

"Whoever has traversed this wilderness on lengthy foot patrols, passing through vast forests, dense thickets and groundless swamps and across sand rivers, watching herds of elephants and buffaloes and innumerable antelopes, hippos and birds, becomes addicted."



SELOUS IN AFRICA

PHOTOGRAPHS BY ROBERT J. ROSS
INTRODUCTION BY LOREM IPSUM

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PAGE 1: Hippos returning to the Luwegu River at dawn while the full moon sets to the west. Given the abundant permanent water in the Selous, hippos are found in large numbers throughout the game reserve.

PRECEDING SPREAD: During the long dry season which generally runs from May through November even the major rivers recede. Flying low over the Luwegu River in September the sand patterns are endlessly varied, whether a dry 'sand river' beneath the plane's shadow or in the narrowing stream still flowing with water. Peter Matthiessen wrote his acclaimed book Sand Rivers based on a walk through the Selous during the 1979 dry season.

RIGHT: The Selous Game Reserve supports one of Africa's largest remaining populations of elephants despite an epidemic of poaching in recent years.

Upwards of 20,000 of these mighty pachyderms are either permanently or seasonally in the reserve.



The Selous Game Reserve

A History of Africa's Oldest Protected Area

Rolf D. Baldus

he Selous Game Reserve, at around 50,000 km2, approximately the size of Switzerland or the U.S. states of Vermont and New Hampshire combined, is the African continent's largest legally gazetted wilderness area. No habitation, no cultivation, no cattle, no people apart from reserve staff,

some photographic tourists and legal trophy hunters make this a true wilderness. The Selous is remote, difficult to access, little explored and still poorly documented.

Why is the Selous such a wilderness? A mixture of tsetse flies, natural barriers and history have all contributed to its isolation and low human population densities. The Selous is the heart of the Tanzanian miombo or Brachystegia woodland. A major river network crosses the Selous. The Rufiji River and its tributaries, the Ruaha, Kilombero and Luwegu Rivers, were a barrier to people and modern communication. The rivers were also barriers to wildlife. For example, the giraffe of the northern Selous have never crossed the Rufiji southwards. In the 19th century it was the slave trade and at the beginning of the following century it was one of the first African anti-colonial rebellions that hindered population growth in the area that became the Selous. The Arab driven East-African slave trade reached its peak in the 19th century. Zanzibar with its Omani rulers was the center of the trade. Slaves from the hinterland were brought to the coast and transported to Zanzibar Island where they were detained and marketed before dhows took them to the

Middle East and beyond. Traders like the famous Zanzibari business man Tippu Tip developed slave routes to the Indian Ocean from as far as the central Congo basin. Thousands of slaves were driven through two caravan routes crossing the area which is now the Selous. The ivory and the slave trade went hand-in-hand. Some local tribes in the interior hunted elephants and people and sold the "white and black ivory" with good profit to the Arab traders. The slaves were forced to carry the ivory tusks to the coast, a rather cost-effective mode of transport. In the second half of the 19th century an average of two hundred tons of ivory were exported every year from Zanzibar, the equivalent of 12,000 elephants.

After German rule was established in 1885 it took only six years before the first hunting regulations were declared. The first general Wildlife Ordinance dates back to 1896. Its intention was made clear by Hermann von Wissmann, then Imperial Governor, in a decree: "I felt obliged to issue this Ordinance in order to conserve wildlife and to prevent many species from becoming extinct, which would happen soon if present conditions prevail ... We are obliged to think also of future generations, and should secure them



LEFT: British explorer, hunter, and convervationist Frederick Courtney Selous (1851–1917), 1890s. ABOVE: Caravans brought both ivory and slaves from the interior.



ost of the Selous remains, as it was a thousand years ago, untouched by human hand. It is only the northeastern corner, which has small-scale development for tourism (tracks and tented camps). South of the Rufiji nothing has changed for centuries. Yes, there are places which have not been visited or walked through. There are streams, seepages and waterholes still to be discovered. There are new plant species still to be collected and identified.

The far southwest of the Selous is perhaps the least known of all. The valleys leading off the south Luwego River offer spectacular scenery in a total wilderness. Management policies for the Selous continue to promote the concept of wilderness – limited block-based hunting, controlled tourism and a minimum of infrastructure. Wilderness is increasingly rare in today's world; long may it continue in the Selous.

- Rolf D. Baldus, Wild Heart of Africa, 2009

The Selous Game Reserve is a vast wilderness. Vistas like this one, looking over the Luwegu River without a road or any sign of human encroachment, are common. During the weeks leading up to the first rains in November or December, after nearly six months without any precipitation, great cloud formations develop in the afternoon but disappear overnight and then reform for days before releasing the first drops of water to the parched ground.

itting on a termite mound with Mbukuri and Mbaya Selemani one afternoon, we were watching a bull elephant, with tusks weighing about eighty pounds each, grazing on freshsprouting grass along a seepage area. He was one hundred yards from us, and beyond was a wide-open, extensive ulambo with small herds of game scattered about it. In these conditions elephant will stay grazing within an area of a few hundred square yards for several days, eating nothing but fresh new grass. They scuff it out of the ground with one of the front feet, pick it up with the trunk, knock the soil off on the ground against a leg or tusk, and pass it into the mouth. They stand looking straight down; all one can see of the eyes is the top eyelids. They seem to become oblivious to anything around them and are easy to approach within a few yards without any cover at all. The only thing to be careful about is noise and, most important, to remain motionless if the eyes open. There was no reason to go closer to this fine bull, so we just watched him for half an hour or more. The wind must have shifted, for he quite suddenly raised his trunk, sniffed the air, and rushed across the ulambo, the other game moving out of his way as he came to them. I expected him to disappear into the bush at the far side. To my surprise, on reaching there he turned to follow along the edge of the open plain, till at full run. He continued in this manner, making a great arc around the ulambo and finally heading directly back toward us. We remained as before on the termite mound and watched him approach. He had covered nearly two miles at speed and showed no signs of easing up. He ended up right where he had been grazing before and stopped immediately upon reaching this point, and then started grazing again as if nothing had ever disturbed him. It was an amazing performance, and one cannot analyze what mental processes prompted such clownish activity.

- Brian Nicholson, The Last of Old Africa, 2001







LEFT: Elephants consume several hundred pounds of vegetation daily. The fruit from the doum palm is one of the elephant's favorite foods.

ABOVE: Elephants are highly social animals with complex family structures. Greetings between individuals take many forms and can last for several minutes or longer.

BELOW: During the dry season elephants must search for water, often using their keen sense of smell to determine where to dig for subterranean water in the dry sand rivers of the Selous.

RIGHT: The dry season is also a difficult time for the hippos of the Selous. Forced to congregate during the day in smaller and smaller bodies of water, these massive nocturnal feeding herbivores have been known to travel more than 25kms each night in search of fresh grazing areas.





ippos are to a large extent territorial animals. In the dry season the males will savagely fight an invading bull until one or the other moves away. They frequently get killed or die of wounds inflicted in these contests, which can last for several days. The territorial disputes seem to involve only limited sections of a river; the surrounding grazing areas are a free-for-all for any hippo in the river. During the rains they will move about the country over distances of up to forty or fifty miles, lying up in rainwater pools during the day. Grazing at night at any time of year is an individual affair, and they only congregate in large groups when reentering the river for the daylight hours. I think it probable that the same hippo congregate at the same point on the river every day. Kihuramira was a deep, isolated, permanent pool, heavily polluted by three separate schools of hippo totaling over one hundred animals. Hippo live entirely on grass, and where there is any concentration of them, grazing becomes scarce in the dry season within a three-mile perimeter of their refuge in the river. Other species of grazing animals tend to move farther away at the peak of dry season, partly because the hippo clean out most of the grass, but also because they make it unpalatable by defecating over grass and shrubs whenever the urge takes them. The hippo scatters the dung in broken up bits all about it by thrashing its short tail vigorously. Throughout southeastern Tanganyika hippo are common in all the major rivers and lakes. There are also many crocodile in the same waters, some of them huge reptiles up to sixteen feet long and weighing more than a ton. Although crocs will regularly feed off any hippo carcass, I have never seen any evidence that they attack hippo or their young. There seems to be neutrality between these two species that enables them to live together in the same waters without hostility.

- Brian Nicholson, The Last of Old Africa, 2001

Hippos in the Selous often spend the entire day semi submerged in pans where the water hyacinth helps to protect their skin from the sun.

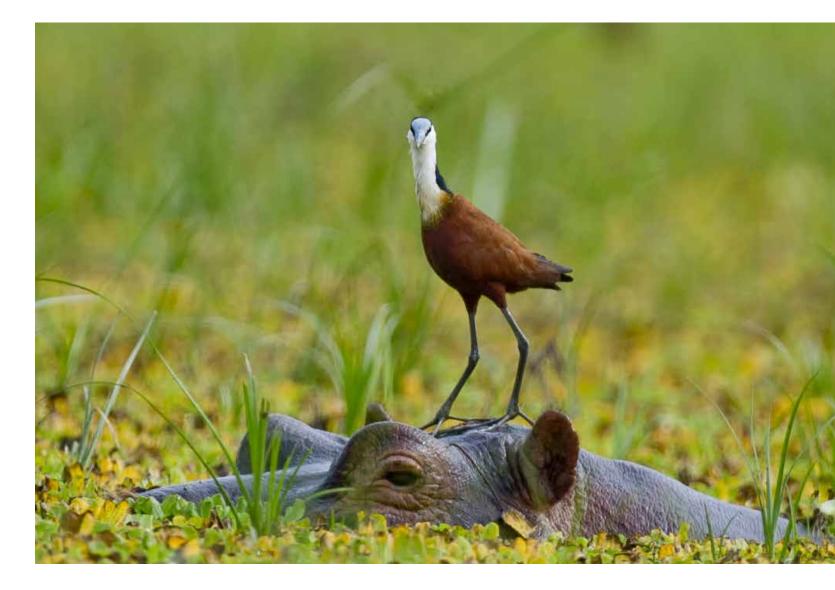
Despite being vegetarians needing to consume 50 kgs of food per day, the hippos do not seem to eat the water hyacinth.

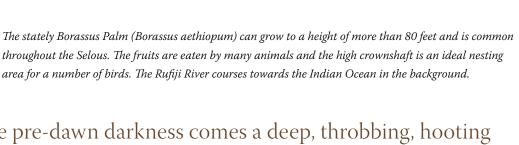




LEFT: African Open-billed Storks are commonly seen in the shallow waters of the Selous where they feed primarily on mollusks. Their upper and lower mandibles only meet at the tip of their distinctive bill.

BELOW: The African Jacana has a symbiotic relationship with the hippos with which they share pools of water. The jacana, sometimes called the Jesus bird for their seeming ability to walk on water due to their extremely large feet, eats insects and other parasites off of the hippos and they are commonly seen together.





hrough the pre-dawn darkness comes a deep, throbbing, hooting sound. There are other sounds but it is this persistent, rhythmic booming that infuses the waking bush with an expectation of the rising sun. This is the ritual calling of the ground hornbill, an essential sound of Africa, which insists that, for all the spectacle and excitement provided by the large mammals, Selous is also a place for birds.

There are few places in the vast Selous ecosystem where one cannot hear the ground hornbill's wake-up duet. A black turkey-sized bird with scarlet neck wattles, the ground hornbill lives in family groups. These groups walk methodically through the woodlands and grasslands, preying on any small animals they encounter. The powerful curved beak is as useful to smash the head of a snake, as it is to pick up a small beetle. Each group consists of a breeding pair and its offspring that help in the rearing of the latest brood. These groups may contain up to eight birds. The spectacle of a flock of ground hornbills flying through the Selous woodlands, their white primary feathers contrasting startlingly with their black bodies and scarlet neck wattles, is not easily forgotten.

The ground hornbill is only one of more than 440 species of birds known to occur in the Selous ecosystem. This diversity of bird species is a reflection of the range of Selous habitats, which include grassland, woodland, forest and a range of wetlands. Of all animal groups, birds most conspicuously illustrate the subtle variations in vegetation and landscape.





LEFT: The impala is the most plentiful and the most graceful antelope living in the Selous. Typically found either in bachelor herds of young males or in herds of a single male with a harem of females and young, these antelopes are fast and graceful.

BELOW: The Selous wildebeest has a grayish-yellowish body color, a black beard and tail, and a distinctive white, inverted chevron across the nose. Also known as Nyasaland gnu and the Nyasa wildebeest, it was formerly found in Nyasaland (now Malawi). Now the Selous Game Reserve is its last stronghold.

FOLLOWING SPREAD: The Nyassa Wildebeest found in the Selous is a sub-species of the Common Wildebeest seen throughout much of the African savannah. A distinctive white chevron on the snout is more and more pronounced as one moves south in the Selous where less cross breeding with the Common Wildebeest has occurred. Like all wildebeest, they run madly at the slightest disturbance and often appear comically confused for no apparent reason.









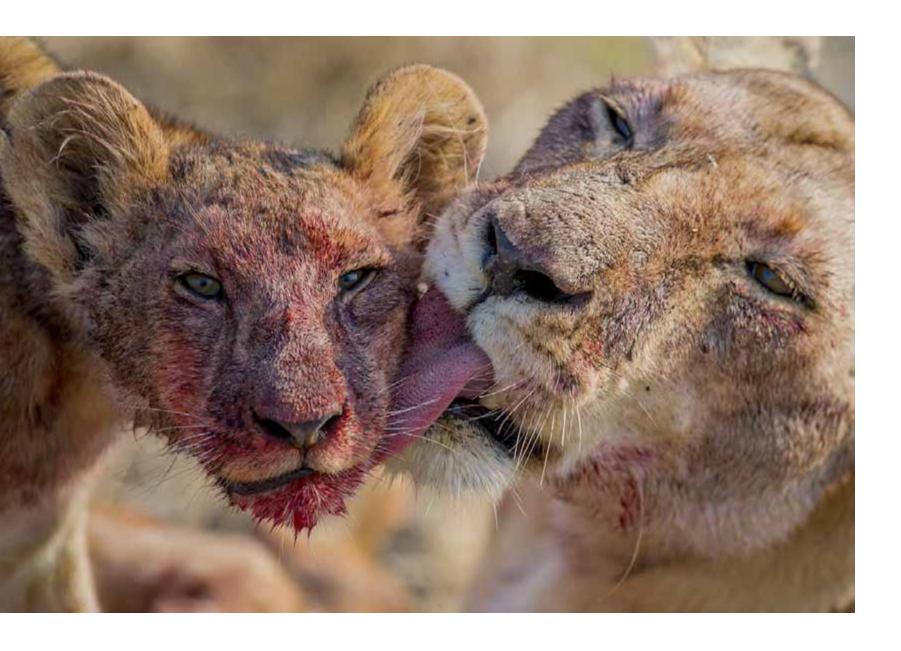
LEFT: Lions are well camouflaged during the long Selous dry season. They are patient and opportunistic hunters.

ABOVE: The eyes of a lion are proportionately larger than in other comparably sized animals.

A lion's eyes are highly functional in very low light which allows lions to hunt effectively at night.

BELOW: Lion cubs will begin to eat meat at about six weeks but they will continue to nurse until they are six months old and they will remain with their mother for up to two years.

OPPOSITE: Lion cubs are cared for by all of the females in a pride. Often several of the females in a pride will give birth at more or less the same time, raising cubs from several litters collectively.



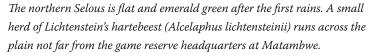


BELOW: The Rufiji Rivers runs west to east through the Selous and to the Indian Ocean. After a rain the water can be muddy. The generally shallow river has numerous sand bars. Hippos had walked on this sand bar overnight.

RIGHT: As the dry season progresses and the river level lowers the sand bars get larger and larger. Hippos traverse the sand bars, often using them for sunning during the day, safe from predators.







irtually all wild animals become increasingly bold in their relations with man after dark. I assume that instinct tells them they are safe from the two-legged predator because he cannot see. In the case of lions, the darker the night, the bolder they seem to become. This certainly seemed to be the case on that unforgettable night a Suguta Mugi. Shortly after the moon had set, leaving us in total darkness, the lions moved to within 150 yards from where we were camped. A deep moan or two indicated their proximity, then one gave voice to a series of full-throated booming roars, gradually fading into low grunts and sighs. Shortly afterward it started again and was joined by two or three others. The sheer volume of sound seemed to make the night air vibrate as it peaked and then faded into harsh stertorous sighs. The lions were now not more than one hundred yards away; and they repeated this awesome performance at intervals until an hour or so before dawn, when we heard them softly moaning as they retreated into the bush. These "concerts" as I call them, are a rare and thrilling experience and, for all our guns, lights, and fires, make one feel vulnerable to the perceived power engulfing one's being. It is common enough to hear lions at night, but a full-blown audition like this, at such close range, is rare indeed and happens only a few times during a lifetime on safari.

- Brian Nicholson, The Last of Old Africa, 2001





LEFT: Impalas are found in large numbers throughout the Selous. During the mating season a single male may control a breeding group of thirty or more females.

BELOW: The Selous is ideal habitat for the Common waterbuck (Kobus ellipsiprymnus ellipsiprymnus) and they are found in great numbers throughout the game reserve.

RIGHT: The greater kudu (Tragelaphus strepsiceros) is a large and magnificent antelope. While not common, they can be found in certain parts of the Selous where their favorite vegetation grows in abundance. The males have large spiral horns which can reach more than five feet in length.







PRECEDING SPREAD: A journey of Maasai Giraffes crosses a shallow portion of Lake Manze. The giraffe is the national symbol of Tanzania and they are protected throughout the country. In the Selous, giraffe are only found in the far northern portion of the game reserve, north of the Rufiji River.

RIGHT AND BELOW: The Selous Game Reserve is home to the largest Cape buffalo (Syncerus caffer) population in Africa. Buffaloes are usually found in herds of from 50 to more than 300 animals.









he best safaris are those that bring you closer to nature and being on foot in the Selous achieves this in the best possible way. You walk where the animals walk, on their terms and your senses are challenged, they are your survival equipment. Long suppressed primitive instincts are awakened and, once triggered, there is no turning back. You become addicted. They call it the African bacillus, an incurable affliction that can only be remedied by a dose of the African wilderness. Those of us who have walked the walk have been infected by a particularly virulent strain.

Richard Bonham, 2009

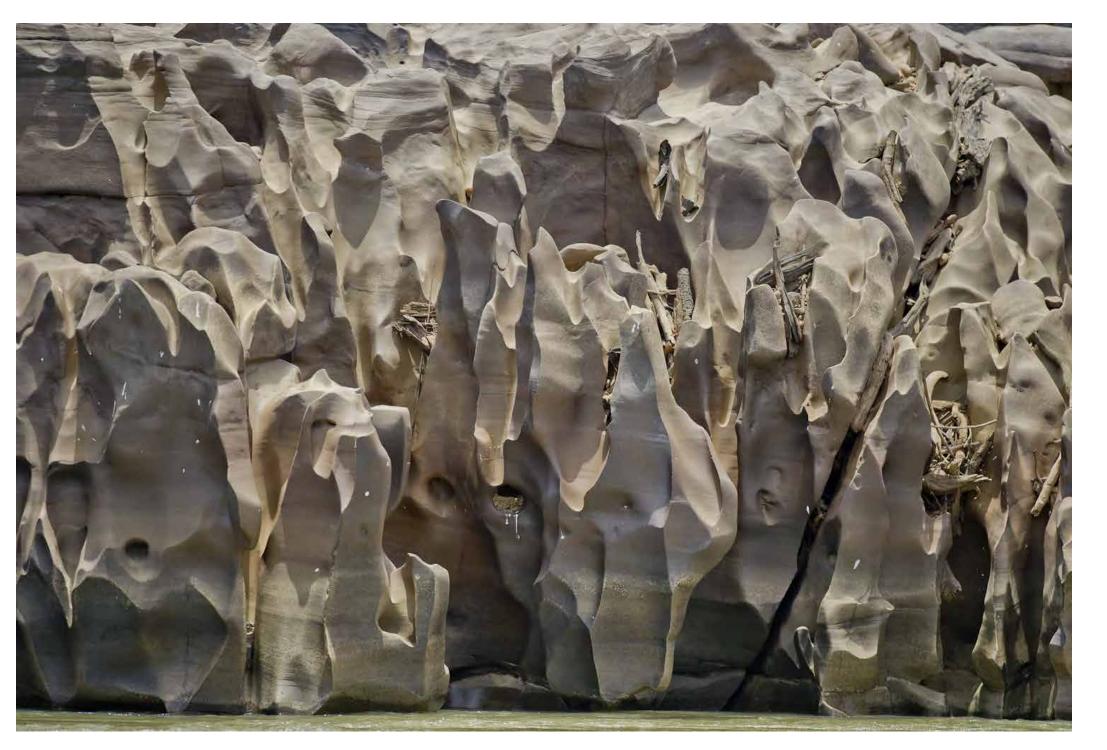
PRECEDING SPREAD: The common impala is one of the most beautiful and abundant antelopes in Africa. They can be found in large numbers in the savannah areas of most east and southern African countries although one of the largest populations is in the Selous.

GATEFOLD: The lakes in the northern part of the Selous provide water for a wide variety of species, most of which must risk coming to the lake each day to drink. Highly vulnerable to attack from lions when at the water, these animals tend to approach the water in large numbers during the heat of the day when the lions are least active and the various species each use their specialized skill to watch, listen or smell approaching predators.



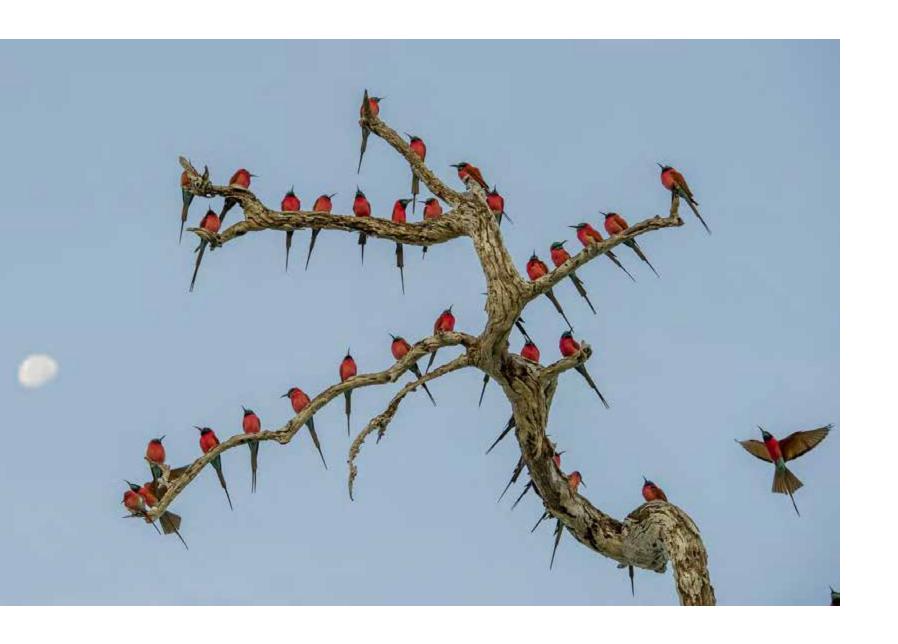


Miombo woodland is the predominant vegetation of the Selous Game Reserve. Miombo is comprised of a number of species of brachystegia all of which typically lose their leaves during the dry season and then produce a rich flush of growth just before the first rains. Miombo, the Swahili word for brachystegia, thrives in poor soils. At one time miombo woodland covered more of sub-Saharan Africa than any other vegetation but many areas of miombo woodland have been degraded by human encroachment. The Selous is the largest intact miombo woodland remaining on the continent.



The Ruaha River joins the Rufiji River in a sandstone canyon that has eroded over the ages, leaving behind an ever changing mosaic of graceful forms that disappear with each rainy season and reappear as the Ruaha water level drops, revealing newly scoured pinnacles and crevices in the walls of the canyon.

The Northern Carmine Bee-eater (Merops nubicus) is a beautiful and gregarious seasonal visitor to the Selous. They are often found early and late in the day roosting in great numbers on trees and bushes in and around the lakes and rivers of the Selous.







LEFT: The black-winged stilt, common stilt, or pied stilt (Himantopus himantopus) is a graceful wader found at the edge of many of the lakes and rivers throughout the Selous.

BELOW: The Yellow-billed stork (Mycteria ibis) is a large wading bird with a distinctive bright yellow bill. During the breeding season the feathers turn from white to a delicate pink shade and the bill becomes a deeper and brighter yellow.

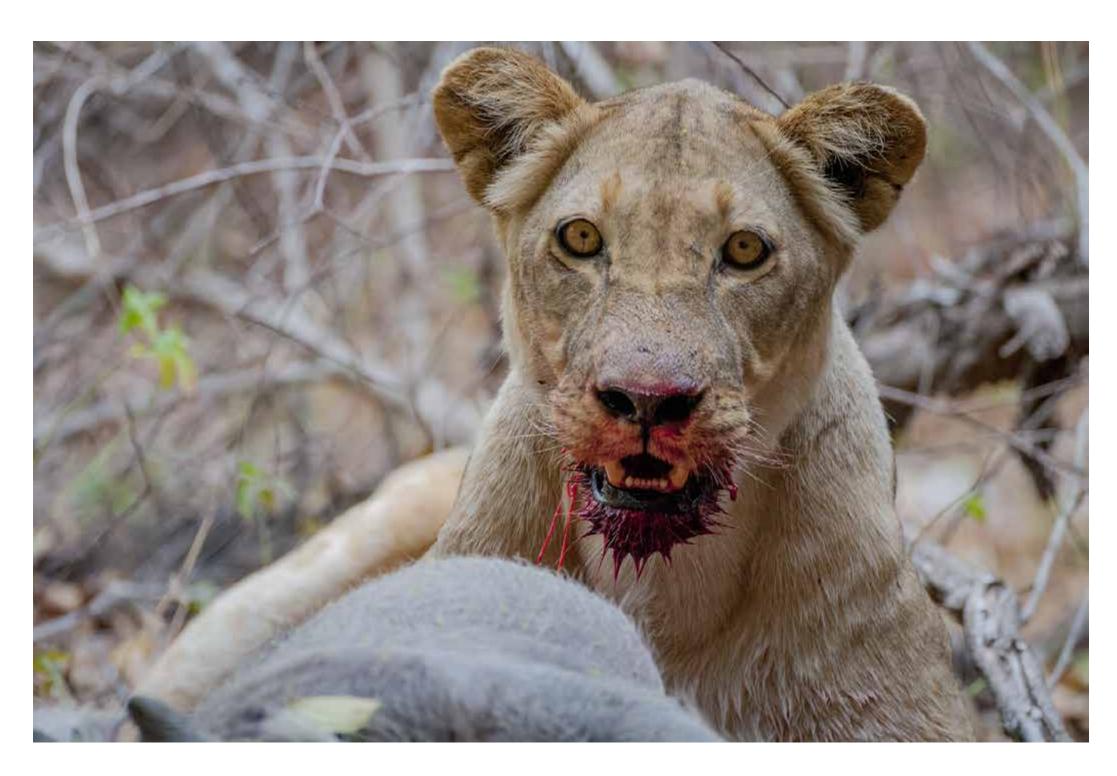






LEFT: A rare and highly endangered canid, the African wild dog (Lycaon pictus) is found in reasonably good numbers in the Selous. The wild dogs, or pained hunting dogs, are dependent on large areas of contiguous habitat thus making the Selous, Africa's largest protected area, critical for their conservation.

ABOVE: Highly social animals, generally only the alpha male and alpha female wild dog will breed while all members of the pack, often up to twenty members, will cooperate to rear the pups.



ABOVE: A young lioness defends her prey, a warthog and a favorite food of the lions.

LEFT: An African Fish Eagle, one of the Selous' largest birds with a beautiful and distinctive call, carries off a young Nile Crocodile.



BELOW: Snakes of all shapes and sizes are plentiful but rarely seen in the Selous. This green tree snake, probably a member of the genus Philothamnus was more curious than threatening.

RIGHT: African Foam-nest frogsm (Rhacophoridae Chiromantis) are unique in their ability to tolerate the midday sun and heat of the African bush. These frogs construct foam nests on branches overhanging temporary water into which they deposit their eggs which develop into tadpoles within the nest before dropping into the water to continue development.

FOLLOWING SPREAD: A femaile Banded Groundling Dragonfly rests on the forehead of a young Nile Crocodile in Lake Manze. An almost identical camouflage pattern is seen on the two completely different animals.









LEFT: The Nile crocodile (Crocodylus niloticus) is the second largest living reptile on Earth. These apex predators can reach 15 feet in length or more and they are abundant in all of the waters in the Selous. They are powerful swimmers, using their strong tails to propel them through the water. They are also fast runners on land.

BELOW: This large nile crocodile had likely lost part of his upper snout in a fight with another crocodile over food.





During the dry season in Selous the animals struggle to find water. This Nyassa wildebeest probably was weak from the effects of the dry season and was caught in the thick mud as it came down to drink where it likely died of exhaustion trying to get out of the thick mud at the edge of the lake.



obert Ross's images of the game reserve area in southern Tanzania known as the 'Selous,' are a revelation. In our Age of Unenlightenment, when a fingertip on a Google map passes for exploration, he has given us nature on the scale of William Blake. In his many images of spectacular flora and fauna, there is God, and there is religion, the cosmos, and microcosms; but more than anything, there is the excitement one feels and sees when a photographer is born and shakes loose to show us what is yet to be seen.

Eric Meola, photographer

THE SELOUS IN AFRICA by Robert J. Ross

"Rarely written about and rarely photographed, the Selous is a vast wild place in southeastern Tanzania. A stronghold of large animals, it is the largest wildlife sanctuary on the African continent (larger than Switzerland). It is also one of the least accessible and the least known. With Robert J. Ross' *The Selous in Africa*, this is about to change. An American photographer, Ross has travelled to this extraordinary wilderness numerous times documenting its great array of wildlife with some of the most beautiful photographs ever taken there."

— Peter Matthiessen, National Book Award-winning author and environmental activist

"In spite of its great size and status as one of the planet's prime reserves, there has not been a definitive book on the Selous Game Reserve. The best yet was Peter Matthiessen's brilliant narrative *Sand Rivers* that was published all those decades ago and Rolf Baldus' largely hunting book *Wild Heart of Africa*. It looks as though Robert J. Ross has nailed it. His years of research throughout the whole of the Selous has paid off and I think we have in Rob's new book on the Selous the first definitive book that covers the length and breadth of this fabulous wilderness."

— Colin Bell, co-founder, Wilderness Safaris and Great Plains Conservation

"The Selous is one of the largest wild areas left on earth. Robert J. Ross is a dedicated conservationist and tenacious photographer. Just the combination needed to bring this wilderness to the light. Rob's book appears at a critical time when the attention it brings is most needed."

— Michael "Nick" Nichols, photographer, conservationist, and editor-at-large, National Geographic

Robert J. Ross



Rob is a native New Yorker who has spent the past decade capturing colorful moments in Africa and elsewhere around the world. He now divides his time between homes in Cape Town and New York. His motivation is to reveal the uniqueness everyday, cutting through stereotypes to highlight the color and texture in places and things as common as an Italian street market or a Hamptons beach and as exotic as a virgin forest in Central Africa or the outstretched hand of a lemur in Madagascar.

Rob's work has been published in *National Geographic Adventure*, *National Geographic Traveler*, *Condé Nast Traveler*, *Getaway Magazine*, *Africa Geographic*, *Islands*, *Travel Africa* and many other leading travel and environmental journals. Rob has also undertaken photographic assignments for the World Wildlife Fund*, The Wildlife Conservation Society, The Global Fund for Children, and other NGO's where he has felt that his images could make a difference.

www.rjrossphoto.com





