

Country Profile

Republic of Rwanda

Giraffe Conservation Status Report

March 2016



General statistics

Size of country: 26,338 km²

Size of protected areas / percentage protected area coverage: 9%

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one species (*Giraffa camelopardalis*) and nine subspecies of giraffe (Muller *et al.* 2016) historically based on outdated assessments of their morphological features and geographic ranges.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 occur in the Republic of Rwanda:

Species: Masai giraffe (*Giraffa camelopardalis tippelskirchi*)

Conservation Status

IUCN Red List (IUCN 2012):

Giraffa camelopardalis (as a species) – least concern

Giraffa camelopardalis tippelskirchi – not assessed

In Rwanda:

Giraffe is listed by the Rwanda Environment Management Authority as a protected species that may consequently not be hunted. Rwanda's draft Wildlife Act is currently under revision at parliament level.

Issues/threats

Rwanda is one of the smallest but most densely populated countries in Africa (over 10 million inhabitants account for a population density of 230/km²) and one of the poorest countries in the world (Nsabimama 2010, Blanc *et al.* 2007). Growing population pressure, limited land resources, and a decade of war, has resulted in movement and resettlement of human populations in and adjacent to protected areas (Blanc *et al.* 2007; Kanyamibwa 1998). In 1994, following the Rwandan Civil War, returning refugees from Uganda and Tanzania saw an opportunity to resettle in Rwanda. Together with their livestock they occupied much of the Akagera National Park and surrounding land in the north east of the country (Van De Weghe 1990). With grazing and water readily available adjacent to and inside the park, human-wildlife conflict increased e.g. human injuries from wildlife, crop-raiding, illegal killing and illegal grazing (Van De Weghe 1990).

Akagera Management Company, a partnership between African Parks and the Rwanda Development Board, has been responsible for the management of Akagera National Park since early 2010 and since then there have not been any recorded incidents of illegally killed giraffe, or carcasses found (S. Hall pers. comm.).

However, giraffe have been sighted with snares and other injuries, and as such illegal hunting is still considered a potential serious threat (S. Hall pers. comm.).

An aerial survey undertaken in 2002 indicated a 50-80% decline in wildlife in the area of the former Akagera National Park (Lamprey 2002). The decline was most marked in the degazetted area and has mainly been attributed to human activities (Lamprey 2002). As giraffe frequently roam outside the park into the degazetted area, this could suggest a possible negative impact on current and future giraffe populations. At the time of writing, a boundary fence is under construction which would limit the movement of animals out of the park boundaries in future.

Estimate population abundance and trends

Historic

Giraffe do not naturally occur in Rwanda (East 1999). Historic records indicate significant populations of wildlife, although never giraffe (Van De Weghe 1990).

Recent

The first extra-limital introduction of giraffe into Rwanda occurred in 1986 (East 1999; Van De Weghe 1990). The Government of Kenya donated two male and four female Masai giraffe, which were subsequently introduced into the southern part of Akagera National Park in 1986 (East 1999; Van De Weghe 1990). Until



then, the species had never been recorded in Rwanda, despite the eastern savannas of Rwanda bordering with Tanzania in an area where giraffe were once abundant (Van De Weghe 1990). Regardless of their alien status, the giraffe flourished and the first offspring was born in 1988, after which the population grew exponentially (Van De Weghe 1990) to approximately 20 by 1994 (East 1999).

An aerial survey of the Akagera National Park was conducted in 2002 and estimated the total giraffe population at 101 individuals (Lamprey 2002). However, 80% of the giraffe were surveyed outside the current park boundaries, in the degazetted area, possibly suggesting that this is their preferred habitat.

Current

The most recent aerial survey of the park was undertaken in 2010 in which no giraffe were recorded in the sample transects, making population estimates difficult. Only one group of 15 giraffe was observed outside the survey transect and hence could not be included (S. Hall pers. comm.).

During informal ground counts along the two main roads in Akagera National Park (south to north) park officials have recorded 23, 31 and 38 individuals respectively in 2012. However, based on incidental observations, the Akagera National Park giraffe population is currently estimated at just over 100 individuals (S. Hall pers. comm.; www.african-parks.org).

N.B. An aerial survey is planned for the end of 2012 and it is hoped that this will give a more precise estimate of current giraffe numbers.

Future Conservation Management

The following are proposed conservation management options for giraffe in Rwanda:

- As giraffe are an extralimital introduction to Rwanda, it is important that any future introductions (although this in itself should be reviewed in light of its biodiversity conservation for giraffe) should only be the same (sub)species as previously introduced – *G. c. tippelskirchi*;
- Development of National Giraffe Strategy for Rwanda; and
- Support to dedicated giraffe conservation, habitat protection, education and awareness initiatives (government, NGO and academic)

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Citation

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Map

