



## Twiga Tracker Initiative: Giraffe Tagging Report

White Nile Migration Landscape, South Sudan

14 March – 4 April 2024

### Background

African Parks (AP) signed an agreement with the government of the Republic of South Sudan to co-manage the Boma and Badingilo National Parks (NP) in 2022. As a first step to understanding this complex and diverse landscape, AP undertook the largest ever wildlife tagging operation in South Sudan in 2023, where a total of 126 GPS satellite tracking units were deployed on 13 different species of wildlife in the Boma and Badingilo NPs, including on *critically endangered* Nubian giraffe. The Giraffe Conservation Foundation (GCF) provided veterinary support to the operation including fitting 11 giraffe with GPS satellite tracking devices (11 tail units and 4 ear tags), which was the first-ever tagging of giraffe in South Sudan.

The 2023 tagging operation yielded valuable movement data for multiple species and highlighted that the migratory species' (Mongalla gazelle, Bohor reedbeek, white-eared kob and tiang) movements are heavily influenced by the wildlife-human interface with the diverse communities that co-inhabit the landscape. This has led AP to work towards establishing a larger protected area, the **White Nile Migration Landscape**, which includes the Boma and Badingilo NPs (~30% of the total landscape). Due to manufacturer/technical malfunctions with the Savanna Tracking Iridium tail units, giraffe movement data was limited to three months post-tagging. The Ceres Trace ear tags were trialled as back up option, however, they were deployed on the edge of the known Globalstar satellite network and did not perform optimally. However, the limited movement data collected, showed new and dynamic Nubian giraffe movements in the landscape that warranted additional giraffe tagging once another opportunity arose.

In early 2024, a second wildlife tagging operation took place across the larger White Nile Migration Landscape. For GCF, the goal was to gain a better understanding of how giraffe utilise the landscape and are impacted by human

presence to guide their management and protection in this complex environment.

### Objective

To fit GPS satellite tracking units on 11 species in the White Nile Migration Landscape. Species prioritised included Nubian giraffe, African savanna elephant, African lion, cheetah, spotted hyaena, white-eared kob, Bohor reedbeek, tiang, eland, Mongalla gazelle, and Nile lechwe. GCF donated veterinary and equipment support as well as 20 Iridium GPS SpoorTrack and 20 Ceres Globalstar satellite ear tags. SpoorTrack units were first trialled on giraffe in Namibia in January 2024 with promising performance prior to their deployment in South Sudan. Since the previous tagging, Globalstar had launched additional satellites to enhance coverage over Central and North Africa.

### Results

GCF's Dr Sara Ferguson supported the mission from 14 March to 4 April 2024, where a total of 83 animals were tagged, this included 20 giraffe, which were fitted with both SpoorTrack and Ceres ear tags (12 female, 8 male). Units were attached to each ear on the outer/dorsal aspect and secured with two pins through the ear, taking care to avoid the thick cartilaginous ridges and vasculature of the ear. Eleven giraffe were tagged in/around Badingilo NP while the remaining nine tags were deployed in and north of Boma NP. Interestingly, one of the female giraffe in Badingilo NP was retagged after the 2023 mission. Both, the nonfunctioning tail unit and still transmitting Ceres tag were removed and replaced with new units. The ear had healed well from the previously placed Ceres tag and the tail unit was broken (manufacturing fault) and left minor abrasions on the tail tip. All giraffe did well during the immobilizations. Tissue and cheek swabs were collected in the process.

### Acknowledgements

We thank the Government of South Sudan, AP and Dr Richard Harvey for their collaboration and permission to continuing this important Nubian giraffe conservation effort.

