

## Massive herds of animals found to still exist in Southern Sudan

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Aerial surveys by the New York-based Wildlife Conservation Society confirm the existence of more than 1.2 million white-eared kob, tiang antelope and Mongalla gazelle in Southern Sudan, where wildlife was thought to have vanished as a result of decades-long conflict. Despite the war, some species of wildlife in Southern Sudan, last surveyed more than 25 years ago, have not only survived but have thrived east of the Nile River in numbers that rival those of the Serengeti.

The survey project was conducted by J. Michael Fay, a conservationist with the Wildlife Conservation Society (WCS) and a National Geographic Explorer-in-Residence; Paul Elkan, director of the Wildlife Conservation Society Southern Sudan Country Program; and Malik Marjan, a Southern Sudanese Ph.D. candidate from the University of Massachusetts, Amherst. They worked in cooperation with the Ministry of the Environment, Wildlife Conservation, and Tourism of the Government of Southern Sudan (GoSS). Funding for the project also came from USAID under the USAID/U.S. Department of Agriculture Sudan Agreement and the U.S. Fish & Wildlife Service. After years of fighting northern Sudan, Southern Sudan formed an autonomous region as part of a 2005 peace agreement, and will hold a referendum on independence in 2011.

"I have never seen wildlife like that, in such numbers, not even when flying over the mass migrations of the Serengeti," said Fay. "This could represent the biggest migration of large mammals on earth."



Fay, Elkan and Marjan also report an estimated 8,000 elephants, with concentrations mainly in the Sudd, the largest freshwater wetland in Africa. They also found evidence of even larger numbers of elephants in Boma and in the Jonglei landscape. According to the World Conservation Union's African elephant database, there were no reliable records of elephants in Sudan.

"Although we were telling people that wildlife was still present in Southern Sudan, nobody believed us," said Maj. Gen. Alfred Akwoch, undersecretary of the Ministry of the Environment, Wildlife Conservation, and Tourism. "Thanks to the aerial surveys, we now know that wildlife resources, including elephants, are still intact in many areas, but also urgently need strong measures to conserve and manage them through joint efforts at all levels."

The Southern Sudan region was last surveyed in 1982 by the Wildlife Conservation Society. Civil war broke out in the region in 1983. Based on experiences in other war-torn regions such as Mozambique and Angola, where wildlife vanished as a result of those conflicts, scientists believed that the wildlife of Southern Sudan had also disappeared.

Recently, though, reports from within Southern Sudan indicated that pockets of wildlife had been sighted. Marjan and his colleagues from the Wildlife Conservation Society and members of the Ministry of Environment, Wildlife Conservation, and Tourism, with support from USAID/USDA, undertook ground surveys in 2001 and 2002 of the wildlife populations in Boma and confirmed the presence of white-eared kob in considerable numbers. At the time, aerial surveys could not be conducted due to the ongoing war. "We were amazed to see these large numbers of white-eared kob in Southern Sudan," said Marjan. "Most people assumed we would find nothing in terms of wildlife."

Fay and his colleagues decided to return to Southern Sudan to conduct



new surveys as part of a 2004 Wildlife Conservation Society/National Geographic project, dubbed Africa MegaFlyover, when a team traveled in a modified Cessna 182 just hundreds of feet above the ground for 70,000 miles (112,650 km) to create an unprecedented record of human impact on the land. A survey of Southern Sudan was part of the initial planning for the trip, but Fay was unable to complete his surveys due to political obstacles.

On Jan. 17, 2007, Fay, Elkan and Marjan set out to replicate the surveys of the early '80s. Using the same methodology, the same flight lines, the same flight height, they began an aerial survey of three of the four blocks surveyed earlier: Boma National Park, Jonglei region and Southern National Park. Covering more than 58,000 square miles (150,000 square km) and 150 hours of survey time, the team used a survey technique of flying systematically along transects making observations of all wildlife, livestock, human activities and habitat. Observers on each side of the aircraft counted animals that they observed between two sets of rods placed on the wings of the plane. Using statistical techniques of extrapolation, they calculated estimates of how many animals there were on a landscape.

To their surprise, the results in Boma showed little difference in the numbers of white-eared kob counted in the '80s, which at the time was proclaimed one of the largest wildlife migrations on the planet.

"We estimated more than 800,000 kob in Southern Sudan," said Fay. "If you were a gold miner and hit a vein of gold, like we found in kob, you would have found El Dorado. Never in my wildest dreams could I have imagined that this kind of abundance in nature existed in a region after 25 years of civil war, virtually unknown to the world at large."

"This is a homecoming for the Wildlife Conservation Society, which conducted the last wildlife surveys of white-eared kob in the region



some 25 years ago before the civil war," said Dr. Steven Sanderson, president and CEO of the Wildlife Conservation Society. "We are happy to be welcomed back like old friends by the Government of Southern Sudan, and we look forward to working together to safeguard this amazing wildlife treasure."

Fay and his colleagues believe that follow-up aerial surveys and tracking will reveal that the team missed a significant portion of kob due to the animals' movements during the surveys. As a result, they believe that there could actually be well over a million white-eared kob in Southern Sudan. Combined with the tiang and Mongalla gazelle, the team believes this would represent larger numbers than even those of the famous Serengeti migrations. "We cannot risk losing this amazing natural resource now," said Fay.

The Wildlife Conservation Society is calling for the creation of a Sudano-Sahel Initiative, based on the model of the Congo Basin Forest Partnership, to foster wise natural resource management in a region of great global conservation value and strategic importance beset by conflict over resources.

"The significance of this find and the critical juncture we are seeing in the development of Southern Sudan require an intensified effort in the area of natural resource conservation, particularly wildlife," said Brian D'Silva, senior policy adviser, USAID/Sudan.

Other species population estimates included 250,000 Mongalla gazelle, 160,000 tiang, 13,000 reedbuck, 8,900 buffalo and 2,800 ostrich. Also observed were lion, leopard, eland, Grant's gazelle, roan antelope, lesser kudu, hartebeest, giraffe, oryx, crocodile, hippo and other animals in viable populations.

Fay and his colleagues also discovered populations of beisa oryx, thought



to be extinct in the region, and the Nile lechwe, which is antelope found no where else in the world, and presumed near extinction. More than 50 beisa oryx were spotted in the Boma area alone. Almost 4,000 Nile lechwe were estimated in the Sudd swamps along with considerable populations of hippopotamus, buffalo and sitatunga.

Southern National Park, located west of the Nile, did not fare as well. Here the team observed a 90 percent loss of some key species since the '80s. According to Elkan, "We saw no buffalo where in 1981 there were estimated to have been 60,000, and only one group of elephants was sighted where some 10,000 had been estimated to roam in the past." The team did verify the presence of the largest antelope on earth, the Derby eland, in Southern National Park. "This species has gone extinct over much of its former range, so it is very good news that what we believe is a viable population has survived in Southern National Park," said Elkan.

Many non-migratory wildlife species on the east side of the Nile were also significantly reduced. "We did not observe a single zebra during the systematic survey in Boma, where 29,000 were seen in the early '80s," said Elkan. During complementary reconnaissance surveys in late May, Elkan, WCS pilot Falk Grossman and Jamus Joseph, assistant director of the WCS Southern Sudan Country Program, did finally sight a group of three zebra moving with the white-eared kob migration in Boma National Park. The team also identified a key zone of semi-arid habitat supporting several species, which will be proposed as a new protected area. (OVER)

In an effort to protect this newly discovered natural resource, WCS has signed cooperation agreements with both GoSS and its Ministry of Environment, Wildlife Conservation, and Tourism to launch a conservation strategy that will safeguard the region's wildlife and wild lands, which may now rank among the richest in Africa. The plan would include the integration of several thousand ex-combatants from the



Sudan People's Liberation Army into wildlife services, help establish and manage official networks of national parks and other protected areas and integrate conservation principles into the management of landscapes, which will develop approaches in partnership with traditional local communities and engage the private sector to employ sound environmental practices.

"Humanitarian and development NGOs are swarming into southern Sudan," said Fay. "With all the relief being poured into the region for development and the resource industries moving in, we could actually see this precious wildlife resource, which has thrived under these difficult circumstances, disappear. Ironically, the silver lining to this violent time in Sudan has been the animals flourishing."

"Numerous threats in this post-war era face the region, including an enormous amount of extensive seismic exploration for oil in the Sudd that is harming the environment," added Elkan. "Industrial permits have been awarded over much of the migration corridors. Widespread automatic weapons used during the conflict are now being used by unauthorized individuals for poaching and commercial, unsustainable hunting. The international aid community is building roads, hospitals, schools and commercial networks in the area without determining how this will affect the wildlife and without appropriate environmental impact assessments and mitigation plans in place. Resettlement in areas depopulated during the war is putting stress on the land. Thousands of refugees and internally displaced people are on the move back into this area, which is causing deforestation east of the Sudd wetlands."

"With the billions being spent annually in Southern Sudan by the international community, almost nothing is being spent on natural resource management, particularly on wildlife conservation," said Undersecretary Akwoch. "We need donors, partners and well wishers to recognize the importance of wildlife resources as the future backbone of



the economy and development of Southern Sudan."

Added Luka Biong Deng, Minister for Presidential Affairs for GoSS, "We are recognizing the results of our peace dividend with the return of internally displaced peoples and refugees, and the recovery of our wildlife populations. The government of Southern Sudan is faced with many challenges in natural resource management and extractive industries. The plan for management of wildlife and the protected areas network being designed by the Ministry of the Environment, Wildlife Conservation, and Tourism and the Wildlife Conservation Society will be a key component of the overall development of Southern Sudan."

Source: Wildlife Conservation Society

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