

Country Profile

Republic of Zimbabwe



Giraffe Conservation Status Report

September 2020

General statistics

Size of country: 390,757 km²

Size of protected areas / percentage protected area coverage: 12.5 %

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one species (*Giraffa camelopardalis*) and nine subspecies of giraffe (Muller *et al.* 2018) historically based on outdated assessments of their morphological features and geographic ranges.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 are found in the Republic of Zimbabwe:

- Species:** Southern giraffe (*Giraffa giraffa*)
- Subspecies:** Angolan giraffe (*Giraffa giraffa angolensis*)
South African giraffe (*Giraffa giraffa giraffa*)

Conservation Status

IUCN Red List (IUCN 2018):

Giraffa camelopardalis (as a species) – Vulnerable (Mueller *et al.* 2018)

Giraffa camelopardalis angolensis – Least Concern (Marais *et al.* 2018)

Giraffa camelopardalis giraffa – Not assessed

In the Republic of Zimbabwe:

The Zimbabwe Parks and Wildlife Management Authority (PWMA), formerly known as the Department of National Parks and Wildlife Management, was established in June 2002 and operates under the Parks and Wildlife Act of 1975 (Auditor General 2003).

In the Republic of Zimbabwe (referred to as Zimbabwe in this report), the area occupied by national parks (where wildlife are protected), safari areas (hunting is permitted but controlled through a quota system), recreational parks (centred around national dams or lakes), botanic reserves (small areas designed to protect particular plant species), botanic gardens (areas where indigenous and exotic plant species are protected and propagated) and sanctuaries (reservoirs of animal species that are threatened with extinction and are provided safe breeding habitats) are collectively called the 'Wildlife Estates' and total approximately 47,000 km², or 12.5% of the total land area (Murindagomo 2013; Auditor General 2003). Wildlife Estates are the responsibility of the Ministry of Natural Resources and Tourism and managed by the PWMA which is also responsible for wildlife resources throughout the country, including commercial and communal areas, as well as Government and private land (P. Duncan, pers. comm.).

Giraffe are not a protected species in Zimbabwe and as such hunting, the removal of animals and animal products from a safari area, as well as the sale of animals and animal products is permitted. However, this is controlled and monitored by the PWMA under section 38 of the Parks and Wildlife Act of 1975. Each year interested stakeholders submit a quota off-take proposal for giraffe (and other wildlife), and a decision is then made by PWMA for each individual property based on the historical offtakes and updated ecological reports (Paragraph 5.7.3 the Zimbabwe Wildlife Policy stipulates that, "the setting of quotas is to be done on a scientific basis" and that "the Authority should carry out a detailed research before allocating quotas so as to have an insight into factors that may determine the setting of quotas in the requisite areas."). These reports are drafted by ecologists usually hired by the land owners either specifically for this purpose or form part of their permanent staff in order to conduct permanent monitoring (B. Leesmay pers. comm.). Other types of quota issued are: concession area hunts (areas leased out to safari operators), and citizen hunts (also utilised through the bag system and sold by auction but to citizens only) which are categorized as sport hunting, capture and translocation or rations for staff members (Policy for Wildlife 1992).

Issues/threats

Following the introduction of the Conservation Act of 1960, a wildlife philosophy based on economic incentives began. Zimbabwe quickly became one of the leaders in Africa for wildlife conservation and management with protected areas of the State, rural community run wildlife management areas and private game ranches and reserves reportedly generating US\$300 million per year in income (Murindagomo 2013).

However, a report by National Geographic News in 2007 indicated a disturbing trend in the decimation of wildlife in Zimbabwe as result of "national economic meltdown" following the land grab policy, implemented in 2000 (Wadhams 2007). Growing political and economic instability has put unprecedented pressure on the country's environment. Deforestation, poaching and unsustainable resource exploitation are destroying what was once among the best-managed park system in Africa (Barbee *et al.* 2006).



National parks in Zimbabwe are increasingly being encroached upon by neighbouring communities and their agricultural developments (Dunham *et al.* 2001-2013). With erratic subsistence farming settlements of people on large areas of ranch land, giraffe along with other wildlife are disappearing (P. Johnstone pers. comm.).

A United States-based elephant conservation group recently released a documentary exposing the possible involvement of high-level ZANU PF members in the poaching of elephant and rhino in the Hwange National Park. According to a statement, a crew from the production house 'When-Giants-Fall' spent six weeks in Zimbabwe in 2014, gathering information on the poaching from safari operators, conservationists and investigative journalists specialising in poaching (The Southern Eye 2015). While, yet to be confirmed, it is a concerning factor that cannot be over looked when it comes to conservation and management of species within Zimbabwe.

In addition, a 2003 Audit Report by the Auditor General on the Protection and Conservation of Wildlife by PWMA and Ministry of Environment and Tourism, noted that despite the Zimbabwean Wildlife Estates still existing, the PWMA and supporting legislation and policy still being in place, very little is done to implement laws protecting wildlife and resource usage. This is a result of limited human capacity and resources needed for patrols, policing and prosecuting.

For giraffe in Zimbabwe, human encroachment and the associated poaching, habitat degradation and fragmentation are the biggest direct threats while mismanagement remains a large and unknown indirect factor moving forward.

Estimate population abundance and trends

Historic

Giraffe were found throughout Zimbabwe, not just in national parks, however, the highest concentrations have historically been in the Wildlife Estates and on private land. According to the African Antelope Database 1998, giraffe estimates were 26,276: Hwange National Park – 14,651 (1996), Matetsi SA Complex – 3,295 (1995), Kazuma Pan – 561 (1995), Zambezi National Park – 543 (1995), and Gonarezhou National Park – 4,972 (1995), Forestry areas – 2,344 (1995). No data is available for private farms. Since these estimates were reported, all data is based on aerial survey reports conducted in a number of areas across Zimbabwe.

In 2001 the first of such surveys was undertaken, the first of its kind since 1998 and as part of a continued effort to monitor and study large herbivores in the parks. The study area covered Gonarezhou National Park (including Chipanda Pools, Chilojo, Naivasha, Chefu and Mabalautta National Parks) and surrounding areas of Malapati Safari Area and Maheynye ward in Ndowoyo Communal Land. Giraffe numbers were estimated at 195 (Dunham *et al.* 2002a). During this survey a number of squatter and poacher camps were observed as well as a significant increase in domestic animals, a consequence of human encroachment within the park and an additional burden on its natural resources.

During the same time period giraffe numbers in north west Matabeleland (including Hwange National Park, Zambesi National Park, Kazuma Pan National Park, Matetsi Safari Area and Denka Safari Area) were estimated at 3,437, and in the Save Valley Conservancy at around 278 (Dunham 2001; Dunham *et al.* 2002b Lenton 2004). In the Sebungwe Region and the Zambezi Valley (Chizarira & Matusandona National Parks, Chete & Chirisa Safari Area, and Binga, Ngokwe and Nyaminyama communal areas), no giraffe were recorded (Mackie 2001).

In the 2007 survey of Gonarezhou National Park, surrounding areas of Malapati Safari Area and a small area of communal land giraffe numbers were estimated at 231 (Dunham *et al.* 2007). Interestingly, an estimated six-fold increase in illegal residents, and a 66-fold increase in cattle inside the park was reported since 2001.



(Dunham *et al.* 2007). In north west Matabeleland, giraffe numbers continued to reduce dramatically to 1,417 (Dunham *et al.* 2007). Save Valley Conservancy giraffe were estimated at 707 (Lenton 2007) and in the Sebungwe Region, no giraffe was again recorded (Dunham *et al.* 2006). More recently in Gonarezhou National Park, Malapati Safari Area, Mahenya Communal Area and the communal land on the north, west and southern border of Limpopo using the same aerial survey method estimated the numbers of giraffe at 473 (Dunham *et al.* 2013). The 2013 survey was extended to communal lands south of the park including Sengwe communal land, land that is, in part at least, a potential wildlife corridor between Gonarezhou National Park and Kruger National Park in South Africa.

It was also noted that between 2009 and 2013, 34 giraffe were released into Gonarezhou National Park. These individuals originated from privately owned ranches in the south eastern lowveld of Zimbabwe, where they were considered surplus to management requirements. However, it is unlikely that these introduced giraffe had any significant influence on the 2013 estimates (Dunham *et al.* 2010). Also during this time period, two fences were erected in the park as a means of separating the communities and their livestock. Whilst cattle were recorded in the park, very few wild herbivores were observed in the communal area. In 2013, the Save Valley Conservancy Aerial Survey estimated a total giraffe population of 876 (Joubert *et al.* 2013).

Current

Recent aerial survey (2014) across Zimbabwe were undertaken with the support of the Great Elephant Census, and in Gonarezhou National Park including Malapati Safari Area an estimated 540 individuals were observed (Dunham & van der Westhuizen 2015); 1,568 giraffe in north west Matabeleland (including Hwange National Park, Zambesi National Park, Kazuma Pan National Park, Matetsi Safari Area and Denka Safari Area) (Dunham *et al.* 2015); and 661 giraffe in Save Valley Conservancy (Dunham & van der Westhuizen 2015) including Mokore Ranch – 32 giraffe, Sango Ranch – 404 giraffe, Savuli Ranch - 4 giraffe and Umkondo Ranch - 8 giraffe (Jooste & Lenton 2014). Communications with a number of other private reserves and ranches in Zimbabwe, reveal the following population estimates: Imire Lodge – 14 (R. Travers pers. comm.), Cawston Block – 280 (J. Johnstone pers. comm.), Shangani Ranch – 84 (C. Edwards pers. comm.), Nuanetsi Conservancy – 450 (B. Leesmay pers. comm.), Nuanetsi Cattle Ranch – 100 (B. Leesmay pers. comm.), Malilangwe Trust & Wildlife Reserve – 332 (B. Clegg pers. comm.), and Jabulani Safaris – 8 (W. Blackburn pers. comm.). In Buby Valley Conservancy estimates of giraffe numbers in 2012 were 6,000-8,000 (P. Trethown pers. comm.), and today are estimated at 3,000 individuals (B. Leatham pers. comm.).

Additional estimates for giraffe in other private and public land in Zimbabwe, including Drummond, Nottingham, Matopos National Park and Tuli Safari Area estimate a minimum of ~500 giraffe (P. Fick pers. comm.).

In total, there is an estimated minimum of 7,985 giraffe in Zimbabwe, and preliminary genetic findings indicate that the majority (3,876 individuals) are South African giraffe and an estimated 3,000 individuals are Angolan giraffe, and likely 1,109 are hybrids. Ongoing studies will help further understand the countries giraffe taxonomic status and these numbers may differ once further analyses of individuals is undertaken.



Future Conservation Management

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

- Development of National Giraffe Strategy for Zimbabwe;
- Taxonomic assessment of all major giraffe populations in Zimbabwe;
- Identification of priority conservation efforts for giraffe conservation;
- GPS satellite tagging of giraffe populations to help with monitoring and anti-poaching support; and
- Support to dedicated giraffe conservation, translocation, habitat protection, education and awareness initiatives (government, NGO and academic).

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References

Auditor General. 2003. *The Protection and Conservation of Wildlife by Parks and Wildlife Management Authority and Ministry of Environment and Tourism* Office of the Auditor General for the Parliament of Zimbabwe.

Barbee, J. and Hanes, S. 2006. *Zimbabwe: Human Conflict/Environmental Consequences*.

Dunham, K.M. 2001. *Aerial Census of Elephants and Other Large Herbivores in North West Matabeleland, Zimbabwe*. WWF-SARPO, Harare.

Dunham, K.M. 2002a. *Aerial Census of Elephants and other Large Herbivores in Gonarezhou National Park and bordering lands, Zimbabwe*. WWF-SARPO, Harare. 46pp.

Dunham, K.M. 2002b. *Aerial Survey of Elephants and other Large Herbivores in the Save Valley Conservancy*. WWF-SARPO, Harare. 61pp.

Dunham, K.M., Mackie, C.S., Musemburi, O.S., Chipesi, D.M. Chiweshe, N.C., Taylor, R.D., Chimuti, T. Zhuwau, C. and Brightman, M.A.H. 2006. *Aerial Census of Elephants and Other Large Herbivores in the Sebungwe Region, Zimbabwe*. WWF-SARPO, Harare.

Dunham, K.M., Mackie, C.S., Musemburi, O.C., Zhuwau, C., Nyaguse, G.H., Taylor, R.D. and Chimuti, T. 2007. *Aerial Survey of Elephants and other Large Herbivores in Gonarezhou National Park, Zimbabwe*. WWF-SARPO Occasional Paper 18 WWF-SARPO, Harare. 49pp.

Dunham, K.M., Mackie, C.S., Musemburi, O.C., Zhuwau, C., Nyaguse, G.H., Mtare, T.G., Taylor, R.D. and Chimuti, T. 2007. *Aerial Survey of Elephants and other Large Herbivores in North West Matabeleland, Zimbabwe*. WWF-SARPO, Harare.

Dunham, K.M., Mackie, C.S., Nyaguse, G. and Zhuwau, C. 2015. *Aerial Census of Elephants and other Large Herbivores in north-west Matabeleland (Zimbabwe): 2014*. Great Elephant Census, USA. 134pp.



- Dunham, K.M., van der Westhuizen, E., van der Westhuizen, H.F. and Ndalmani, H. 2013. *Aerial Census of Elephants and other large herbivores in Gonarezhou National Park (Zimbabwe) and surrounding areas*. Frankfurt Zoological Society, Gonarezhou Conservation Project, Chiredzi. 113pp.
- Dunham, K.M. and van der Westhuizen, H.F. 2015. *Aerial Census of Elephants and other Large Herbivores in Gonarezhou National Park and Save Valley Conservancy (Zimbabwe): 2014*. Great Elephant Census, USA. 125pp.
- East, R. 1999. *African Antelope Database 1998*. IUCN/SSC Antelope Specialist Group. IUCN, Gland, Switzerland and Cambridge, UK.
- Murindagomo, F. 2014. 'Wildlife management in Zimbabwe: The CAMPFIRE programme'. Wildlife management in Zimbabwe: The CAMPFIRE programme/FAO.
- Fennessy, J., Bidon, T., Reuss, F., Kumar, V., Elkan, P., Nilsson, M.A., Vamberger, M., Fritz, U. & Janke, A. 2016. Multi-locus analysis reveal four giraffes species instead of one. *Current Biology* **26**: 2543-2549.
- Government of Zimbabwe. 1996. Parks and Wildlife Act, 1975, Chapter 20:14. Revised Edition. Government of Zimbabwe.
- Government of Zimbabwe. 1960. Wildlife Conservation Act, 1960. Wildlife Conservation Act, 1960
- Jones, B.T. 2008. *Legislation & Policies relating to Protected Areas, Wildlife Conservation and Community Rights to Natural Resources in countries being partner to the Kavango Zambezi Transfrontier Conservation Area*, A Review commissioned by Conservation International, in collaboration with African Wildlife Foundation, supported by the Swiss Agency for Development & Cooperation. Windhoek, Namibia.
- Jooste, D. and Lenton, S. 2014. *Aerial Survey of Mokore, Sango, Savuli and Umkondo Ranches, Save Valley Conservancy, Zimbabwe*
- Joubert, C. and Joubert, L. 2013. *Aerial Survey of the Larger Herbivores Save Valley Conservancy*
- Lenton, S. 2007. *Aerial Survey of the Larger Herbivores Save Valley Conservancy, Zimbabwe*.
- Mackie, C.S. 2002. *Aerial Census of Elephants and Other Large Herbivores in the Sebungwe Region, Zimbabwe*. WWF-SARPO Occasional Paper Number 3. Harare, Zimbabwe..
- Marais, A., Fennessy, J., Fennessy, S., Brand, R. & Carter, K. 2018. *Giraffa camelopardalis ssp. angolensis*. The IUCN Red List of Threatened Species 2018: e.T88420726A88420729. <http://dx.doi.org/10.2305/IUCN.UK.20182.RLTS.T88420726A88420729.en>. Downloaded September 2020.
- Muller, Z., Bercovitch, F., Brand, R., Brown, D., Brown, M., Bolger, D., Carter, K., Deacon, F., Doherty, J.B., Fennessy, J., Fennessy, S., Hussein, A.A., Lee, D., Marais, A., Strauss, M., Tutchings, A. & Wube, T. 2016. *Giraffa camelopardalis*. The IUCN Red List of Threatened Species 2016: e.T9194A51140239. Downloaded September 2020.
- Policy for Wildlife, Zimbabwe, 1992
- Southern Eye 2015. *Film Exposes Zanu PF Bigwigs* <<http://www.southerneye.co.zw/2015/04/25/film-exposes-zanu-pf-bigwigs/>> Downloaded 6 May 2015
- Selier, J. and Page, B. 2014. *Dry season fixed-wing aerial survey of large mammals in the northern Tuli Game Reserve and Mapunhubwe National Park and of elephants in the Greater Mapunungubwe Transfrontier Conservation Area, Botswana, South Africa and Zimbabwe, August 2014*. University of KwaZulu Natal, South Africa.
- ZPWMA. 2015. The Zimbabwe Parks and Wildlife Management Authority <<http://www.zimparks.org/>>
- UNEP. *WCMC Conservation Dashboard for Zimbabwe*.< <http://www.unep-cmc.org/#?country=ZW&dashboard=show>> Downloaded 9 February 2015.



Winter, S., Fennessy, J. & Janke, A. 2018. Limited introgression supports division of giraffe into four species. *Ecol Evol.* **8**: 10156–10165. <https://doi.org/10.1002/ece3.4490>

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Map

