marginal for Red Fox (Wachter and Attum 2006). Brito *et al.* (2009) identified probable sympatry between the two species along a relatively narrow stripe spreading from coastal southern Morocco to northern Egypt.

Systems: Terrestrial

Use and Trade

They are very occasionally killed for food, but rarely hunted for sale of furs.

Threats (see Appendix for additional information)

Threats include direct and indirect persecution by hunting and indiscriminate use of poisons. In some regions, foxes face persecution for their perceived impact on game species like Houbara Bustard (*Chlamydotis undulata*) and livestock (Murdoch *et al.* 2007); in Saudi Arabia, individuals have been seen hanging by the neck from road signs, suggestive of persecution by humans (Cunningham 2009). In Israel, the species is on the verge of extinction due to competitive exclusion by Red Foxes that are expanding their range following expansion of human settlements in the Negev Desert (Yom-Tov and Mendelssohn 1988); similarly, in the Arabian Oryx Sanctuary, Oman, and parts of UAE at least, it has been displaced around settlements by the Red Fox (Mallon and Budd 2011), and recently signs of a similar process have been observed through extensive camera trapping studies in the western empty quarter of Saudi Arabia (C. Barichievy and T. Wachter pers. obs).

Conservation Actions (see Appendix for additional information)

Legal protection

It is not listed on the CITES Appendices. State-level protection varies: in Israel, the species is fully protected by law, and no hunting, trapping or trading is allowed, whereas in Morocco, according to the annual hunting decree, Rüppell's Foxes and Red Foxes may be hunted during the whole year, as they are considered pests.

Presence in protected Areas

It occurs in a number of protected areas across its wide range (see Cuzin and Lenain 2004, Cuzin 2013).

Presence in captivity

Rüppell's Foxes are held in captivity, including in the Rabat Zoo, Morocco; the Dubai Zoo, and the Breeding Centre for Endangered Arabian Wildlife in Sharjah, United Arab Emirates. Attempts to breed Rüppell's Foxes generally have not been very successful (Ginsberg and Macdonald 1990), although they have been successfully bred in the Hai Bar Breeding Centre, Eilat, Israel (E. Geffen pers. comm.).

Research needs

The status and ecology of populations outside of the Arabian Peninsula remains largely unknown. Monitoring of populations in well-established protected areas throughout the species' range is encouraged. There is scope for detailed study of competition between Rüppell's and Red Foxes.

Credits

Assessor(s): Mallon, D., Murdoch, J.D. & Wachter, T.

Reviewer(s): Hoffmann, M. & Sillero-Zubiri, C.

Contributor(s): Cuzin, F., De Smet, K., Djaidi, T., Lenain, D., Masseti, M. & Nader, I.

**Facilitators(s) and
Compiler(s):** Hoffmann, M.

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External Resources

For [Images and External Links to Additional Information](#), please see the Red List website.

Appendix

Habitats

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Habitat	Season	Suitability	Major Importance?
3. Shrubland -> 3.5. Shrubland - Subtropical/Tropical Dry	-	Suitable	Yes
8. Desert -> 8.1. Desert - Hot	-	Suitable	Yes
13. Marine Coastal/Supratidal -> 13.3. Marine Coastal/Supratidal - Coastal Sand Dunes	-	Marginal	-

Threats

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Threat	Timing	Scope	Severity	Impact Score
5. Biological resource use -> 5.1. Hunting & trapping terrestrial animals -> 5.1.2. Unintentional effects (species is not the target)	Ongoing	Minority (50%)	Negligible declines	Low impact: 4
	Stresses:	1. Ecosystem stresses -> 1.3. Indirect ecosystem effects		
5. Biological resource use -> 5.1. Hunting & trapping terrestrial animals -> 5.1.3. Persecution/control	Ongoing	Minority (50%)	Negligible declines	Low impact: 4
	Stresses:	2. Species Stresses -> 2.1. Species mortality		

Conservation Actions in Place

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Conservation Actions in Place
In-Place Research, Monitoring and Planning
Action Recovery plan: No
Systematic monitoring scheme: No
In-Place Land/Water Protection and Management
Conservation sites identified: No
Occur in at least one PA: Yes
Area based regional management plan: No
Invasive species control or prevention: Not Applicable
In-Place Species Management
Harvest management plan: No

Conservation Actions in Place
Successfully reintroduced or introduced benignly: No
Subject to ex-situ conservation: Yes
In-Place Education
Subject to recent education and awareness programmes: No
Included in international legislation: No
Subject to any international management/trade controls: No

Conservation Actions Needed

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Conservation Actions Needed
2. Land/water management -> 2.1. Site/area management

Research Needed

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Research Needed
1. Research -> 1.2. Population size, distribution & trends
1. Research -> 1.3. Life history & ecology
1. Research -> 1.5. Threats
3. Monitoring -> 3.1. Population trends

Additional Data Fields

Population
Population severely fragmented: No
Habitats and Ecology
Generation Length (years): 3

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