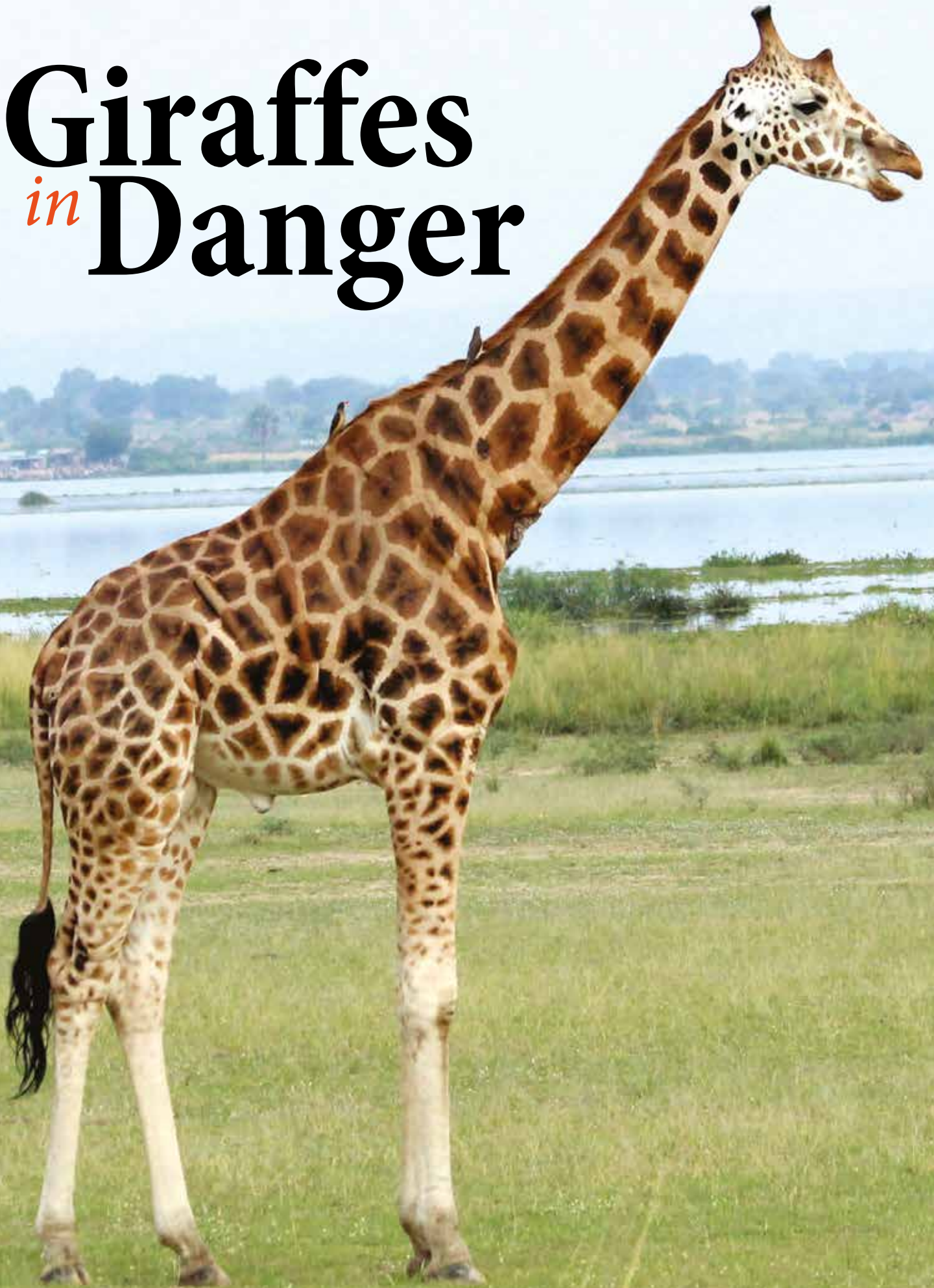


CONSERVATION

Giraffes *in* Danger





FELIX PATTON is a rhino ecologist with MSc in Conservation biology and a PhD on research on individual rhino identification and social behaviour. He is a frequent contributor to SWARA.

Giraffe have clearly slipped under the conservation radar with their population plummeting unnoticed until recently. In some countries, giraffe are on the edge of extinction. While the basic ecology of a giraffe is well-documented, understanding their behaviour, especially social organisation and the mechanics of their dispersal is less understood. The need for research to inform decisions is vital.

The Giraffe Conservation Foundation (GCF) in conjunction with Dartmouth College, United States, and the Uganda Wildlife Authority (UWA) have been monitoring the last surviving natural population of Nubian (Rothschild's) giraffe at Murchison Falls National Park (MFNP).

Decisions on giraffe conservation and management in Uganda, and throughout Africa, need to be based on reliable scientific information and robust analyses in order to be effective. Greater information is needed on giraffe population size and trend, demographic parameters, ranging patterns, habitat use and genetics.

A detailed understanding of population structure, recruitment and survival in the

MFNP source population is an essential component to safely removing individuals and using them to propagate viable populations in other areas of Uganda. Additionally, the knowledge of group structure, preferred associations and social dynamics can provide a social element to the selection of individuals for translocations.

The outcomes from this unique research will be of importance in guiding giraffe researchers and conservation managers throughout Africa.

LIFE AS A GIRAFFE RESEARCHER IN MURCHISON FALLS NATIONAL PARK

It is 6 am, pitch dark but warm when the alarm goes off. There is no electricity in the morning where we are staying at the UWA Student Centre in MFNP so on goes the head torch. The first job is to get the gas burner fired up and boiling water for the essential cup of coffee.

The Land Cruiser stands ready for the oil and water check and then loaded with food, water and equipment for the long day ahead. The first stop is the north bank of the Victoria Nile to meet the 7 am ferry carrying our UWA ranger Jozef Adriko across from the south bank. It will be his 7th season of giraffe surveys, so he is a real veteran knowing the areas we are going to cover like the back of his hand.

Our vehicle now consists of a team of three – the researcher who takes the photos indicating the age and sex of the giraffe; the spotter and recorder; and the driver, with the job of getting the vehicle in the right place

GREATER INFORMATION IS NEEDED ON GIRAFFE POPULATION SIZE AND TREND, DEMOGRAPHIC PARAMETERS, RANGING PATTERNS, HABITAT USE AND GENETICS.

30%

Percentage Giraffe numbers have plummeted by in the last three decades

111,000

Number of Giraffe that remain today as a result of habitat loss through expanding agriculture, human-wildlife conflict, civil unrest, and poaching for their meat, pelts, and tails, are among the reasons for the decline.

PHOTO BY: FELIX PATTON

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for the required right-side full body photo to be taken. Every giraffe has a different coat pattern, like a fingerprint, but getting them to stand in an ideal way is no easy feat!

In addition, a significant number of giraffe have crusty lesions on their neck and torso, (known as Giraffe Skin Disease - GSD), caused by a filarial worm but it is not known if it affects, or not, the life expectancy of the infected individuals. Over time, the surveys will provide important information on GSD.

Also recorded are any signs of injury, especially those caused by snares. Giraffe may unintentionally step into wire snares laid by poachers to catch mainly smaller antelope. The wire digs into the lower leg causing nasty cuts or swelling of the foot. If still attached to the leg, the

TOP LEFT & RIGHT: Injuries caused by illegal wire snares. The snare is simple, cheap, lightweight, easy to make, easy to set up and nearly impossible to escape. The typical snare used in Africa is nothing more than a length of wire ending in a loop formed by a slipknot.

ALSO RECORDED ARE ANY SIGNS OF INJURY, ESPECIALLY THOSE CAUSED BY SNARES. THE WIRE DIGS INTO THE LOWER LEG CAUSING NASTY CUTS OR SWELLING OF THE FOOT.

UWA veterinary team, currently supported by Sara Ferguson of GCF, are contacted to remove the snare and treat the wound. Regretfully on occasion, a dead giraffe is found.

The survey entails driving, on two separate occasions, one of five, 100 km+, predetermined loops that cover all the accessible areas of the north sector of the Park where the main giraffe population reside. There is up to an hour to drive to the start of a loop and then it is a matter of driving slowly along the main tracks while looking for any visible giraffe.

Once seen, the vehicle has to get around 30m from the giraffe - who could be as much as 2km away on the far side of a valley - driving across the grass plains, or through bush or forest with the hidden perils of termite mounds, warthog holes, tree stumps, rocks and deep depressions caused by soil erosion. Rarely are the giraffe on their best behaviour walking in a line across the road in front of us!

The males may often be found walking alone, or in a small group with females and their calves or sometimes there are as many as 20 in a male-only group. The females are mostly in a small group with a number of calves or in larger groups of adults and sub-adults with as many as 50 together. Each of the groupings offers different approaches and difficulties when it comes to getting the vehicle positioned well for the photographer. Sometimes the giraffe run off

and need to be followed until they are standing quietly. At other times, a giraffe may keep turning away as the vehicle is being positioned so we go around in circles. Some choose to hide in bushes or behind trees and need gently cajoling into the open. Whatever the situation, the aim is for 'minimal disturbance' leaving the giraffe in a calm and settled state.

It takes around nine hours to complete a loop. It depends on the number of giraffe seen, how easy they are to get to (and then back to the road) and how quickly the photographs can be taken. There is only time for two stops – 15 minutes for breakfast and 45 minutes for lunch.

It gets very hot and humid and there are places where the tsetse flies seem to lie in wait for someone to bite/sting and that is painful. It is hard work and not for the faint-hearted. Bad ground takes its toll on the land cruiser so a trip to the local town (sic) of Pakwach for fuel or supplies is often accompanied by a visit to our trusted mechanic Wilfred for running repairs.

At the end of the 100km or so loop we drive back to catch the 4 pm or 6 pm ferry crossing for Jozef to return to his home. Then it is up to the

BELOW: A Giraffe family. As in cattle, female giraffes are called cows, while the males are called bulls. After mating, the cow will have a gestation period of around 14 months. Baby giraffes are called calves. During birth, the calf will drop to the ground, since mother giraffes give birth standing up. The fall can be as far as 5 feet.

student centre for a welcome shower and then get down to the desk work. Photographs and the GPS record are downloaded and all paperwork put in order. Some work can be done in the nearby Paraa Lodge with essential electricity, a cold drink but a slow internet.

By around 7.30 pm it is dark but the generator is in action so there is power. It is still warm and humid. The gas burner is fired up and water boiled for the ready-made pasta meals we have brought with us. Mixed with pesto sauce and taken with crispbread and a cold beer from the Lodge, it tastes fine. There is just time to clean up, get ready for the next day, do the last bit of computer work, take a cold shower and then it is time for bed, exhausted.

BACKGROUND

Giraffe populations have declined by 30 per cent in the three decades from approximately 150,000 individuals in 1985 to just 111,000 in 2015. The IUCN recognises all populations belong to a single species of giraffe split into nine subspecies and classified them as "Vulnerable" on its Red List in 2016.

PHOTO BY: PETRA CAMPBELL



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New genetic work proposes four distinct species of giraffe: southern giraffe (*Giraffa giraffa*), Masai giraffe (*G. tippelskirchi*), reticulated giraffe (*G. reticulata*) and northern giraffe (*G. camelopardalis*).

Also proposed is one subspecies of the northern giraffe, the Nubian giraffe (*G. c. camelopardalis*), which includes the Rothschild's giraffe (*G. c. rothschildi*).

The Rothschild's giraffe was once widespread across southern Sudan, Uganda and Kenya, but is now confined to a few, isolated and enclosed translocated populations throughout Kenya and Uganda, with only one natural wild population remaining in Uganda, in Murchison Falls National Park (MFNP). The most recent population size estimate for Rothschild's giraffe in Kenya and Uganda is a little over 3,000 individuals.

In the early 1960s, there was thought to be as many as 2,500 Rothschild's giraffe in Uganda, which declined to a low of only around 100 in the 1990s. While their decline in Kenya was due to agricultural development and the conversion of natural habitat to privately owned farms and cattle ranches, in Uganda, armed conflict and poaching had severe impacts upon numbers.

BELOW: Giraffes cross a burnt plain in the early morning. Giraffes inhabit savannahs, grasslands and open woodlands across Africa but the Rothschild subspecies only exists in small numbers within protected areas in Kenya and northern Uganda. The animal is also known as the Baringo Giraffe, having once made its home around the Lake Baringo area of Kenya.

Uganda's giraffe population drastically decreased in the 1970s and 1980s due to the political instability and breakdown in the rule of law that led to illegal hunting of wildlife, including giraffe for the bushmeat trade, agricultural expansion, human encroachment, and habitat degradation, fragmentation and destruction. However, with the restoration of stability and implementation of strong conservation measures, the population started to grow steadily and there are around 1,450 giraffes in MFNP.

THREATS

Rothschild's giraffe is under threat in Kenya from habitat loss, confinement in enclosed areas with carrying capacity limits and from unknown risks associated with inbreeding and limited resources. In Uganda, there is a potential threat from habitat restriction as a result of future oil exploration in Murchison Falls National Park.

Giraffe contribute directly to the loss of their food as they will over-browse on or debark Acacia trees, remove the flowers necessary for pollination and prevent them from reaching their full height. Browsing also increases the tannin content, which reduces the palatability and nutritional value of the browse.

3,000

The most recent population estimate for Rothschild's giraffe in Kenya and Uganda .

PHOTO BY: PETRA CAMPBELL





In both countries, giraffe are threatened by poaching as they are a ready target for the bushmeat trade. The Acholi and Langi people on the northern bank of the Victoria Nile in Uganda maintain a strong hunting tradition and are known to poach. Giraffe are also being killed or injured by snares set for other bushmeat species.

Giraffe are also predominantly preyed on by lions that target calves resulting in reduced survival rate.

PROTECTION AND CONSERVATION

At a global level, the Nubian giraffe was recently classified as 'Critically Endangered' as a subspecies, but because IUCN still recognises them as Rothschild's giraffe, they were downlisted in 2018 to 'Near Threatened' despite the need to increase their local and international protection. In 2017, giraffe were included under Appendix II of the Convention on the Conservation of Migratory Species of Wild Animals (CMS), which encompasses migratory species that would benefit from collaborative research and conservation efforts.

Giraffe are being considered for listing under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Appendix II at its 2019 Conference of Parties.

In Uganda, they are protected under the Game (Preservation and Control) Act (1959, Chapter

TOP: The Rothschild Giraffe is one of the tallest giraffes. They can be 19 feet in height and weigh about 2,500 pounds with the males weighing more than the females by several hundred pounds. It's coloring is unique compared to the other species.

Their coat consists of dark brown and dark orange patches and then areas of beige through them. Their markings stop at the top of the knee caps, below that area the spots disappear, and everything below that point down is whitish.

BELOW RIGHT: The research team investigate the death of a calf.



PHOTOS BY: FELIX PATTON

198) and are identified as animals which may not be hunted or captured without necessary permits.

OIL EXTRACTION

On the northern bank of the Victoria Nile in MFNP and in much of the western areas where many giraffe are situated, plans for oil extraction are underway. Exploration and development within such an ecologically-sensitive zone must take all precautionary measures and strictly comply with the mitigation measures stipulated within the Environmental Impact Assessment (EIA), Environmental Management Plans, EIA certificate approval conditions, restoration plans and any other plans aimed at mitigating the negative impacts of such developments. ►



PHOTO BY: JENNY ADAMS

DEVELOPING MURCHISON

Murchison Falls was declared a National Park in 1952 and, with a minor amendment to the boundaries in 1970, now covers an area of 3,893km². By the 1960s, it was the most popular wildlife destination in East Africa for tourists, attracting some 60,000 visitors annually. The launch trip to the base of the Falls was the primary attraction along with abundant elephant, buffalo, hippo, crocodile and Uganda Kob.

In the early 1960s, in an effort to save Uganda's white rhino, a small number were moved east across the Albert Nile to the open grasslands of the Buligi area of the Delta where there were already some black rhinos in the Acacia dominated forest section.

The recovery in elephant numbers in Murchison Falls National Park is largely attributed to successful conservation efforts implemented by Uganda Wildlife Authority, improved legislation and conservation policies, the stability and security in the country.

By the mid-1960s, the elephant population had increased dramatically to between 12,000 and 14,000. Woodlands were being destroyed creating extensive tracts of grassland while thickets were opened up becoming vulnerable to the annual fires that swept through the Park. So too were the larger trees that had been debarked when browse had become scarce. Park authorities culled some 2,000 elephants between 1965 and 1967. Protection was afforded to the elephants when dictator Idi Amin introduced the death penalty for their poaching in the 1970s.

The political upheaval of the 1970s led to the devastation of Uganda's wildlife. Idi Amin's army and later the Tanzanian liberation forces were mainly responsible, with elephants killed for their ivory, rhino for their horns and buffalo and other wildlife for meat.

Murchison's herds of elephant and buffalo were nearly annihilated. By 1980, the elephant population was just 1,420, the decline continuing into the early 1990s when just 290 were counted while the 15,000 buffalo had been reduced to just 1,500 in 1991. Rhinos became extinct in the country in 1983.

As the civil strife subsided, finance from the European Union and Germany enabled all facets of the Park infrastructure to be repaired and developed, management plans put in place and funding made available for operations. In 2003, UWA received a World Bank loan to strengthen its capacity to manage the wildlife protected areas, including MFNP, more effectively. ●

KENYA STANDS TALL FOR GIRAFFE

Arthur B. Muneza

In November 2018, the International Union for the Conservation of Nature (IUCN) updated the conservation status of seven of the nine subspecies of giraffe on the Red List of species threatened by extinction.

Importantly, among the seven subspecies, five were assessed for the first time ever. The West African and Rothschild's giraffe, first assessed in 2008 and 2010 respectively, were "downlisted" from 'Endangered' to 'Vulnerable' (West African giraffe) and 'Near Threatened' (Rothschild's giraffe) on the latest IUCN Red list update.

This is a result of conservation initiatives undertaken in the countries where these giraffe subspecies occur. Nonetheless, there is still more work to be done. Two giraffe subspecies are now listed as 'Critically Endangered' (Kordofan and Nubian giraffe) and the reticulated giraffe is listed as 'Endangered'. Only the Angolan giraffe was listed as 'Least Concern' following a sharp increase in their numbers. The Masai and South African giraffe are yet to be assessed and while the latter appear to be doing well, Masai giraffe will most likely be listed in one of the threatened categories of the IUCN Red List.

At the same time, while most of the world was focused on this update, Kenya Wildlife Service, with

support from conservation partners, including the Giraffe Conservation Foundation, developed and launched the National Recovery and Action Plan for Giraffe in Kenya (2018 - 2022) in November 2018 to mitigate the threats that giraffe face in the country.

Kenya, the only range state with three different types of giraffe, became the first East African country to have such a framework and the second in Africa after Niger. This proactive approach in conservation has shown tremendous success in Niger where the giraffe population has increased by almost 1,000 per cent in 25 years. This crucial conservation tool charts the way forward for stakeholders to develop and implement priority actions to conserve Kenya's giraffe.