

Is there hope for Africa's lions?  
Biologist and wildlife photographer Susan McConnell  
examines their chances for survival

# In a Last Wild Place



*Written and photographed  
by Susan McConnell*

**F**or the past two nights we've been trying to catch and collar lions. So far, no luck. Our efforts to lure the cats by broadcasting cries of pigs and antelopes in distress have attracted only hyenas and the *hoo*-calls of wild dogs hunting by moonlight. Tension is mounting in the research camp over these failures—everyone on staff will get a bonus if we catch a lion. Colleen and Keith Begg, leaders of the Niassa Lion Project, are optimistic that persistence will pay off, but the men on staff are discussing whether our bad luck warrants a ceremony at the nearby grave of Chief Nantusi. It may be time to ask the ancestors for assistance.

Head tracker Euzebio Waiti has another idea. He has spotted lion spoor close to the remains of two elephants, shot by poachers a few weeks earlier. Keith and Colleen think the carcasses are too old to attract lions; even the vultures have moved on. But Euzebio wants to return and use the sounds of bawling buffalos to call in lions. Keith agrees to the plan, and Colleen will stay in camp with their two preschoolers.

We position our Land Rover downwind of the more recently killed elephant. Keith, Euzebio and tracker Batista Amadi suspend a loudspeaker in a nearby tree to broadcast buffalo calls. Keith paces off the distance between the vehicle and the carcass; he adjusts an air-powered rifle to match the distance and inserts a dart loaded with sedatives into the barrel. We climb into the Land Rover and settle down to wait.

**AT STANFORD, I CONDUCT RESEARCH** in a laboratory but, like so many women biologists I know, my entry into science was fueled by a fieldwork fantasy of becoming the next Jane Goodall. I met the Beggs a few years ago at a Bay Area conference on wildlife conservation; my husband and I have helped support the Niassa Lion Project ever since.

The Beggs came to Niassa in 2003. After a decade in the Kalahari Desert studying honey badgers, the two conservationists (Colleen has a doctorate in zoology; Keith is a cinematographer) drove

20,000 miles across Africa searching for a place where they could make a unique contribution to wildlife. At the Niassa National Reserve in the far north of Mozambique, they were smitten. At 10 million acres, Niassa is the size of Massachusetts and Connecticut combined, an area home to 10 million Americans. By contrast, Niassa teems not with people, but with wildlife: nearly a thousand lions, more than 16,000 elephants, 350 African wild dogs, herds of sable antelope, Cape buffalo, wildebeest and zebra.

Despite this abundance, hardly anyone has heard of Niassa. Established in 1954, the reserve and its wildlife thrived even while the civil war decimated and displaced Mozambique's human population. Few foreigners visit Niassa, and small wonder—the price of a private charter flight from the closest city, Pemba, runs more than \$2,000. The animals here don't pose for photographs, as they do in highly trafficked safari destinations. Niassa is isolated, remote and spectacularly beautiful. It may be the last great wild place on the planet.

Because lions sit at the top of the food chain, the Beggs study them as a way of assessing the reserve's ecological health. A struggling lion population is like an erratic heartbeat or high blood pressure—a warning sign of impending disaster. And throughout Africa, the number of lions is plummeting. Conflicts with local people, habitat destruction, inadvertent snaring and sport hunting threaten this iconic species. Once numbering in the hundreds of thousands, fewer than 30,000 lions remain on the continent. In protected reserves like the Serengeti, about 6 percent of adult lions die each year due to natural causes. The Beggs have determined that lions in parts of Niassa are being lost at a staggering rate of 28 percent.

**WE BROADCAST BUFFALO** calls through the speaker. The bawls convey fear and distress. Euzebio scans the area using a red spotlight, less visible to cats than white light. Nothing. We wait 10 minutes and Keith plays the calls again. A second sound becomes

audible—a low, grunty-breathy *huhn huhn*, coming from the right. I hear movement in the long, dry grass.

Euzebio turns on the spotlight, revealing a blonde male lion at the elephant carcass. To our surprise, he seems to be wearing a collar. Keith is puzzled; he studies the animal through binoculars. “It’s Samora,” he says.

A year prior, the team had put a GPS collar on a young male, whom they named Samora, and a radio collar on his male companion, Sam. But the two lions soon went on walkabout, eventually leaving radio distance. Colleen and Keith have been eager to recover Samora’s GPS collar (and its collected data) and to replace it with a satellite collar that will transmit his location several times a day.

“I can’t believe it,” Keith whispers. “Exactly the lion we’ve been hoping to find.” He positions the rifle and looks through the sights. Keith can see the lion’s shoulder, but tall grasses threaten to deflect the dart. He waits. With a digging lunge, Samora tucks into the carcass, his head and shoulders disappearing behind the elephant. We are all tense, focused. Except Batista, who has somehow fallen asleep. At this moment, he erupts in a loud snore.

The noise prompts Samora to sit back from the carcass, giving Keith a clear view. With a hard puff, the air rifle lofts the dart. The lion leaps as the dart hits, then he sprints a few yards away. Keith grabs his binoculars: The dart is in Samora’s shoulder, plunger fully depressed.

With Batista on the roof of the Land Rover as lookout, Euzebio and Keith remove the old GPS collar from Samora’s neck and replace it with a



**THE LION SLEEPS:** Sedated Samora gets a physical exam from Begg and Waiti. The tracker (top) fastens the bolts that secure a new collar.

satellite collar. Keith and Euzebio measure the lion’s height and length; they draw blood, treat wounds, check for parasites, examine testicles. I kneel beside Samora. He is fit, tightly muscled. There isn’t a single tick on him. I rest my hand on his flank, following the rise and fall of his breathing.

Euzebio cradles Samora’s head in his lap, exposing the lion’s nose and teeth for Keith to photograph. Samora’s teeth are unsullied by tartar—pure white. Sharp. Teeth for gripping and slicing. I run my finger along his canines. They’re just beginning to show wear on the enamel, a pattern that suggests Samora is about 4 years old: a mature male, ready to define a territory and mate.

I check Samora’s feet. His forepaws dwarf my hands. Too late, I remember where those forepaws have recently been, deep in the belly of a putrid elephant. Four hand-washings later, the smell is eradicated from my fingers, but I wish I’d brought some Purell.

**NIASSA MAY NOT BE** well known, but it’s a prime destination for big game hunters, mostly Americans. The Beggs have tried to maintain a neutral attitude toward hunting: Mozambique needs Niassa to earn its keep, and hunting fees provide the reserve with its primary revenue. But the Beggs also believe that science can inform sustainable hunting policies. Research in the Serengeti suggests that if hunting can be confined to lions aged 6 years or older, their offspring will have matured enough to survive the arrival of a new territorial male.

The Beggs collaborated with the Mozambican management authority to institute a novel point system. Hunting concessions that shoot only older lions are rewarded by expansion of their quotas for the next year; those that take lions younger than 6 are penalized.

Colleen has the unpleasant task of inspecting trophies. She uses size, nose pigmentation, tooth wear and manes to assess the lions’ ages. I can only imagine her internal conflict as she examines the skulls and hides of animals she treasures—but the system seems to be working. In 2011, some 88 percent of lions shot in Niassa were aged 6 or older, compared to 25 percent in 2004.

The more serious threats to Niassa’s lions, however, are conflicts with the reserve’s populace. In contrast to most large national parks in Africa, Niassa’s animal and human populations are not separated by highly policed fences. The 35,000 residents of the reserve, scattered amongst 40 villages, subsist on fishing, farming and honey gathering. There is almost no cash economy. I



**DOWN BY THE RIVERSIDE:** Against long odds, McConnell spotted Samora as she canoed down the Lugenda River.

imagine it’s hard for people there to find an upside to living with lions, particularly if one just ate their goat or maimed their brother-in-law.

The concept of an inhabited wilderness feels like an internal contradiction. But the original notion of wilderness was centered on the presence of animals, not the absence of people. Mbamba village, just down the road from the Beggs’ research camp, is home to about 2,000 people. “It’s like living in a time warp,” says Keith, “in the Africa of 50 years ago.” For my part, I find it jarring to see people fishing, walking and bicycling in places dense with lion spoor. Keith agrees, but says, “In Niassa, people are living in a natural way, with the whole carnivore guild in place. It’s one thing to fence a reserve and defend it—you separate man and wildlife. But that man fishing, there—is he a poacher? He *lives* here. He has a right to be here.”

In the past 12 years, 13 people in the Niassa Reserve were killed by lions; another 20 were injured. I am surprised to learn that lions were not killed in retribution after these incidents. Local people believe there are two kinds of lions: bush lions, which are normal animals, and spirit lions, which are empowered by witch doctors to settle vendettas. It’s thought only the latter come into villages or fields and kill people.

While respecting local beliefs, Colleen and Keith have sought to understand the circumstances surrounding deaths and injuries caused by lions. Many incidents occur during the wet season, after crops are planted. Warthogs and bush pigs gorge on maize, rice and sugarcane, and lions follow the pigs—and then find even easier prey in the form of people sleeping outside, guarding their fields.

“Niassa is a boiling pot of all the difficult conservation issues mixed into one place,” Keith says. He ticks off the issues: encroachment by humans, hunting, commercial poaching. But one problem stands out. “The bushmeat question is the most important issue for lion conservation in the future.”

By Mozambican law, it’s illegal to kill wildlife in a conservation area. Villagers keep chickens and goats, but the supply of domestic meat fails to meet demand. The Beggs surveyed people in Mbamba

village and found that fully half had eaten the meat of wild animals—bushmeat—in the previous week. A chicken costs \$3, while a wild guinea fowl caught with a snare can be had for 60 cents. Villagers know how to construct heavy cable or wire snares that target antelope or buffalo—and these snares inadvertently catch lions. In Mbamba village alone, five lions (two of them wearing radio-tracking collars) were killed in snares in a single year.

**THE PRINCIPLES THAT UNDERLIE** community-based conservation are clear: Active community partnership must be coupled with concrete benefits like income from ecotourism, job creation, enhanced education and improved health care. Colleen and Keith think such ecotourism could thrive in Niassa, and they’ve seen how this can work. Before joining the Niassa Lion Project, tracker Euzebio Waiti was a major poacher in Mbamba village. “He’s killed lions and elephants, and he’s used all kinds of snares,” Colleen says. “But now he’s becoming a conservationist.”

The sole ecotourism lodge in Niassa is built on the banks of the Lugenda River near a dramatic cluster of granite inselbergs. It feels like Yosemite Valley without the crowds. The Lugenda Wilderness Camp was nearly full before my arrival, but I am its only guest for three nights. Sitting atop an inselberg, I look out over miles and miles of river, forest and mountains. There are no visible roads, no cell phone towers, no signs of humanity. The air is pierced by the whistles of hyraxes, small rock dwellers whose closest relative is the elephant. I cannot wrap my mind around the scale of this place.

Wim Ebersohn, my guide at the camp and a former reserve official, answers my questions about poaching in Niassa—not only of animals, but also the illegal removal of timber, minerals and other natural resources. In 2008, Niassa experienced a sudden influx of ruby miners and gem traders; stones showed up for sale in Bangkok a few months later. Wildlife rapidly disappeared from the mining area due to poaching and habitat destruction. Patrols managed to

KEITH BEGG