ECOLOGY

A Long March to Save Africa's Dwindling Wildlands

A conservation biologist is setting out on a yearlong trek through the heart of Africa to survey plants and animals before they are lost

Mike Fay was tramping through what he assumed was virgin forest in the Central African Republic a decade ago, hot on the trail of gorillas, when he stumbled across something out of place. Kneeling beside a yanga, a kind of forest pothole that collects water during rainstorms, he noticed tiny black specks in the dirt—kernels from an oil palm tree, which is usually associated with human settlement. "I thought, 'That's strange,' " Fay recalls. "I'd been walking around this forest for 2 years and hadn't seen a single oil palm." Fay later used carbon dating of kernels to establish that oil palms flourished in the region more than a millennium ago, around the time that linguists believe Bantu-speaking people were migrating across sub-Saharan Africa. To Fay, a biologist with the Wildlife Conservation Society (WCS) in New York City, the find suggests that the Bantus cultivated oil palms across huge tracts before moving on and letting the land revert to wild. "It appears that humans were everywhere," in even the most remote Central African forests, he says.

The discovery illustrates the rewards of probing the rainforest on foot rather than from behind the wheel of a Land Rover. Although not all experts buy Fay's argument that oil palms imply past occupation, most are convinced of the value of foot-slogging through the forest. And so they applaud Fay's newest venture: an ambitious effort to survey a 1400-kilometer-long swath of land, stretching from the Central African Republic southeast across Congo to the coast of Gabon, before large tracts succumb to the latest wave of human migration and exploitation. In a project set to get under way next week, Fay and a company of Babendjele and Bangombe guides and porters will spend a year trekking through forests, inventorying plants and animals and searching for additional signs of ancient settlements. Fay hopes that what he calls a "megatransect" will generate data that the three African governments and land managers can tap to cordon off ecologically valuable lands while encouraging sustainable logging and hunting in other regions.

Whereas typical surveys cover only a small area, or examine only a few aspects of a wider terrain, the megatransect "offers an unprecedented opportunity for an ecological snapshot on a large scale," says John Hart, a WCS senior scientist who has studied the effects of Congo's civil war on wildlife. "What Mike proposes to do is extremely important" for documenting the land before human activity irrevocably alters it, adds Claudia Olejniczak, an anthropologist at Washington University in St. Louis.

Long slog. Mike Fay's devotion to Central African forests will have to sustain him for 1400 kilometers.

Such a project requires an almost obsessive commitment to conservation, a kind of devotion that Fay has demonstrated before. In 1993, he led a campaign to persuade the Congolese government to set up a national park to protect 400,000 hectares of the Nouabale-Ndoki forest, a vast preserve teeming with forest elephants, an antelope called the bongo, and lowland gorillas. Based mostly on Fay's survey work, the government designated the park's core off limits while allowing sustainable logging, hunting, and tourism along the edges. "I tip my hat to his successful efforts" to set up the park, says the U.S. Forest Service's John Sidle, endangered species coordinator for the Great Plains National Grasslands, who calls Fay "a risk taker and adventurer."

Before Fay strikes out on foot, he plans to gather a bird's-eye view by flying his own Cessna over the study area's 17 connected forest tracts. He'll use a video camera and Global Positioning System information to roughly chart his course through the woods, recording locations of settlements, roads, and logging operations, particularly in areas with scant data on land-use patterns. Fay has pioneered this aerial approach to data collection in Central Africa, a region barely penetrated by ground surveys. "You can sense a village coming even 20 kilometers away," he says. First weeds appear, then oil palms and other crops.

But for the new project, the real fun starts at ground level. After striking out from a settlement at the periphery of the dry, sandy Ngoto forest in southern Central African Republic, Fay's team will follow human and animal trails deep into the forest, along a general compass line that should bring them to the next settlement some days later. Following trails rather than bushwhacking will be less invasive and save the group's strength, says Fay, who will note large mammal spoor and identify and sample plants on the route, which he expects to traverse at a rate of about 7 kilometers a day. Along for the ride will be a photographer for *National Geographic*, which is funding the project. "I want to be able to take away as many images as I possibly can," Fay says.

To get a sense of the relative wildlife density from one stretch of forest to the next, Fay intends to lure animals into the team's path. Six times a day, a guide will let out a melodious, high-pitched sound—like a cross between a goat's bleating and a cat's mewing—that mimics the distress call of a duiker, a small antelope. The call is known to attract a variety of mammals, including chimpanzees, leopards, genets, pythons, and duikers themselves. However, these "pulse of the forest" tallies, as Fay calls them, will not help to inventory mammals, such as buffalo and bongo, that ignore the wails.

By the end of his journey, Fay hopes to have amassed a data trove that can help conservationists make a case for setting aside vital habitat for imperiled species, such as the forest elephant and the gorilla. Fay understands that many hectares will be developed for logging or other uses. But he hopes, for example, that some of the older forest areas might be spared.

Such pragmatism may not please everybody, but it seems to work, particularly in the face of government practices that embrace logging and the conversion of forests to agricultural fields. Fay compares the situation in Central Africa today to the rapid colonization of western North America last century. "The parallels are overwhelming," says Fay, who has steeped himself in the journals of the Lewis and Clark expedition, which blazed a trail for western colonists nearly 200 years ago. Fay feels for Meriwether Lewis, who was so distraught by the thought of developing the West that he committed suicide 3 years after the expedition ended. "He just couldn't handle the fact that the area west of the Mississippi was going to be completely colonized," Fay says. "It just drove him crazy, he loved that place so much."

–RICHARD STONE

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