

GIRAFFE CONSERVATION IN NIGER

Hot season survey report

APRIL 2019

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1. Introduction

The West African giraffe (*Giraffa camelopardalis peralta*) in Niger are the last remaining population in all West Africa. The major population is located in the transition zone of the Regional Park W Biosphere Reserve (Kouré and Dallol Bosso central zone) and in the more northerly Fandou, Dingazi and Simiri areas. The north-south oriented Dallol Bosso Valley stretches for 350km from the Mali border to the Niger River on the Benin border and is a key giraffe migration area in the hot season.

The current population of giraffe in Niger is estimated at ~600 individuals based on annual survey undertaken in the rainy season. However, their distribution in the hot season is less well known. Therefore, a pilot hot season survey was carried out for the first time in April 2018 to better understand the situation. In April 2019 the second hot season survey was carried out in all major areas where giraffe reside. This survey was undertaken in collaboration with the Niger Government Directorate of Wildlife, Hunting, Parks and Reserves, and local guide NGO AVEN.

Objectives

The main objective of the mission was to survey giraffe during the hot season throughout the Dallol Valley and other key areas. More specifically, the survey aimed to:

- Determine the distribution areas of giraffe during the hot season
- Count, photograph and identify giraffe observed with a focus on newborns
- Sensitize the local population in giraffe conservation and their habitat

2. Methods

The survey method used is identical to that of the annual survey i.e. a systematic count of the individuals observed. The survey itinerary and sites are adapted according to information received from local informants (guides, foresters, ecoguards). Importantly, it is not a complete count of the population but rather a minimum population assessment.

The survey consists of a direct terrestrial survey count in vehicles and taking photographing each profile of all individuals encountered (right and left sides). All giraffe are identified by comparing the photos taken with those of known giraffe listed in the population album and integrated into the GiraffeSpotter photographic database.

The survey team consisted of a driver, AVEN guide, photographer, observer and note taker recording all observations and corresponding photo details.

Itinerary

The survey was undertaken over a 12-day period in April 2019. Departing from Niamey the team used the route highlighted in the figure below.

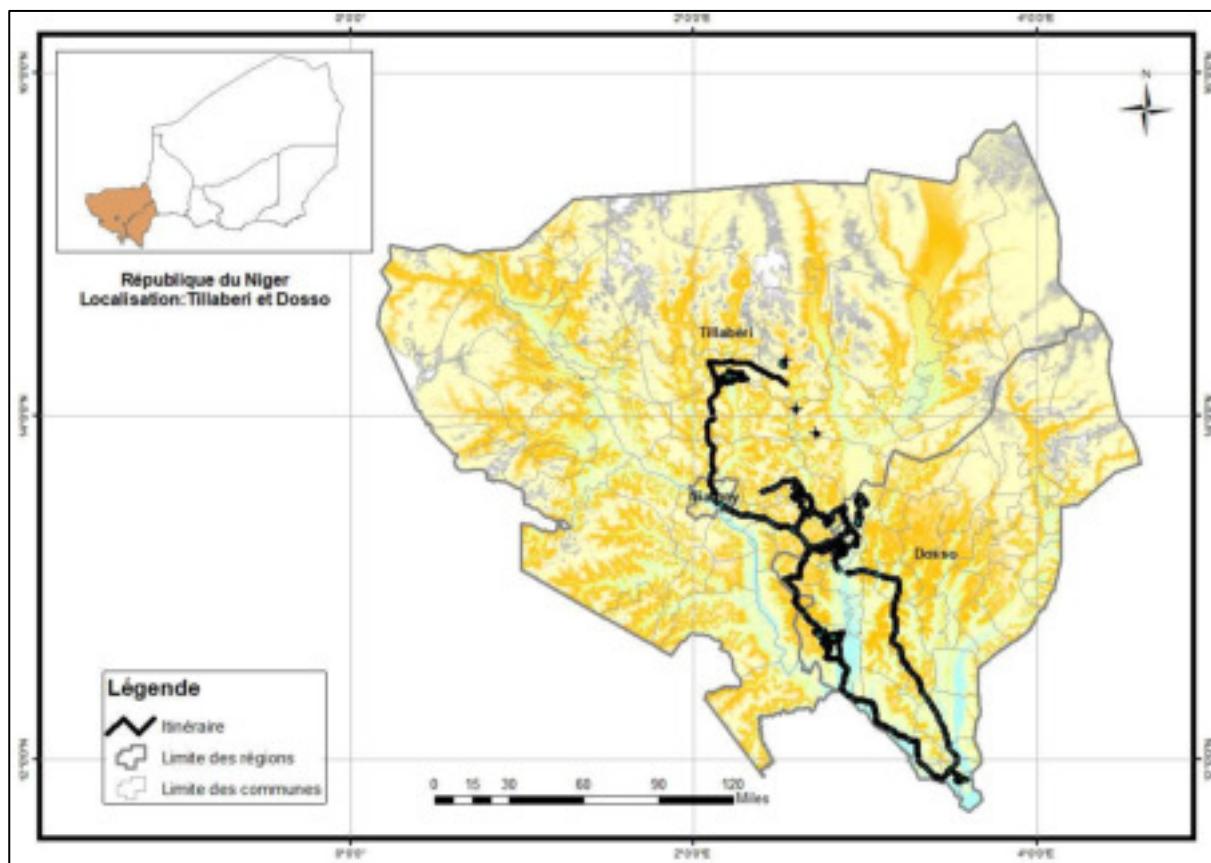


Figure 1. Survey route of the team during April 2019

During the survey we travelled across two regions, Tillabéry and Dosso, to estimate the numbers and determine the distribution of giraffe during the hot season. The survey began in the Central Zone at the level of the communes of Dantchandou, N'gonga and Kiota N'goygolo. The survey then continued to Birni N'Gaouré, Gaya and Falmey, extending to a few kilometres from the Beninese and Nigerian border.

A second survey route was then conducted during the Central Zone in Harkanassou, N'gonga and Dan Tchandou to cover the central zone of Kouré, (Giraffe Zone) where the majority of the individuals are located. Finally, the survey travelled north to the outlying areas of Fandou and Dingazi and finished up in Simiri.

3. Distribution of giraffe during the hot season

The figure below shows the distribution of giraffe observed during the hot season survey in April 2019. The distribution highlights the range beyond the Central Zone and core Giraffe Zone area clearly highlights the high concentration of giraffe observed throughout the Dalol Bosso.

Giraffe have been observed in Sabon birni (Gaya) a village located 5 km from the border with the Republic of Nigeria, and in Falmey not far from the Niger River where we think that the Niger River is a barrier for giraffes preventing them from cross to W. Park

Individuals were also registered in Dingazi and Simiri and information on the presence of giraffes in Fandou. These giraffes, however, could not be located accurately and thus could

not be observed. It should be noted, however, that the safety aspect of this area has been a limiting factor in our movements.

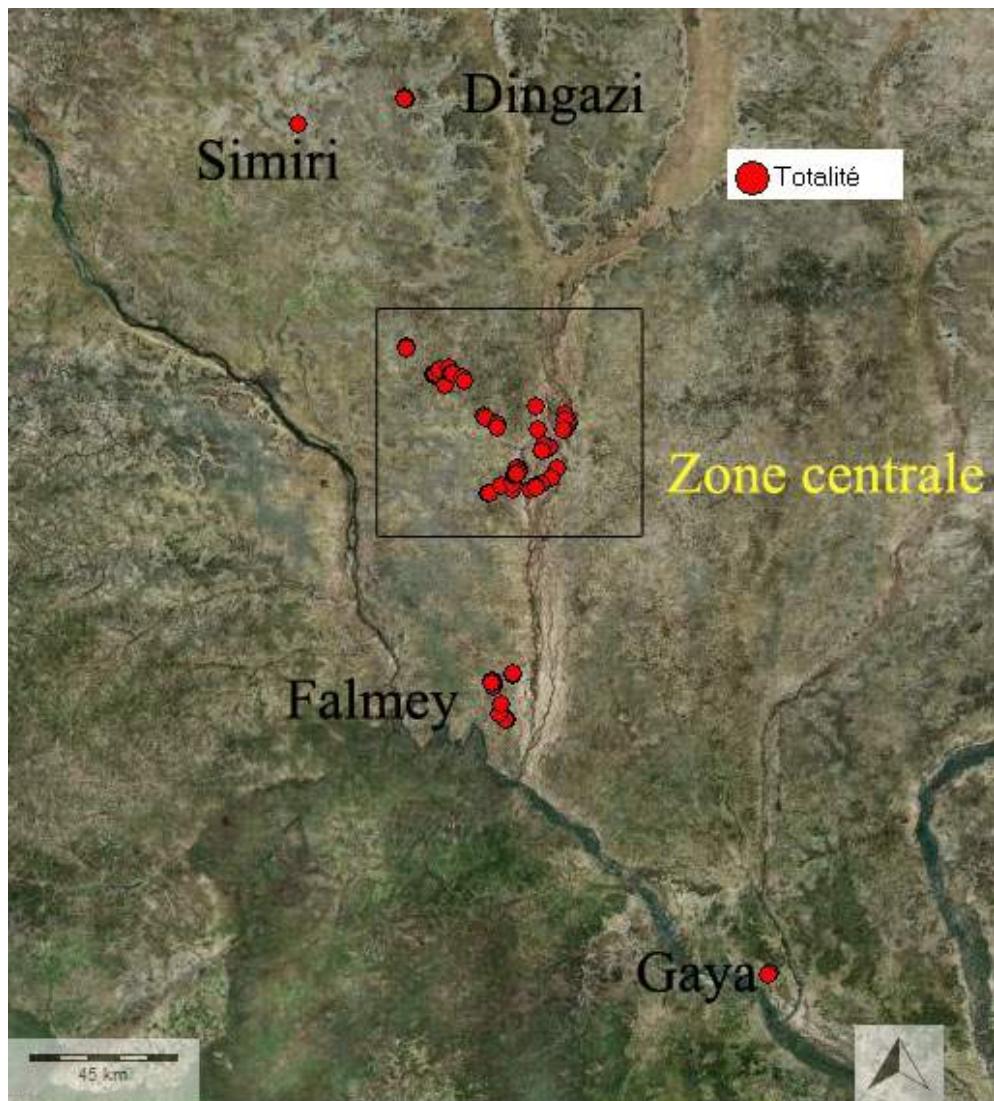


Figure 2. Distribution of giraffe observation during the hot season.

The distribution of giraffe during the hot season was compared to individuals observed during the rainy season (2018).

During the rainy season, the majority of giraffe in the Central Zone are present on the Kouré Plateau (Giraffe Zone) while during this survey in the hot season (2019), individuals were more present in the Dalol Bosso and south towards the Niger River near the border with Parc W.

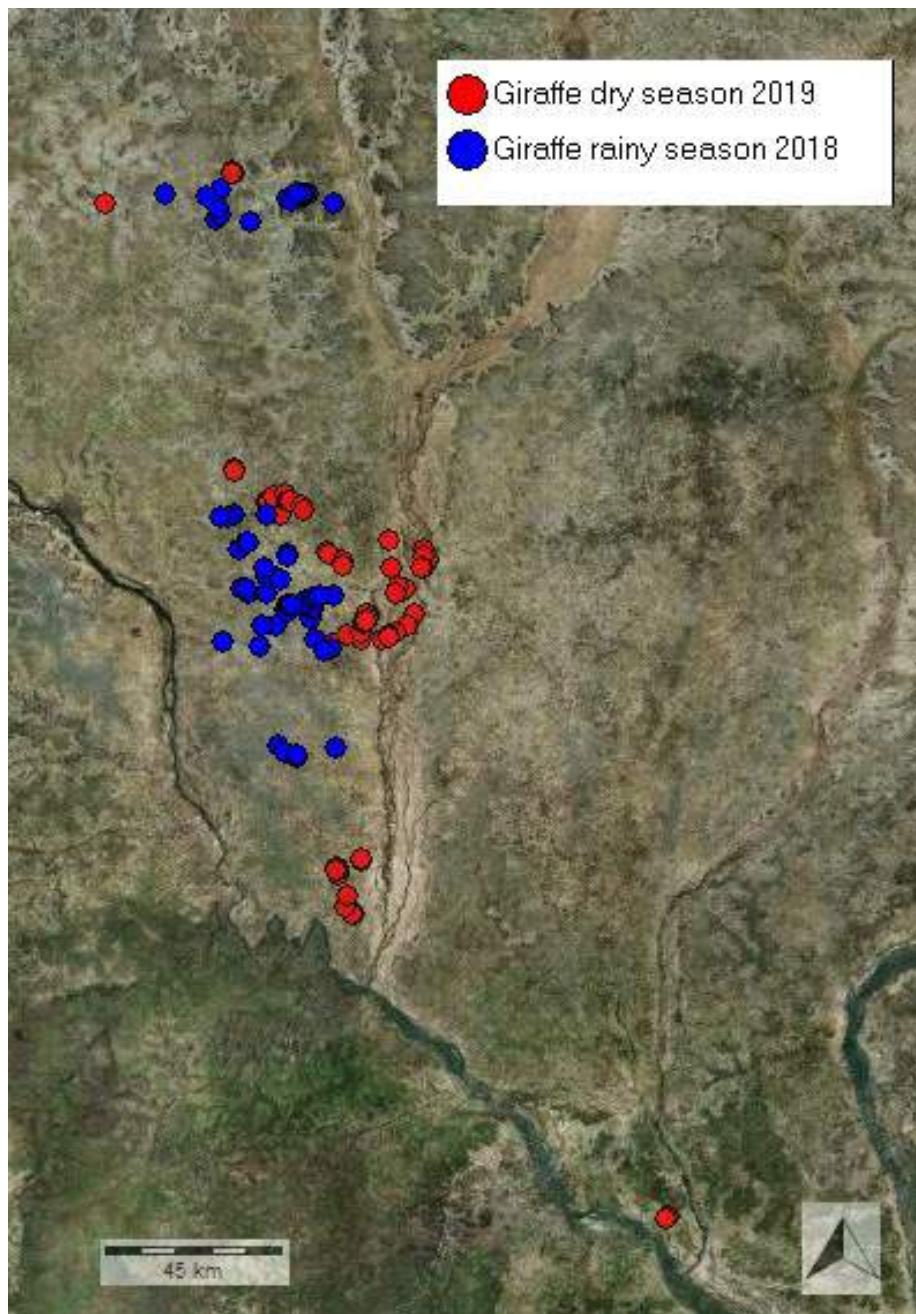


Figure 3. Comparison of seasonal distribution of giraffe: August 2018 (blue) and April 2019 (red)

4. Results

In parallel with the general information on the distribution of West African giraffe in Niger, this survey provides new data on the population. Following the survey the team processed all the available data working collaboratively with the Ministry and AVEN guides. They assessed all information and reviewed the identification of all giraffe new and old.

During the hot season survey a total of 249 giraffe were observed, including: 160 adults (113 females and 47 males), 25 sub adults (16 females and 9 males), 16 juveniles (4 females and 12 males) and 48 calves – the majority of which were born in 2019. The average herd size observed was 5.79 individuals per herd.

The figures below detail the distribution of the population by age and sex.

Age Class Sex	Adults	Sub Adults	Juveniles	Calves	TOTAL
Male	47	9	12	21	70
Female	113	16	4	27	69
TOTAL	160	25	16	48	249

Figure 1. Number of individual giraffe observed by age and sex.

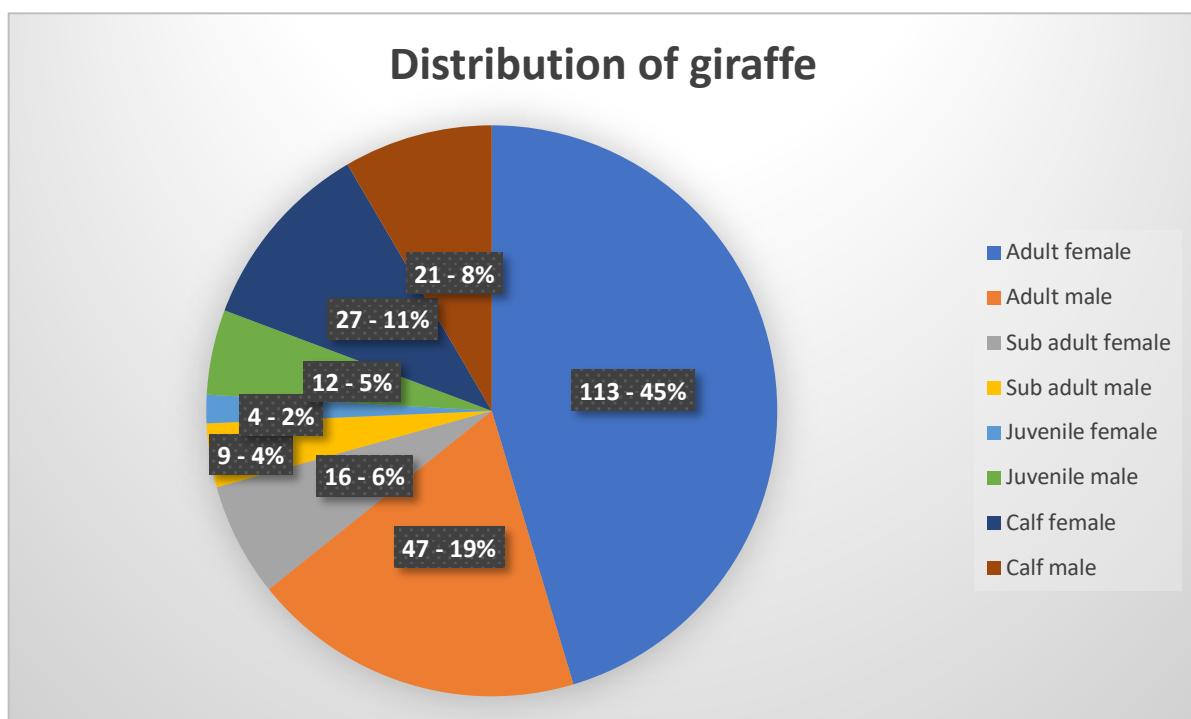


Figure 2. Distribution of the giraffe population by age and sex

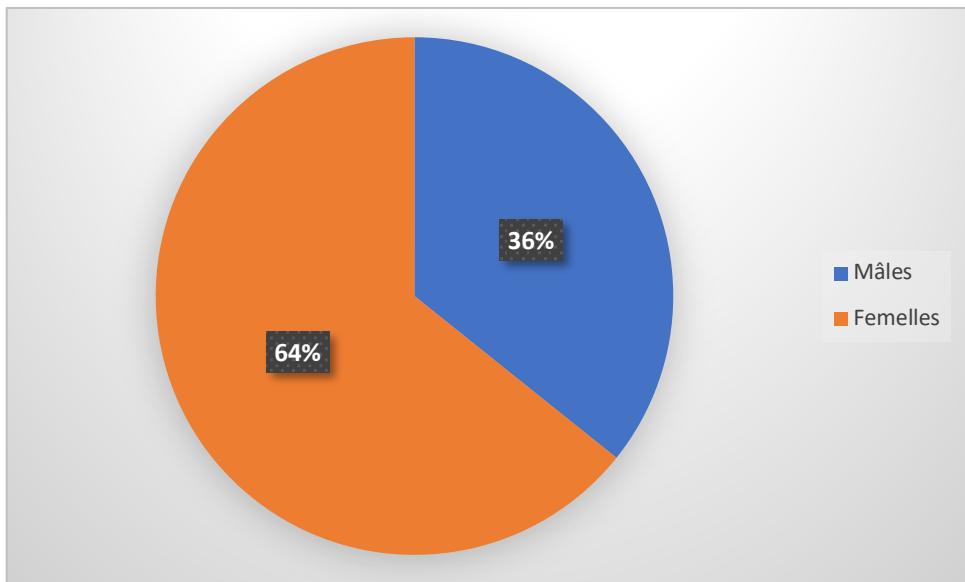


Figure 3. Distribution of giraffe by sex

Compared to the 2018 hot season survey results, the observations from 2019 were greater in number with 249 giraffe observed compared to only 154 individuals in 2018. Of the giraffe observed in 2019, only 46 (18.5%) were observed during the same survey period in 2018.



Figure 4. Female giraffe and calf

The high rate of individuals observed in 2019 compared to 2018 can be explained by several factors: (1) high birth rate recorded (47 newborns), (2) high temperatures recorded in 2019 possibly limiting migration of giraffe, and (3) concentrated survey effort in preferred giraffe areas.

5. Mortality and threats

Unfortunately during this survey, we recorded the death of seven giraffe during 2019 to date, including three newborns for which we do not have any tangible explanations to justify their cause of death. The only assumption that has been advanced by the guides is the increased temperatures recorded this year.

ID	Date	Sex	Age Class	Cause	Location
70/07	February 2019	Male	Adult	Fell in well	Boula Tambo
110/10	March 2019	Male	Adult	Fighting	Kiota
Unknown	March 2019	Male	Adult	Natural	Kiota
Unknown	March 2019	Unknown	Calf	Unknown	Kanaré
Unknown	April 2019	Female	Calf	Unknown	Sougourou
Unknown	April 2019	Unknown	Calf	Unknown	Tombara
124/10	April 2019	Male	Adult	Fighting	Kossai Beri

Although not representative in the table above, the main threats observed over recent years for Niger's giraffe are road accidents and human-giraffe conflict, the latter of which are a result of crop raiding. Often the giraffe are chased out of the fields or gardens by farmers who use sticks and stones, which can lead to injuries. Even if the animal is not killed instantly, it has sometimes lead to complications leading to the death of the animal. Similar cases have been recorded by guides and foresters.

In order to reduce these threats, especially those due to human-wildlife conflicts, ongoing community liaison efforts are needed with the surrounding populations. Therefore, in parallel with this survey, the team also sensitised the people of the area in the interest of the conservation of giraffe and their habitat.

6. Conclusion

In summary, the 2019 hot season survey provided additional and supplementary data to the annual census counts and the previous 2018 hot season survey. Interestingly, several giraffe that had not been seen during the 2018 hot season survey or the 2018 rainy season, were observed during this survey. In addition, the area surveyed was larger than that previously studied in 2018 and allowed us to follow up in new sites.

Importantly, we noted that some giraffe in outlying areas remained relatively sedentary compared to the central area of Kouré, namely Falmey, Dingazi and Simiri. According to the local population, these individuals spend all year in these areas which demonstrates the creation of an expansion of the population at the spatial level.

Below are some suggestions and recommendations with regard to the DFC / PR and the NGOs working in the area:

- Modernize and redefine the systematic monitoring method for surveying giraffe to refine population estimates and spatio-temporal distribution.
- Reactivate the existing network of local informants, to obtain information on giraffe at any time and extend this network in the new municipalities where giraffe are present.
- Ensure the collaboration of State agents in surveys to facilitate their implementation.
- Accompany and train guides and ecoguards, especially those in outlying areas, that have no means of travel or communication.



List of survey participants

- Abdoul Razack Moussa Zabeirou (Project Coordinator GCF-SCF)
- Ahmed Oumarou (Driver GCF-SCF)
- Ousseini Idrissa (AVEN)
- Ismaël Mahamadou (Forester Kouré)
- Safiou Adamou (Forester Falmey)
- Amadou Chekaraou (Guide Gaya)
- Idé Adamou (Guide Kiota)
- Karidjo (Guide Fandou)
- Abdoul Baki (Guide Dingazi)
- Salissou Abdou (Guide Oualam)
- Local Chiefs (Harkanassou, Sabon Birni, Kiota, Fandou, Oualam et Simiri)