



Quarterly conservation update – Kordofan giraffe (*Giraffa camelopardalis antiquorum*), Garamba National Park, Democratic Republic of Congo

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Introduction

Garamba National Park (GNP) in the Democratic Republic of Congo (DRC) was first established in 1938, one of the first in Africa, by virtue of its uniqueness. Throughout its long history the Park was first made famous with the world's only elephant domestication program, coupled with its high numbers of elephant and buffalo, and home to the world's last northern white rhino (*Ceratotherium simum cottoni*) population. Additionally, the Park was designated a UNESCO World Heritage site in 1980 and on the List of World Heritage in Danger in 1996. Sadly, the Park's infamy has increased through losing the last northern white rhino, and being plagued by numerous groups of rebels, in particular the Lord's Resistance Army.

In fact, the Park, being nestled in the far north-eastern corner of the country, is writing history every day again, not because of the countries' own destabilised politics (the 2,000km between the Park and the countries' capital creates an efficient buffer), but because of its war against armed militia coming from neighbouring countries.

GNP, and its adjacent Hunting Reserves, are also home to DRC's only population of giraffe, historically named 'Congo giraffe' (Amube et al. 2009; De Merode et al. 2000; East 1999) but genetically identical to other Kordofan giraffe across Central Africa (Fennessy et al. 2016).

Due to illegal hunting, current giraffe numbers in the Park and surrounding areas were reported to be less than 40 individuals – and less than 2,000 Kordofan giraffe (*Giraffa camelopardalis antiquorum*) remain in the wild (Muller et al. 2016). The numbers have never been so low since the first aerial census of Garamba National Park was undertaken in 1976, when 350 giraffe were estimated (Savidge et al. 1976).

Interestingly, poaching of giraffe by local tribes living in the adjacent Hunting Reserves to Garamba NP has been relatively limited. This is because they believe that consuming giraffe meat causes leprosy. However, some giraffe were poached in the last decade for their tail hair which is a status symbol for tribe chiefs (African Parks, 2012). Amube et al. (2009) reported that the traditional taboos have largely died out with the influence of modern society and the invading *muharaleen* horsemen, who specifically value giraffe tails as part of their dowries, have increased

their illegal hunting of giraffe. A decline in general wildlife populations in the Park is furthermore linked to post war instability, power struggles and exploitation of resources, particularly from neighbouring countries (Hillman Smith & Amube 2005).

The giraffe population of the DRC was formerly recognised as a separate taxon, the Congo giraffe (*G. c. congoensis*), but numerous authors have since subsumed it into *G. c. antiquorum*, and more recently a subspecies of the Northern giraffe (*Giraffa camelopardalis*) (Fennessy et al. 2016).

In the context of the above, the DRC Institut Congolais pour la conservation de la Nature (ICCN) and African Parks Network has been undertaking key conservation and management of the Park, and more recently a focus has been on preserving the last remaining giraffe. The Giraffe Conservation Foundation (GCF) with assistance from its partners has provided some technical and financial support to the Park, and the latest is through my conservation research efforts to assess the situation and to develop an adequate management plan for the remaining giraffe population. This quarterly conservation update provides an overview of the work undertaken from April – June 2017, and is a follow up on a previous quarterly updates that covers the work undertaken in October – December 2016 and January – March 2017.

Update on population dynamics

Being dispersed over four different regions, Garamba's giraffe are categorised into four categories (East, Northwest, Southwest and West). Besides two bigger populations in the East and Southwest, there are two small populations in the West and Northwest, home to 3 and 4 giraffe respectively. During this reporting period four new giraffe were identified which is a positive.

	Juvenile (6)	Subadult (9)		Adult (32)	
	Male/Female (6)	Male (3)	Female (6)	Male (11)	Female (21)
East	GIR44U GIR45U GIR54U	GIR02M GIR15M GIR17M	GIR01F	GIR04M GIR09M GIR10M GIR14M GIR21M GIR38M GIR39M GIR41M	GIR03F GIR05F GIR06F GIR08F GIR12F GIR13F GIR16F GIR20F GIR37F GIR43F
Southwest	GIR49U GIR52U GIR56U		GIR29F GIR30F	GIR46M GIR19M GIR47M	GIR11F GIR42F GIR50F GIR53F GIR51F GIR28F GIR55F
Northwest			GIR34F GIR35F		GIR32F GIR33F
West			GIR26F		GIR22F GIR24F

Figure 1. Population dynamics of giraffe in Garamba NP categorised by region.

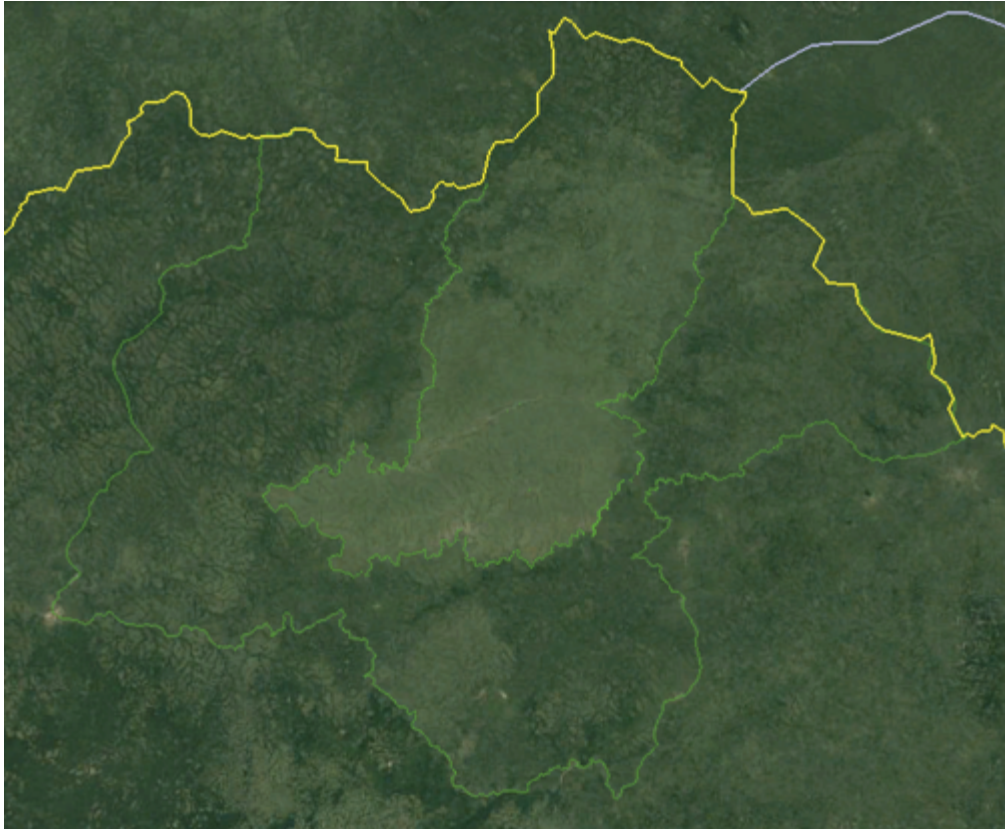


Figure 2. Satellite image of Garamba NP containing suitable habitat for giraffe and bordered all around by densely wooded areas.

The population dynamics of Garamba's giraffe are highlighted below. The age class ratios are currently 1: 0.27: 0.12 (adult 68.1%: sub-adult 19.1%: juvenile 12.8%), while the sex ratio is 1: 0.51 (Female 66%: Male 34%), compared to the assumed average of 1:1 (Female 50%: Male 50%).

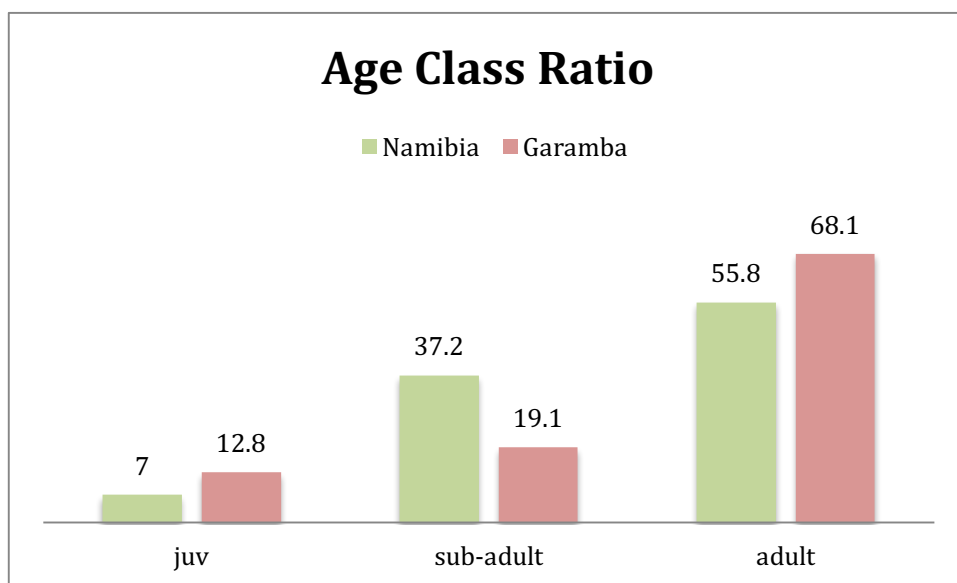


Figure 3. Age class ratios of Garamba's giraffe compared with Namibian data (Fennessy, 2004).

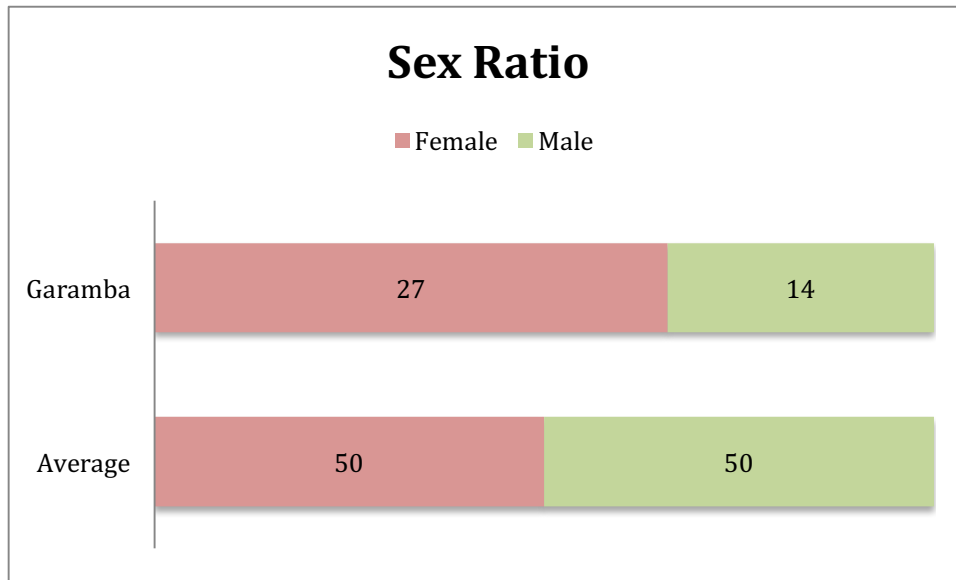


Figure 4. Sex Ratio of Garamba's giraffe compared with the expected average sex ratio.

De-collaring operations

Of the eight giraffe that were originally fitted with a GPS satellite collar (head harness) in January/February 2016, five had already been removed or fallen off as of March 2017. The last remaining three collars were removed during this reporting period.

GIR43F, named 'Mwambe', was collared on 3 February 2016 and was the last giraffe in the Park with a functioning unit. However, when the giraffe was spotted on 29 March 2017 on a dedicated giraffe observation flight, it was noticed that the unit had slipped down on its neck and actions motioned to remove the collar as soon as possible to prevent any possible injuries. On 31 March 2017 with assistance of Dr. Karen Lubbe, the collar was removed successfully. Subsequent monitoring has indicated that the individual is in good condition.

GIR37F, named 'Mibale', was collared on 25 January 2016 and signals of the collar were received up until 11 October 2016. As the animal was coincidentally seen during an elephant collaring operation on 23 April 2017, the animal was darted and the collar successfully removed by Dr Pete Morkel. The individual has since been seen in good condition.

GIR42F, named 'Sambo', was collared on 30 January 2016 and signals of the collar were only received up until 20 March 2016. Because of the densely vegetated area he inhabits, observations were rare after the collar stopped sending through signals. It was on a dedicated giraffe flight on 17 May 2017 that he was spotted and Dr Karen Lubbe successfully removed the collar on 23 May 2017. The animal has since then been seen in good health.



Figure 5. Photo of the successful de-collaring operation of GIR42F or Sambo

Ground patrols

Two ground patrols were conducted during the reporting period. This was limited due to the environmental conditions as the grass is extremely high and very difficult to spot any animals in the field. The first patrol was from the 26-27 May in the south-western region with journalist Thomas Nicolon covering a story on Garamba's giraffe for Le Monde and Monga Bay.

- http://www.lemonde.fr/afrique/article/2017/06/11/les-derniers-jours-des-girafes-du-congo_5142308_3212.html
- <https://news.mongabay.com/2017/05/drcs-garamba-national-park-the-last-giraffes-of-the-congo/>



Figure 6. Patrolling in Garamba National Park

Three giraffe were observed but couldn't be matched with other known individuals in the Park. After continued observations we confirmed them to be new individuals for the Park database, a positive story in helping the population expand.

Another ground patrol, again in the south-western region, was conducted from 8-13 May with the objective to assess the potential of constructing a fenced giraffe enclosure in an area that was thought suitable for securing part of the population. Over five days a total of 40km in transects was walked in the proposed 18km². During this period, two giraffe were observed and faecal samples collected.

Aerial patrols

Based on the environmental conditions in GNP during the reporting period, giraffe were more easily monitored from the Parks small airplane. In total, 23 giraffe flights were carried out across the Park with a total of 105 giraffe observed in 29 herds. Ongoing analysis of the flight data is occurring.

Habitat mapping

The development of potential giraffe enclosure site for the establishment of a secure and protected satellite population of GNP giraffe has been identified and assessed with respect to habitat suitability by a ground patrol team. The area has been mapped using a Canon 5D Mark IV on a dedicated flight to produce a high-resolution map.

The construction of an enclosure to protect and breed a secure giraffe population in GNP is an action plan proposed by the Park's management. However, it is decided not to effectuate the enclosure plan before a Strategy Plan and enclosure assessment has been complete. During the field assessment, the area was found to be suitable but small fencing changes are to be proposed due to marshy areas.

We hope that this mapping is a first step to better assess the habitat and from here develop a targeted plan based on the best knowledge available to establish such a secure population.

National Giraffe Conservation Strategy and Action Plan – Uganda

Garamba NP's African Parks Network was invited by GCF to attend the regional workshop to develop the first-ever National Giraffe Conservation Strategy and Action Plan for Uganda. I was fortunate to attend the meeting on the Parks behalf of African Parks Network as this was seen as a valuable learning experience for the ongoing development of GNP Giraffe Conservation Strategy, the framework for the conservation of the park's giraffe in order to secure their future.

Over the course of the workshop, a logical framework was developed to support the next ten years of giraffe conservation and management in Uganda by identifying clear objectives, actions and indicators to be addressed in order to meet the goals outlined for the national vision.



Figure 7. Group photo of the workshop to develop the National Giraffe Conservation Strategy and Action Plan meeting in Entebbe, Uganda

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