

DIVINITY

D U K E U N I V E R S I T Y

Remembering & Renewal

Three Wesleyan Scholars

Join Faculty Ranks

The New Monasticism

In Durham's Walltown, a Covenant Community

Meeting of the Waters

Along the Amazon,
an Ecologist Follows his Call

FALL 2005



Meeting

of the



Photo by Alex Fattal '01

Six miles south of Manaus, Brazil, in the heart of the Amazon rainforest, the Rio Negro and the Rio Solimões come together to form the Rio Amazonas. From there, the Amazon begins its seaward journey, more than 4,000 miles long, reaching widths of up to 18 miles and depths of more than 200 feet.

It's at this first "meeting of the waters" that one of the river's most magical displays can be observed. Despite having merged, the two rivers remain, for a stretch of several miles, almost perfectly distinct, their colors—the opaque white of the Solimões and the dark, amber hue of the Negro—flowing side by side, touching but not blending.

In Manaus, near where the waters meet, Kyle Van Houtan is bringing together two typically divergent currents of contemporary scholarship. Science and faith, argues Van Houtan, who will graduate next spring with an interdisciplinary doctorate in ecology and theology, are not mutually incompatible. In fact, in his view and that of a growing number of scientists, environmental crises, including the loss of species, are fundamentally ethical issues.

Van Houtan's doctoral dissertation—"Narrating Species Extinction in the Ecological and Biblical Traditions"—represents an unusual interdisciplinary inquiry at Duke's Nicholas School of the Environment & Earth Sciences, and it has led him into uncharted terrain. Along the way he has worked with several Duke Divinity School faculty, including Stanley Hauerwas, Willie Jennings and Ellen Davis.

His trip to Brazil last summer provided an opportunity to wrap up details for his dissertation. But at the same time, he was there advocating environmental stewardship. He met with local pastors, missionaries, and fellow Christian researchers in Brazil, urging them to think of environmental stewardship as "a Christian cause with political implications, not the reverse."

And yet, he says, there are many people who don't see the environment "as something that involves them; something intimate. They don't see themselves as creatures. But we are biodiversity." For Christians in particular, he says, that's significant irony. "The Creation Story ends with humans being *made*—in a *garden*. The Bible actually talks about this. The language is not in the terms many conservationists would use. But it's there."

Take the first chapter of Colossians, he says: "'God created all things, both in heaven and earth, and he holds them all together.' That's all of this

Waters

By Patrick Adams

forest. He caused it to be, called it good, and asks us to steward it. As ordained by Christ, the church has a prophetic voice to transform people's character. One aspect of that transformation is through stewarding creation."

A student of Stuart Pimm, Doris Duke chair of conservation ecology in the Nicholas School, Van Houtan first came to Manaus several years ago to study birds.

His research focuses on species endemic to small fragments of the Amazon severely threatened by deforestation. Using mist nets to capture birds and then tracking their movement via satellite images, he identifies what characteristics and behaviors predispose certain birds to disappear more quickly than others. For the past four years he's contributed his findings to the Biological Dynamics of Forest Fragments Project, a joint venture of the Smithsonian Institution and the Brazilian federal government's National Institute for Amazonian Research (INPA). The project serves to monitor changes caused by disturbances in the rainforest and to make recommendations on how best to preserve it.

During his first visit, Van Houtan considered his role as strictly that of a scientist. His work consisted, almost entirely, of long days in the field. He wore knee-high boots to shield his legs from snakebites and spent the hot, humid nights in a hammock draped by a mosquito net to ward off malaria. The conditions were nothing new. At Stanford University, where Van Houtan earned a master's degree in biological sciences, he studied macaws and parrots—curious to biologists for eating clay—on a river in southeastern Peru. There, he endured four months in a place locals referred to as "El Inferno" (Hell).

"We were playing soccer one day and, laughing, they made me goalie," he recalls. "Guarding the goal, I didn't get to run around. By the time the game was over, I counted 246 insect bites ... below my knees." Far worse, Van Houtan ended his stint in Peru prematurely after noticing a persistent leg wound. Back in California, this was diagnosed as Leishmaniasis, a parasitic and potentially fatal disease spread by the bite of a sand fly. A month of chemotherapy later, he was back on his feet.

Van Houtan had always taken an interest in the natural world, in plants and animals and particularly in birds, which he could identify by the sound of their calls or their movement on a branch. ("Plumage should be the last thing you go by," he says). And it was as a young boy exploring his grandfather's farm in northwest Missouri that he learned "to appreciate creation as created by

God." He recalls how his grandfather would take him around on the tractor to fix fences or check on the herd, and how he'd point things out, like the way an alfalfa field smells just after it's mowed or how the walnuts by the river always grow the biggest.

"He had this appreciation, this deep respect for the land and the animals." And like any farmer, Van Houtan says, "he was very attuned to his dependence on God. If it doesn't rain, you know, you may not eat or you may not buy your children new clothes."

No less an influence on Van Houtan was his family's history of church leadership: his grandfather, the farmer, was also director of a missionary organization; his great-grandfather was a Methodist preacher. "We were mostly Episcopal, but my pop was a Marine, so we moved around a lot, and that meant we didn't always stick to the same denomination. My parents' rule was 'we go where they worship in spirit'."



Photos by Alex Fattal T'01

It wasn't until his junior year in college at the University of Virginia, however, that, as Van Houtan puts it, "something clicked."

"A close friend was date-raped, and to help her in the healing process, another friend of hers and I joined a sexual assault education group. I very soon noticed that I was unique there: Christian, politically conservative, white, male. And I thought, it's not OK that I'm the only one like myself here. Doesn't everyone have a mother or a sister or a female friend? And it was this sort of epiphany moment. I began to see this social disconnect in my research, too. I thought, 'Why am I, as a Christian, rare in my field?'"

"I came to believe more and more that the fundamental obstacle to stopping this crisis, to preventing the loss of biodiversity, isn't necessarily a lack of science. It's a lack of will. It's an ethical issue."

That doesn't mean, he adds, that he is any less a scientist. "I love the science. I'm hard-wired to think like a

scientist. I read books about birds before I go to bed. But the subjects aren't mutually exclusive," he says. "So why as professions should they be?"

After meeting with the director of New Tribes Missions, a non-denominational missionary group based in Manaus, Van Houtan came away inspired. His plan is to produce manuals on natural history and ecology for missionaries to use as they teach indigenous tribes.

"It's a means of offering tribal people something they value. They see themselves as part of nature—which we all are, of course. They just 'get it' better than we do," he says. "So this would help them understand what they see around them every day—why a sloth is green or why parrots will eat dirt, for example."

The medieval church spoke of the "two great books of God," Van Houtan adds. "The Bible and the creation. So this would be teaching them God's 'second great book.'"

Van Houtan's priority, however, is the Christian leaders themselves. This coming summer, he hopes to hold a "boot camp" of sorts for Christian pastors and missionaries in Manaus. He also wants to include evangelical leaders from the United States who, he says, 'don't get' biblical environmental stewardship."

"They may not agree with the environmental movement's talking points, but for the most part, these are smart, reasonable people who are open to conversation." He'd like to have them spend a few days at one of INPA's research sites in the tropical forest north of Manaus. "We'd spend about five days there, discussing natural history, biblical stewardship, and conservation science. I anticipate wonderful and interesting conversations," he says. "When everyone is eating the same rice and fish, being bitten by the same bugs, and all sleeping in hammocks, the pretense evaporates. People tend to be honest."

Where this will all end, Van Houtan can only guess. But one thing is certain: a dialogue will have been opened, and what have long been two opposing systems of belief will find a bit of common ground, rich in biodiversity, in the Amazon rainforest. In Van Houtan's view, if that biodiversity is to be saved, it's up to the Christian creatures among us. And if that's to happen, it seems, it's going to take more people like Van Houtan, more for whom the doctrinaire divisions are no obstacle—a blending of science and faith on a scale as mighty as the Amazon itself. ■

Patrick Adams is a freelance writer living in Bogotá, Colombia.



- ▲ "The fish are getting smaller," said one Christian missionary. Overfishing of the Amazon is a serious threat to its more than 3,000 freshwater species, an important source of food for indigenous peoples.
- ◀ Kyle Van Houtan walks the busy streets of Manaus, Brazil, to meet the pastor of a local Baptist church.
- ◀ Bird's eye view of the Amazon rainforest outside of Manaus, Brazil. Home to the greatest biological diversity on the planet, the Amazon contains more than a third of the world's animal species, 2,500 tree species, and almost a third of Latin America's 100,000 plant species. Since 1978, more than 530,000 square kilometers have been deforested, thousands of indigenous people displaced, and countless animals killed. "It's not a lack of science," says Kyle Van Houtan. "It's a lack of will. It's an ethical issue."