African Wildlife News

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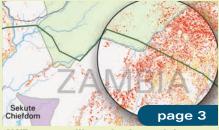
YOUR SUPPORT AT WORK IN THE AFRICAN HEARTLANDS

AFRICAN WILDLIFE FOUNDATION®

Home to elephants, rhinos, and more, African Heartlands

are conservation landscapes large enough to sustain a diversity of species for centuries to come. In these landscapes—places like Kilimanjaro and Samburu—AWF and its partners are pioneering lasting conservation strategies that benefit wildlife and people alike.

Inside THIS ISSUE



AWF uses satellite technology to inform conservation efforts on the ground.



Ethiopia's rich biodiversity holds conservation promise.



Elephant poaching escalates in Cameroon.



AWF, with the Annenberg Foundation, installed a state-of-the-art computer lab at Manyara Ranch Primary School, which is located near a critical wildlife corridor in Tanzania.

Not Just a Lab, but a Future

AWF establishes a state-of-the-art IT lab at a school in rural Tanzania, in the process building hope for the future for hundreds of young students

omputers are a part of everyday life for many students in the United States and other western countries. Youngsters may have lessons that incorporate such technology, while older students often access the Internet to conduct research for school projects. Some classrooms have even replaced their chalkboards with Smart Boards, interactive whiteboards that are linked to a classroom computer.

This is not the case in Tanzania, where many schools lack such technology. Those that do usually have modest setups, featuring old machines running outdated software. Which shows just how special African Wildlife Foundation's (AWF's) most recent project is.

Last year AWF, together with Annenberg Foundation, conceived and built a brand-new IT lab in Manyara Ranch Primary School in rural Tanzania. Over the course of a few months, a former classroom on school grounds was transformed into a state-of-the-art facility with 40 new HP 500 desktop computers. The computers—each of which have their own 20-inch LCD monitor, keyboard, and mouse—feature Intel Dual Core technology and run the Windows 7 operating system and the Microsoft Office 2010 software suite. All are Internet-accessible. The lab also includes a laserjet printer and a projector to facilitate instruction.

Planning for future needs

Establishing a computer lab involves much more than simply ordering and installing a handful of desktops, as James Mithamo will tell you. "The school has 800 students, so the

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Investments in the Future

t's back-to-school season in many parts of the world, and students are (maybe reluctantly) headed back to the classroom after a long summer. One place where there's probably more enthusiasm than reluctance, though, is rural Tanzania, where the classroom is now offering several hundred Maasai students a rare opportunity to plug into the global world through computers.

Unfortunately, computers are still a luxury in many parts of Africa and a rarity in schools. So you'll understand why we at AWF are thrilled to share our latest project: a state-of-the-art IT lab at Manyara Ranch Primary School in our Maasai Steppe Heartland.

The modern facility we've established, with 40 Internet-accessible desktop computers running the latest software, is unique in Tanzania. Already the lab has made a huge difference in the lives of the school's teachers and students. I don't think I'm overstating things when I say that we are helping children to envision a future filled with possibility. Some students have shared that this computer lab will help them become scientists, government ministers, and teachers in the future.

What does this have to do with conservation? Part of AWF's strategy in securing movement corridors for wildlife is providing incentives for communities—in this case, access to quality education—to set aside their land for conservation. And citizens that are better informed make better stewards. As they learn and grow, these children will have the knowledge to help make sound conservation decisions for the future of their country and their continent... and we'll have had a critical hand in this.



poaching of rhinos the past few years. This distressing trend, along with what seems to be a rise in elephant poaching—including a particularly disturbing incident earlier this year in Cameroon (see p. 8)—has led some experts to predict the extinction of some of

Africa's great species in our lifetime.

AWF recently rallied conservationists from across the African continent to take action on the matter and ensure the resurgence of rhino populations. But because this topic is of utmost importance to AWF and the survival of Africa's wildlife, we can't give it the coverage it deserves in the remaining pages of this issue. Instead, our entire next issue of *African Wildlife News* will be devoted to the poaching problem. Please stay tuned.

Sincerely,

Patrick Bergin, Ph.D. Chief Executive Officer

P.S. Your AWF membership and additional support of AWF is always appreciated. To learn more about how your donations have helped with our

helped with our conservation mission in Africa, please see our annual report, at awf.org/annualreport





In April 2012, AWF convened a Rhino Summit in Nairobi, which resulted in a comprehensive response to the poaching crisis. Keep an eye out in our next issue for the results of the Summit.

Butle

A Bird's-Eye View

AWF's GIS team uses satellite technology to inform conservation on the ground

By Kathleen Garrigan

very 16 days a satellite circumnavigates Earth, capturing thousands of images of a changing planet. The satellite, part of an Earth-observation program launched in 1972 by the U.S. Geological Survey (or USGS) and NASA, provides an uninterrupted visual record of the forested, grassy, watery world below, including a bird's-eye view of the areas where AWF works, our Heartlands. Each of those Heartlands has a story to tell-of wildlife movements, of land converted to agriculture, and more. Yet the raw satellite imagery can be difficult to understand on its own. That's where Geographic Information System (GIS) comes in.

"GIS" is an umbrella terminology applied to the entire system of satellite technology, computer software, and human expertise that allows geographical data to be captured, stored, classified, analyzed, and eventually presented clearly in a map. According to David Williams, AWF's director of conservation geography, the maps offer field staff an up-to-date, detailed conservation picture that allows them to better focus their limited resources and attention where they're most needed.

"We can provide harder, more credible evidence as to the trends of wildlife numbers, where their movement routes are, and what threatens those movement routes and core habitat areas,' explained Williams.

Conservation islands

In AWF's Kazungula Heartland, efforts are focused on "choke points" along the Zambezi River through which elephants cross from northern Botswana into Zambia. Here, AWF has been working with several communities, including the Sekute Chiefdom, to secure land for conservation. Recently, maps compiled by the GIS team revealed the rapid expansion of a settlement further north in Zambia, moving from east to west just south of Kafue National Park.

"An area that had previously been wide-open habitat was being converted to cultivation at an alarming rate I've not seen anywhere else," said Williams. "This wall of development is now threatening the connectivity between two conservation landscapes, Kazungula Heartland and Kafue."

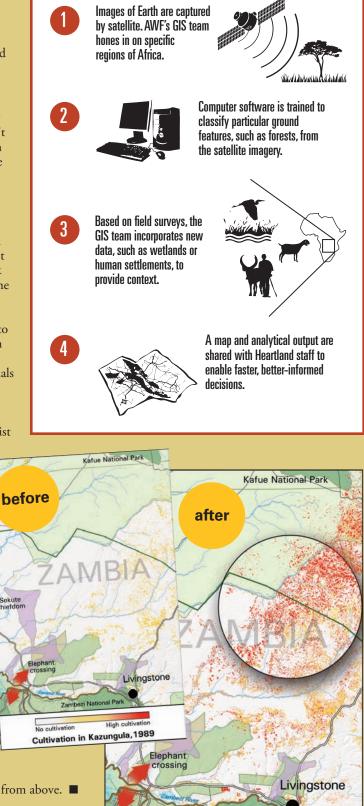
Williams noted this will necessitate changing the conservation strategy on the ground: "We can't focus all of our efforts on the river and those choke points," he said.

With those satelliteinformed maps in hand, AWF staff has an opportunity to develop a future strategy. "Our best option would be to work with Chiefs Musokotwane and Nyawa to identify large pockets of land, maybe 20,000 hectares, to bring under conservation management—creating islands of safety for animals between the area south of Kafue and the Sekute Chiefdom," said Jones Masonde, AWF's ecologist in Kazungula Heartland.

Currently AWF lacks the resources to address this issue; however, looking at the maps now and figuring out the key stakeholders will allow us to hit the ground running when the time comes. And with enough large pockets of protected land, elephants and other wildlife will find their way between human settlements to protected areas-all the while being watched from above.

While AWF's Kazungula Heartland staff focused on elephant crossing points along the Zambezi River, work by the AWF's GIS team revealed rapidly expanding cultivation further north where previously there was open habitat (above left, in 1989, and right, in 2010).

HOW GIS WORKS AT AWF



Zambezi National Park

Cultivation in Kazungula, 2010

No cultivation

High cultivation

Grant Wheeler; map by AWF GIS



Ethiopia's Eden

Boasting natural resources, wildlife, geographic diversity, and beautiful scenery in spades, Ethiopia may be the next tourism capital of the world

By Kathleen Garrigan

onflict. Coups. Drought. Famine. Too often these are the words and images conjured up when we think of Ethiopia. But there are other descriptors that define, or may soon define, this landlocked country nestled in the Horn of Africa: Breathtaking. Fertile. Species-rich.

Ethiopia's borders pack in an incredible array of natural resources and species diversity to rival some of Africa's top safari destinations—Botswana's Okavango Delta, say, or Tanzania's Serengeti National Park. It is also where one of the world's oldest and most advanced civilizations evolved and fashioned an empire the Axumite Empire—comparable to the powerhouses of Persia and Rome. Even before the area was settled by Ethiopic—the great grandson of Noah, according to oral legend—the exhumation of 3-million- to 6-million-year-old hominid bones suggests a much older history, one that began in the geologic cradle of Africa's Great Rift Valley that runs through the center of the country.

With the right investment, the fusion of Ethiopia's natural, historical, religious, and cultural treasures promises to transform it into a paradise, as much for the wildlife and people living there as for the binocular-toting tourists and foreign investors who are discovering there's more to Ethiopia than meets the eye.

Land of extremes

The only country to maintain its independence during the 19th century's "Scramble for Africa," in which European powers annexed and colonized territories across the African continent, Ethiopia

(formerly Abyssinia) is today the second most populous country in sub-Saharan Africa. While it boasts one of the fastest-growing economies in Africa, it is still considered one of the poorest countries in the world, with its 82 million citizens earning far below the per capita income of the sub-Saharan average.

Ethiopia is defined by its extremes. Where one area is arid and barren, another is rain-soaked and fertile. Where a region is low-lying and tropical, another is mountainous with an afro-alpine ecosystem. Quietly, Ethiopia has attracted tourists for decades, many of whom have come to see religious and historical sites such as the rock-hewn churches of Lalibela or the ancient ruins of Axum, relics from a bygone era. Over the centuries, this rich cultural history has flowered in a landscape of incredible natural beauty, with many areas of the country existing as virtual Edens supporting a rich diversity of wildlife. Two places—Simien Mountains National Park, a World Heritage Site, and Gambella National Park—have maintained a high level of biodiversity and are home to a handful of species that are found nowhere else on Earth.

Highlands and lowlands

In 1969, the government designated the western part of the Simien Mountain range a national park, and in 1979, Simien Mountains National Park became a UNESCO World Heritage Site. Its jagged pinnacles and undulating plateaus are home to the Ethiopian wolf and the Gelada baboon, as well as the scimitar-horned Walia ibex, a species of wild goat found only in the national park.



The highlands and lowlands of Ethiopia boast wildlife such as the Ethiopian wolf, (pictured above) plus the world's second-largest migration of white-eared kob.



Ethiopia is considered one of the poorest countries in the world, with its citizens earning far below the region's per capita income.

ed across the gorge that was like clouded amethyst to the peaks of the Simiens."

-Rosita Forbes in "From Red Sea to Blue Nile-A Thousand Miles of Ethiopia," 1925

"Simien alone—the views and the wildlife—takes your breath away," says AWF's director of land conservation, Kathleen Fitzgerald, who visited Simien Mountains National Park last year along with AWF President Helen Gichohi. Fitzgerald suggests that Simien's proximity to the northern cultural tourism circuit will help it pull people to the parks. "It's an astonishing landscape, and it offers trekking, which is really unique in Africa."

In spite of its obvious potential as a tourism destination and refuge for wildlife, Simien's wildlife was greatly depleted during a civil war in the 1980s and today faces threats of human encroachment and overgrazing. Investing in a tourism plan for the park, including community tourism, and enhancing infrastructure will help Simien better accommodate and attract visitors while generating revenue that can be invested back into the park and communities.

Gambella National Park faces somewhat different challenges. Low-lying and humid, it contrasts greatly to Simien in topography, climate, and tourism access, though perhaps not in tourism potential. Ecologically connected with South Sudan's Boma National Park, Gambella is part of a larger system that plays host to the second-largest mammal migration in Africa after Tanzania's Serengeti migration. Every year, 1.2 million antelope, including an estimated 800,000 white-eared kob, move between Boma and Gambella. Lions, elephants, buffalos, Nile lechwes, Nubian giraffes, and rare bird species like the shoebill inhabit Gambella's woodlands and wetlands. "Gambella is really off the beaten path," says Fitzgerald. "It will get there [as a tourist destination], but it's going to take a lot more infrastructure and some real serious design. Gambella floods six months out of the year, so you're looking at an Okavango Delta type model that can pull people in during the dry season but also offer tourism during the rainy season."

A fertile area with plenty of water, the Gambella region has attracted another industry: large-scale agriculture. As Fitzgerald explains, previously Gambella National Park's boundaries were never clearly defined, leaving it vulnerable to agricultural encroachment.

"No one has done a situational analysis of Gambella, so no one really knows what's happening on the ground," explains Fitzgerald. "There's rapid agricultural development that no one has mapped and documented because of lack of funding and other factors. AWF is considering providing that funding support to do the situational analysis that will set the framework to do land-use planning."

Working with the newly formed wildlife authority, Ethiopian Wildlife Conservation Authority, and other partners on the ground, including African Parks Network, AWF is exploring ways in which it can add conservation value to Simien, Gambella, and surrounding areas.

"If they can beef up some of the parks and develop a network and attract enough people, then they can overcome the stigma of drought and famine and show that tourism can help the country," says Fitzgerald. ■



Despite a reputation for being a home of drought and famine, Ethiopia in fact is a fertile, species-rich country boasting an incredible array of natural resources and cultural history.



The Walia ibex is one of several species endemic to the region

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Information Technology Lab (Cont'd from cover)



Students and teachers alike were excited when exposed to the capabilities of the computers at Manyara Ranch School's new IT lab. For many, this is their first hands-on experience with computers.

room can't be too small," AWF's IT director noted, one of several considerations he and the Maasai Steppe Heartland team had to take into account during the project planning.

Another consideration: security. Certain infrastructure improvements had to be made, including swapping out the building's wooden doors for metal ones, replacing broken windows, and reinforcing the ceiling to prevent bats from entering.

Mithamo and his team then had to determine the best network configuration for the school's current—and future—needs, eventually structuring the network to allow for easy expansion to all of the school's dozen-plus classrooms, should such a need arise in the future.

Learning period

But access to the best technology in the world is pointless if people don't know how to take advantage of it.

"Most of the teachers did not even know how to operate computers, so we prioritized teaching the teachers first," Mithamo

said. "Once teachers appreciate the power of technology, they'd be able to pass that knowledge on to students."

At the beginning of the year, therefore, AWF's IT personnel led a two-week training session for school staff. Also taking part in the training were the divisional officer of education for the region, the chairman of the school Parent–

Teacher Association, and a head teacher from a neighboring school.

All the adults proved to be quick studies, according to Mithamo. "Each now has an e-mail address—they had never had e-mail addresses before. Each can get on the Internet. Each can use Microsoft Word and Excel," he said.

Because Tanzania lacks a curriculum that incorporates computers, the IT director made note of additional potential uses for Manyara Ranch School's computer lab and drafted his own curriculum that he hopes will soon be approved for use at Manyara Ranch School. Uses for the lab range from school management such as report generation and expense tracking—to curriculum enrichment, such as connecting students to peers across the continent—even across the world.

Knowledge is power

When he visited Manyara Ranch School this spring to conduct the last of the teacher training, Mithamo had the opportunity to sit in on some of the early lab sessions with students. "They were so excited; you could see it in their faces," he related. "You see in their eyes what it means to them."

Indeed, though the computer lab is still in its nascent stages, teachers and students alike already see the potential of the new facility. "Truly these computers will help us a lot and will make us more with today's technology," one instructor related. A student predicted: "We will... discover the world."

The IT director contends these developments are all in keeping with AWF's conservation work. The school is situated on the grounds of Manyara Ranch Conservancy, which helps protect a critical wildlife corridor that connects Lake Manyara and Tarangire

National Parks. Supporting the school and the local community provides incentives to the community to conserve the corridor for wildlife.

In addition, says Mithamo, "One of AWF's missions is empowering the people, and to empower people is to provide them with information. Information is power; knowledge is power. We are empowering

people who live in a far, remote location to link to the world and learn about wildlife and conservation." To that end, AWF has worked with the school to incorporate conservation education into the curriculum.

He added: "The development of this lab is a milestone for the Manyara community, Manyara School, and teachers and students. I visualize one day, 10 years to come or 15 years to come, when these young students will say that computers at the Manyara lab helped them choose a career—to be an engineer, to be a doctor, to be a pilot—through a simulation that they may have seen at the tender age of 8 or 10 years. To me, this is the greatest thing."

"I visualize one day, 15 years to come, when these young students will say that computers at the Manyara lab helped them choose a career."

-James Mithamo, IT director, AWF



As part of its commitment to capacity building, AWF rebuilt, and continues to support, Lupani School in Zambia



After rebuilding Lupani School in Zambia, AWF has continued supporting the school with infrastructure and curriculum updates. Here, two teachers inspect the new science kit purchased by AWF.

n a Chiefdom where 80 percent of the population is illiterate, education can open doors to a more prosperous future. It can also provide a powerful incentive to engage in conservation, from setting aside lands critical for wildlife movement to halting the unsustainable extraction of natural resources.

That was the thinking behind AWF's engagement with the Sekute Chiefdom in Zambia, where AWF constructed the area's only modern community school (covered in the Summer 2011 issue of *African Wildlife News*). Now, more than one year later, Lupani Community School boasts an enrollment of 115 pupils, and they appear to be thriving, according to AWF's Jones Masonde, who works closely with the families in the Chiefdom. "The parents are very happy with the school—in particular, with the improvements in the quality of education from the school and their children's ability to read and write," he said.

Ongoing support

To ensure continued success for these students, AWF has provided ongoing support for Lupani School, most recently donating 60 textbooks. AWF President Helen Gichohi also made a personal donation of 100 fruit, shade, and ornamental trees worth \$1,000, which were planted on school grounds.

A recent donation from some of AWF's supporters is allowing for additional important improvements to the school's educational capacity and facilities. AWF has purchased a government-approved mobile science lab kit that includes science supplies for conducting experiments. "The provision of this kit will help pupils to translate the theoretical aspects of science into the practical, increasing their overall understanding," observed Nasson Tembo, Kazungula Heartland director for AWF. The mobile science lab also fulfills a requirement by the Zambian Ministry of Education that every school have a science laboratory.

Infrastructure upgrades include the construction of two showers and toilets for the teachers' houses, so that each house has its own bathroom. This means the school has been able to attract a full complement of teachers. AWF has also installed solar panels for three of the teacher houses. Lupani School is not connected to the national hydroelectricity grid, meaning teachers had to rely on candles or lanterns for lighting when preparing lesson plans at night. Now installed, the solar panels are providing enough electricity to light houses in the evenings and even power a computer. This reportedly has dramatically improved teacher morale.

"We are so grateful for this initiative, as it will allow us more time in the evening to prepare for our work," said Stanley Mweengwa, the deputy head teacher at Lupani Community School. "We can assure you of our commitment to teaching these pupils—you should expect a higher pass rate for the examination class!"

Given that Lupani School has already graduated its first class—seven students passed their grade 7 exams and are now in secondary school—the investment in the science kit, solar panels, and infrastructure should continue to produce even more dividends with the teachers and students.

Watch a video on Lupani School: Visit awf.org/lupani.

Lupani PTA Minutes

No matter where in the world they live, it turns out parents are pretty much the same: They'll do whatever it takes to ensure a quality education for their kids. In early March, the Lupani School Parent-**Teachers Association** (PTA) held its third general meeting to discuss various school issues. Parents in attendance agreed to assist in general maintenance of school grounds, including the clearing of the school sports field, and were tasked with raising US\$1,000-approximately \$6 per household—toward a school maintenance fund. The Lupani School administration also introduced a sixth teacher, who had recently arrived at the school.



Involved parents discussed issues of concern at a recent PTA community meeting at Lupani School.

Wildlife Watch

By Madeline Johnson

Ithough this magnificent primate appears similar to other baboons in all physical characteristics, "baboon" is actually a misnomer. Other baboons belong to the genus Papio, while the gelada is the only species still in existence of the genus Theropithicus. It is believed this genus originally contained several species, and according to fossil evidence may have ranged as far outside of Africa as India. Currently the gelada is found only in the Ethiopian Highlands.

The gelada was historically categorized as a baboon largely based on its appearance. These primates are large, robust, and covered with coarse, buff to almost black hair. Adult males have long capes of hair down their back. The color of the gelada's hair can be used to distinguish two subspecies; the northern gelada (T.g.gelada) has buff to dark brown hair, while the southern gelada (P.g.obscuras) has dark brown to almost black hair. (The two subspecies are named for the respective locations they inhabit in Ethiopia.)

The gelada's face is hairless, similar to a baboon, but its muzzle is shorter and closer

in size to that of a chimpanzee's. The characteristic most unique to the gelada, however, is the hairless, hourglass-shaped area of skin found on its chest. The coloration of this skin patch can range from a pink to a dark red and is often exhibited by males.

The gelada is largely terrestrial. It sleeps at higher elevations-where cliffs provide protection and cooler temperatures-and travels during the day to grasslands to forage. Customarily, geladas live in complex, multi-level societies; most social activities occur during the morning while moving through the plateau grasslands. In the afternoon, interactions wane, and individuals focus largely on foraging. It is estimated that between 35 percent and 60 percent of their day consists of feeding.

The gelada is the only primarily graminivorous primate, which means it feeds on grass and grass seeds, comprising



Gelada Baboon

90 percent of its diet. It is adept at digging for seeds and grass tubers, since its index finger and thumb are the most opposable of any primate. The gelada will sometimes eat flowers, herbs, and thistles, depending on what is available. Rarely will it eat insects—and only if they're easily caught. Because grass is its primary food source, the gelada is most often in direct competition with ungulates. ■



Up to 450 elephants had been poached from a single national park in northern Cameroon in early 2012. Park authorities have little by way of resources to respond.

been poached in the last three days," wrote AWF Director of Land Conservation Kathleen Fitzgerald in a blog post. "During our stay, 12 more were poached, putting the estimated 'known' number to 39. A massacre."

Little capacity

By late February, anywhere from 200 to 450 elephants had been poached in Bouba Ndjida National Park in a span of just two months. It was indeed a slaughter of epic proportions.

Carnage in Cameroon

In the course of 2 months, a single national park in Cameroon became a hotbed for poaching

hen an AWF team visited Cameroon in early 2012 to scope out conservation opportunities, little did they expect their visit would coincide with one of the year's most shocking poaching stories. But upon arriving at Bouba Ndjida National Park in northern Cameroon, "we heard that 27 elephants had

News reports tied the killings to armed men from Sudan who were selling ivory from the elephants to purchase arms for regional conflicts. According to Fitzgerald, wildlife authorities in Cameroon lack the resources to respond adequately to such emergencies. "There is no communication in the field, access is difficult, weapons are few, and vehicles, minimal," she wrote in her blog post.

Following international outcry, the Cameroonian government reportedly sent more than 100 soldiers into Bouba Ndjida to hunt down the poachers. The government announced it would also undertake the rehabilitation of park roads and infrastructure, build barriers to separate wildlife from the community, increase the number of eco-guards in the park, and conduct land and air surveillance to deter poaching.

Philip Muruthi, senior director of conservation science for AWF, suggested that anti-poaching efforts would also benefit from the input of local communities. "When we visited, we did not really hear of any programs with the communities there, but it's very hard to police without the citizenry," he explained. "If incentives from wildlife, such as tourism dollars, are missing, people will not report intruders in their community. In our Heartlands, people protect wildlife, because they see wildlife as a resource."

