

# Country Profile

## Democratic Republic of the Congo

### *Giraffe Conservation Status Report*



**Sub-region:** Central Africa

#### General statistics

Size of country: 2,345,410 km<sup>2</sup>

Size of protected areas / percentage protected area coverage: 11%

#### (Sub)species

Kordofan giraffe (*Giraffa camelopardalis antiquorum*) (formerly *G. c. congoensis*)

#### Conservation Status

##### IUCN Red List (IUCN 2012):

*Giraffa camelopardalis* (as a species) – least concern

*Giraffa camelopardalis antiquorum* – not assessed separately

##### In the Democratic Republic of the Congo:

Giraffe are classified by the Congolese Wildlife Authority, the Institut Congolais pour la Conservation de la Nature (ICCN), as a rare or endangered species that is fully protected and may not be killed.

#### Issues/threats

Giraffe in the Democratic Republic of the Congo (DRC) are currently restricted to the Garamba National Park and adjacent hunting reserves in the north east of the country (Amube *et al.* 2009; De Merode *et al.* 2000; East 1999). The Garamba complex consists of Garamba National Park (4,900km<sup>2</sup>) and three adjacent hunting reserves: Azande to the west, Gangala na Bodio to the south and Mondo Missa to the east, totalling a further 7,527km<sup>2</sup> (Amube *et al.* 2009; De Merode *et al.* 2000; East 1999; Hillman Smith 1985). Falling within the Sudano-Guinea savanna zone, the vegetation of the park varies from well watered open long grass savanna in the south through increasing bush and woodland towards the higher ground of the north. The surrounding reserves are more bushed and wooded than the park and therefore an important part of the habitat for giraffe.

Garamba National Park, created in 1938, is one of the oldest national parks in Africa and borders South Sudan on the Congo-Nile watershed (De Merode *et al.* 2000). Together with the northern white rhino, the giraffe were important in motivating Garamba National Park's for its declaration as a World Heritage Site in 1980.

The park is managed by the national government conservation authority, the Institut Congolais pour la Conservation de la Nature (ICCN), but for most of the last forty years has needed international supporting partnerships for adequate conservation. Following the end of an FAO/UNDP project in the 1970s, serious illegal hunting of elephants (66%), rhino (97%), and giraffe (50%) occurred, possibly as a result of their movement out of the park. From 1984 to 2005 the ICCN was partnered by the Garamba Project supported by a consortium of international donors and numbers of wildlife increased until civil unrest broke out again. Since 2005 the park has been managed by African Parks in partnership with the ICCN.

The park has faced many challenges, several of which have been related to Central Africa's turbulent political landscape (Cunliff 2010a; Amube *et al.* 2009; Hillman Smith & Ndey 2005; Hillman Smith 2004; Hillman Smith *et al.* 2003a). The first of these challenges was the post Independence Simba Rebellion in the 1960s which decimated wildlife numbers. Wildlife increased again with reinstated protection and the illegal hunting of the late 1970s and early 1980s focused on wildlife other than giraffe, although the heavy presence of illegal hunters have likely also negatively impacted giraffe. From 1984, the conservation and development activities of the Garamba Project with ICCN facilitated an increase in wildlife, despite an influx of weapons, military deserters and refugees into the DRC in 1991 from the civil war in South Sudan (Hillman Smith *et al.* 2003a). Sudan People's Liberation Army (SPLA) rebels and associates of local military were involved with commercial bushmeat poaching in the park and surrounding reserves during the 1990s but were largely controlled by the Project/ICCN partnership. In 1997 the 'Liberation war' in the DRC precipitated another upsurge of illegal hunting in the park as game guards were disarmed and anti-poaching was curtailed for several months (Hillman Smith *et al.* 2003a; Hillman Smith & Ndey 2005; Hillman Smith *et al.* 2003b). Conservation remained relatively stable throughout the second civil war in DRC, with extra support from a UN Foundation/UNESCO until the cease fire in South Sudan enabled the penetration in 2003 of *Janjaweed muharaleen* horsemen from the west and SPLA from the east, which decimated all wildlife, in particular giraffe.

Interestingly, the Azande and Mondo tribes living in the Hunting Reserves adjacent to Garamba National Park believed that consuming giraffe meat caused leprosy, and although this limited local poaching, possession of giraffe tail hair fly whisk was a status symbol of the Mondo traditional chiefs (African Parks 2012). However, according to Amube *et al.* (2009), the traditional taboos have largely died out with the influence of modern society and the invading *muharaleen* horsemen specifically valued giraffe tails as part of their dowries. Therefore, illegal hunting of giraffe has increased (Amube *et al.* 2009). A decline in wildlife populations is furthermore linked to post war instability, power struggles and exploitation of resources, particularly from neighbouring countries (Hillman Smith & Ndey 2005).

In 2005 the Lord's Resistance Army (LRA), a guerrilla group from northern Uganda, also established a base in the Azande Reserve adjacent to the park in order to escape the Ugandan army. The LRA often infiltrated the park, even attacking the headquarters in January 2009, killing 17 people and creating a long-term atmosphere of fear (ACF 2012; Cunliffe 2010a,b). The LRA remained in the Garamba ecosystem until a Ugandan-led military offensive drove them out in 2009 (Cunliffe 2010a), but are still present in the larger area.

In 2012, another LRA base camp was discovered within the park (ACF 2012; RNW 2012). At the time of writing, the security situation had stabilised with the assistance of the Congo military (FARDC) and UN Special Forces (MONUSCO) who temporarily moved in and once again managed to drive LRA operatives out (ACF 2012). It is believed that the LRA retreated to the densely wooded Azande Hunting Reserve west of Garamba, however, it is expected that they will return to the park unless an ongoing military presence is secured (ACF 2012).

## Estimate population abundance and trends

Taxonomic confusion has surrounded the (sub)species occurrence of giraffe in Central Africa (Hassanin *et al.* 2007). The giraffe population of the DRC were formerly recognised as a separate (sub)species, the Congo giraffe (*G. c. congoensis*), but it has been subsumed into *G. c. antiquorum* (Fennessy 2008). However, further genetic sampling and analysis of the DRC giraffe population, along with other giraffe from the region, is needed to confirm this assumption.

### Historic

Recent records of the occurrence of giraffe in the DRC are limited to the Garamba ecosystem, but in the past they occurred throughout the savannas of *Haut Uele* in northern Congo (de Saeger 1954). In the 1950s, giraffe were distributed throughout the park, but at somewhat lower density in the north-west, due to illegal hunting (Verschuren 1958). Verschuren estimated at least 300 giraffe in the park and noted that counts by Cornet d'Elzius had observed at least 60 giraffe in the *Domaine de Chasse Gangala-na-Bodio* to the south of the park (East 1999)<sup>1</sup>. The presence of a large elephant population has opened the habitat over the last few decades resulting in giraffe largely moving into the peripheries of the park and the adjacent reserves, where woodland density is higher (Amube *et al.* 2009; De Merode *et al.* 2000; East 1999).

### Recent

The first systematic aerial census of Garamba National Park, carried out in 1976, estimated the giraffe population at 350 individuals (Savidge *et al.* 1976). The same method was subsequently applied from 1983 to 2004. Throughout most of the 1980s and 1990s, surveys also included full coverage of the more wooded surrounding reserves, though visibility is sometimes limited.

Systematic sample counting in the park, even with high density stratification of the southern sector, yielded fairly high standard errors for species with low numbers and clumped distribution, including for giraffe. As a result, fluctuations in numbers resulted, but no significant in reduction in numbers occurred until the effects of increased illegal hunting resulted during the civil unrest. Current aerial surveys are total counts over the southern sector and parts of the park, and this method gives only minimum numbers and likely more may be present than observed.

See table below for aerial survey figures for giraffe from Garamba National Park and reserves from 1976 to 2012.

Year	Garamba NP	SE	Reserves (DCS)	Source
1976	350	±250	Not surveyed	Savidge <i>et al.</i> 1976
1983	175	±163	20	Hillman <i>et al.</i> 1983
1984	237	±144	0 in part DC	Hillman Smith 1989
1986	153	±140	13	Hillman Smith 1989
1991	346	±203	46	Smith <i>et al.</i> 1993
1993	347	±419	0	Smith <i>et al.</i> 1993
1995	178	±210	52	Hillman Smith <i>et al.</i> 1995
1998	144	±73	Not surveyed	Hillman Smith <i>et al.</i> 2003b
2000	118	±64	Not surveyed	Smith & Hillman Smith 2000
2002	62	±13	Not surveyed	Hillman Smith <i>et al.</i> 2003b

<sup>1</sup> Although East (1999) referred to *G. c. peralta*, *G. c. antiquorum* and *G. c. congoensis* collectively as western giraffe, *G. c. congoensis* has been subsumed into *G. c. antiquorum* (Fennessy 2008) and is now assumed to be Kordofan giraffe as referred to throughout this document.

Year	Garamba NP	SE	Reserves (DCS)	Source
2003	62	±75	Not surveyed	Hillman Smith <i>et al.</i> 2003b
2004	185	±152	Not surveyed	Hillman Smith <i>et al.</i> 2004
	<b>Garamba NP (South)</b>			
2005	48		Not surveyed	De Merode <i>et al.</i> 2005
2006	52		18 in parts of DCs	Emslie <i>et al.</i> 2006
2007	82		0 in part DC	Amube <i>et al.</i> 2009
2012	11		11 in part DC	African Parks 2012

Between 1976 and 1983 there was very heavy illegal hunting of all wildlife and figures from the 1983 count indicate a drop in giraffe numbers as well, though this may have partly been due to movement out of the park. However during the first 10 years of the Garamba Project, from 1984 to 1995 numbers of most species, including giraffe, rose. The 'Liberation' civil war affected Garamba in late 1996 and early 1997, with disarming of guards, anti-poaching being forced to stop completely for several months and penetration of the park by poachers that were largely Sudanese. The 1998 post war count indicates a fall in giraffe numbers. In August 1998 the second civil war started and although conservation activities were maintained and wildlife numbers remained relatively stable, constraints on the transport of aircraft fuel prevented the surveys including the surrounding reserves. Illegal hunting rose disastrously in 2003/4 with invasions by the SPLA and Sudanese *janjaweed* horsemen and giraffe numbers fell again.

### Current

Although giraffe population numbers have always been relatively low, they have plummeted to only a few individuals the past decades (African Parks 2012). Currently, giraffe are predominantly in the southern sector of Garamba National Park and in areas that extend to the Azande, Mondo Missa and Gangala na Bodio Hunting Reserves (Amube *et al.* 2009). Aerial counts of the southern part of the park and adjacent hunting reserves in 2007 indicated that approximately 85 individuals remain in the area (Amube *et al.* 2009). In 2012 African Parks (2012) observed only 11 in the park and 11 in the reserves during an aerial total count, but estimated approximately 70 individuals roaming the park.

In summary, current giraffe numbers for the DRC are estimated at <80 Kordofan giraffe, found exclusively in the Garamba National Park and adjacent hunting reserves.

### Future Conservation Management

The following are proposed conservation management options for giraffe in the DRC:

- Anti-poaching efforts to conserve the population and the ecosystem of Garamba National Park and Reserves;
- Development of National Giraffe Strategy for the DRC;
- Support to dedicated giraffe conservation, habitat protection, education and awareness initiatives (government, NGO and academic).

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## References

ACF 2012. *Congo and UN military assistance to counteract LRA in Garamba National Park*. African Conservation Foundation. <http://www.africanconservation.org/201206262650/conservation-news-section/congo-and-un-military-provide-assistance-to-counteract-lra-in-garamba-national-park> (Accessed 9 July 2012).

African Parks 2012. *Five giraffe successfully collared in Garamba*. [http://www.african-parks.org/News\\_30\\_Five+giraffe+successfully+collared+in+Garamba.html](http://www.african-parks.org/News_30_Five+giraffe+successfully+collared+in+Garamba.html) (Accessed 5 July 2012).

Amube Ndey, J., Antonínová, M. & Hillman Smith, K. 2009. Giraffes of the Garamba National Park, Democratic Republic of Congo. *Giraffa* **3(1)**: 8-10.

Cunliffe, S. 2010a. *A road less travelled*. <http://www.leisurewheels.co.za/outabout/ourreaders/a-road-less-travelled/> (Accessed 6 July 2012).

Cunliffe, S. 2010b. *The price of protection*. Africa Geographic, November edition p 18-20.

Dagg, A.I. 1962. *The distribution of the giraffe in Africa*. School of Graduate Studies, University of Waterloo, Waterloo, Ontario, Canada.

De Merode, E., Hillman Smith, K., Nicholas, A., Ndey, A. & Likango, M. 2000. The spatial correlates of wildlife distribution around Garamba National Park, Democratic Republic of the Congo. *International Journal of Remote Sensing* **21(14)**: 2665-2683.

De Merode, E., Inogwabini, B.I., Tello, J. & Panziama, G. 2005. Report of an aerial survey of Garamba National Park, August 2005. *Unpublished Report*.

De Saeger, H. 1954. Introduction, *Exploration du Parc National de la Garamba, Mission H.de Saeger*. Fasc 1 Institut des Parcs Nationaux du Congo Belge, Bruxelles.

East, R. 1999. *African Antelope Database 1998*. IUCN/SSC Antelope Specialist Group. IUCN, Gland, Switzerland and Cambridge, UK.

Emslie, R.H., Reid, C. & Tello, J. 2006. *Report on the different target species counted and evidence of poaching activity recorded during aerial and ground surveys undertaken in Southern Garamba National Park and adjoining Domaine de Chasse Gangala na Bodio*. Kinshasa: ICCN / APF / AfRSG / UNESCO.

Fennessy, J. 2008. An overview of *Giraffa camelopardalis* taxonomy, distribution and conservation status, with a Namibian comparative and focus on the Kunene Region. *Journal Namibia Wissenschaftliche Gesellschaft/Namibia Scientific Society* **56(1758)**: 1-16.

Hassanin, A., Ropiquet A., Gourmand, A.L., Chardonnet, B. & Rigoulet, J. 2007. Mitochondrial DNA variability in *Giraffa camelopardalis*: consequences for taxonomy, phylogeography and conservation of giraffes in West and central Africa. *Comptes Rendus Biologies* **330**: 265-274.

Hillman, K., Borner, M., Oyisenzo, M., Rogers, P. & Smith, F. 1983. Aerial Census of the Garamba National Park, Zaire, March 1983. *Report to IUCN, IZCN, WWF, FZS, UNEP & FAO/UNDP*.

- Hillman Smith, K. 1989. Garamba National Park Ecosystem Resource Inventory. *Garamba National Park Project Report*.
- Hillman Smith, K., Tshikaya, P., Ndey, J.A. & Watkin, J. 2003a. Poaching upsurge in Garamba National Park, Democratic Republic of the Congo. *Pachyderm* **35**: 146-150.
- Hillman Smith, K., Smith, F., Amube Ndey, J., Atalia, M., Tshikaya, P. & Panziama, G. 2003b. *General aerial counts 1998, 2000, 2002 & 2003 and evaluation of the effects of the civil wars on the ecosystem*. Garamba Project Report. Unpublished report. ICCN/ZSL/FZS/USFWS/IRF.
- Hillman Smith, K. 2004. Poaching escalates in Garamba National Park. *The Horn Newsletter* Volume 2004 Spring, pp. 16-17.
- Hillman Smith, K. & Ndey, J.A. 2005. Post-war effects on the rhinos and elephants of Garamba National Park. *Pachyderm* **39**: 106-110.
- IRG. 2007. Southern Sudan environmental threats and opportunities assessment: Biodiversity and tropical forest assessment. Prepared by the International Resource Group for the USAID. Washington, DC, USA.
- IUCN 2012. *The IUCN Red List of Threatened Species. Version 2012.1*. <http://www.iucnredlist.org>  
Downloaded on 24 August 2012.
- RNW 2012. Radio Netherlands Worldwide. *LRA rebels attack DR Congo park guards*. <http://www.rnw.nl/africa/bulletin/lra-rebels-attack-dr-congo-park-guards> (Accessed 9 July 2012).
- Savidge, J., Woodford, M. & Croze, H. 1976. Report on a Mission to Zaire *FAO W/K1593 KEN/71/526 – ZAI/70/001*
- Smith, K., Smith, F., Mbayma, A., Monungu, L., Watkin, J., de Merode, E., Amube, N. & Kobode, E. 1993. Garamba National Park, General Aerial Count May 1993. *Garamba National Park Project Report (unpublished)*.
- Smith, F. & Hillman Smith, K. 2000. *Summary report 1997-2000: Garamba National Park Project*. Unpublished report.
- Verschuren, J. 1958. Ecologie et biologie des grands mammifères *Exploration du Parc National de la Garamba, Mission H.de Saeger*. Fasc 9. Institut des Parcs Nationaux du Congo Belge Bruxelles.
- Verschuren, J. 1975. Wildlife in Zaire. *Oryx* **13**: 149-163.

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Map

