

Country Profile

The State of Eritrea



Giraffe Conservation Status Report

August 2019

General statistics

Size of country: 121,320 km²

Size of protected areas / percentage protected area coverage: 4.26%

Species and subspecies

In 2016 the International Union for the Conservation of Nature (IUCN) completed the first detailed assessment of the conservation status of giraffe, revealing that their numbers are in peril. This was further emphasised when the majority of the IUCN recognised subspecies were assessed in 2018 – some as *Critically Endangered*. While this update further confirms the real threat to one of Africa's most charismatic megafauna, it also highlights a rather confusing aspect of giraffe conservation: how many species/subspecies of giraffe are there? The IUCN currently recognises one species (*Giraffa camelopardalis*) and nine subspecies of giraffe (Muller *et al.* 2016) historically based on outdated assessments of their morphological features and geographic ranges. The subspecies are thus divided: Angolan giraffe (*G. c. angolensis*), Kordofan giraffe (*G. c. antiquorum*), Masai giraffe (*G. c. tippelskirchi*), Nubian giraffe (*G. c. camelopardalis*), reticulated giraffe (*G. c. reticulata*), Rothschild's giraffe (*G. c. rothschildi*), South African giraffe (*G. c. giraffa*), Thornicroft's giraffe (*G. c. thornicrofti*) and West African giraffe (*G. c. peralta*).

However, over the past decade GCF together with their partner Senckenberg Biodiversity and Climate Research Centre (BiK-F) have performed the first-ever comprehensive DNA sampling and analysis (genomic, nuclear and mitochondrial) from all major natural populations of giraffe throughout their range in Africa. As a result, an update to the traditional taxonomy now exists. This study revealed that there are four distinct species of giraffe and likely five subspecies (Fennessy *et al.* 2016; Winter *et al.* 2018). The four species are Masai giraffe (*G. tippelskirchi*), northern giraffe (*G. camelopardalis*), reticulated giraffe (*G. reticulata*) and southern giraffe (*G. giraffa*). Nubian giraffe (*G. c. camelopardalis*), Kordofan giraffe (*G. c. antiquorum*), West African giraffe (*G. c. peralta*) are the three subspecies of the northern giraffe, while Angolan giraffe (*G. g. angolensis*) and South African giraffe (*G. g. giraffa*) fall under the southern giraffe. Rothschild's giraffe is genetically identical to the Nubian giraffe, and thus subsumed into it. Similarly, preliminary data suggests that the Thornicroft's giraffe is genetically similar to the Masai giraffe, however, additional research is necessary to determine if they are genetically identical or should be considered a subspecies of Masai giraffe (Winter *et al.* 2018). Based on this research, GCF in all publications refers to the updated giraffe taxonomy of four species, while a taxonomy review by the IUCN is ongoing.

The following species and subspecies of giraffe were historically found in Eritrea:

Species: Northern giraffe (*Giraffa camelopardalis*)

Subspecies: Nubian giraffe (*Giraffa camelopardalis camelopardalis*)

Conservation Status

IUCN Red List (IUCN 2018):

Giraffa camelopardalis (as a species, old taxonomy) – Vulnerable (Muller *et al.* 2016)

Giraffa camelopardalis camelopardalis – Critically Endangered (Wube *et al.* 2018)

In the State of Eritrea:

Extinct.

Issues/threats

The State of Eritrea (referred to as Eritrea in this report) is located in the Horn of Africa and was historically known for its lush flora and an abundance of fauna. However, today the country is characterised by sparse vegetation and wildlife populations that are almost non-existent (Tronvoll 1998). In pre-colonial Eritrea it was estimated that 30% of the country was covered in forests, yet in the years following independence the forest cover dropped to an alarming 2% (Tsfamichael 2017). Various factors have contributed to the environmental degradation in the country, including population growth (or poorly planned population settlements), large-scale agricultural development, prolonged periods of war, severe droughts and the disintegration of traditional practices and customs. All of these factors have created environmental constraints with far-reaching consequences for wildlife populations in Eritrea (Tsfagiorgis 2011; Naty 2002a; Coulthard 2001).

The greatest threat to wildlife in Eritrea has been the destruction and degradation of habitat. A rapidly growing human population from the 1880s to the 1980s increased the demand for agricultural land, firewood and building materials (Tronvoll 1998), while deforestation had already become evident towards the end of the 19th century (Tronvoll 1998).

War and violence have been prevalent in the Horn of Africa for the better part of the 20th century (Tronvoll 1998). The Eritrean Liberation Struggle (1961-1991), followed by the Eritrea-Ethiopia border conflict (1998-2000), has had a cumulative negative impact on the natural resources of Eritrea (Tsfagiorgis 2011; Naty 2002b). During the times of unrest, armies exercised irresponsible consumption of natural resources and inflicted irreparable damage on the environment (Tsfagiorgis 2011). In addition to the extensive use of woodlands for firewood and building of trenches and shelter, gunshots and air raids by the Ethiopian military often set fire to woodlands, resulting in further loss of habitat (Tsfagiorgis 2011; Naty 2002a).

The re-settlement of returnees and ex-combatants was later accompanied by the further clearing of woodland for farming and housing. With increased settlements, demand for firewood and charcoal also rose, thus contributing to ongoing habitat destruction (Naty 2002a,b).

The promotion and establishment of large-scale commercial agriculture in Eritrea further profoundly impacted the environment (Naty 2002a). Deforestation has been exacerbated by overgrazing and clearing of vegetative cover for commercial timber use and in search for better farming land (Tsfagiorgis 2011; Naty 2002a).

According to Naty (2002a), deterioration of the Eritrean environment can also be linked to the disintegration of traditional Kunama customs. Historically, traditions and customs of the local Eritrean population supported conservation values thus preventing over-exploitation of natural resources (Naty 2002a). The erosion of these customary practices encouraged individuals to utilise natural resources without any consideration for the norms and values of the others and society as whole (Naty 2002a).

The cumulative effects of all these factors have exerted severe pressure on wildlife populations in Eritrea (Tsfagiorgis 2011). Due to the continuous conflicts and excessive deforestation, the once abundant wildlife that previously populated the country has been vastly reduced and species such as buffalo, hippopotamus and giraffe have gone locally extinct (Tsfagiorgis 2011).



As in many other African countries, one of the greatest barriers to effective future conservation efforts is a lack of resources and capacity (trained personnel, systems and infrastructure), coupled with a lack of available data and information on the country's natural resources and biodiversity (Coulthard 2001).

Estimate population abundance and trends

Records of giraffe in Eritrea are mostly anecdotal, often contradicting, and fraught with uncertainty, especially regarding the species and subspecies that previously occurred in the country.

Historic

According to East (1999), Nubian giraffe formerly occurred in the south-western savannas of Eritrea. Parkyns, an English discoverer who explored Abyssinia (which spanned a geographical area covered by present-day Eritrea and the northern half of Ethiopia) in the 1840s, described in his book 'Life in Abyssinia' the abundance of wildlife and made reference to the occurrence of giraffe in the region (Parkyns 1853).

Anecdotal sources among the Kunama people suggested the prevalence of giraffe in the Gash-Setit area in western Eritrea during recent historical times (Naty 2002a). In the past, the Kunama used to make shields from the hides of giraffe and rhino (Naty 2002a). In the mid 1960s, giraffe reportedly still occurred in the far south-western corner of Eritrea (ZSL 1965).

A review of the historical literature provided limited references to the presence of giraffe in Eritrea and it remains uncertain when giraffe went locally extinct (Fennessy & Brown 2010; Naty 2002a; East 1999; Dagg 1962).

Naty (2002a) suggested the prevalence of giraffe in Gash-Setit as recent as a few decades ago, but did not give any further indication of the time period during which the species disappeared from the area.

Current

Nubian giraffe have been extirpated from their formal range in Eritrea and are now extinct in the country (Tesfagiorgis 2011; Fennessy & Brown 2010; Naty 2002a; East 1999).

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Citation

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Map

