Comayagua and Cortland may be thousands of miles apart, but development sociology professor Max Pfeffer found an unexpected link between the two cities while conducting research on Central American forest conservation.

Pfeffer, who also serves as senior associate dean for the College of Agriculture and Life Sciences, made the discovery while in Honduras and Costa Rica working on ways to resolve tension between conservationists and subsistence farmers. His efforts helped the farmers stay on the land, while making changes to farming practices that preserved soils, water quality, and forest land.

Surprisingly, while Pfeffer gained a better understanding of Central American farmers, he also found answers to another project he was tackling: the integration of new immigrants into upstate New York.

He found that while Upstate communities were losing population, immigrants from Mexico and Central America were breathing new life into the region, not just by filling necessary jobs, but by re-opening churches and revitalizing communities. The key to a successful transition for these immigrants and their new neighbors was to develop strong social ties.

“As people are able to share information and help each other, there is a tangible benefit for everyone,” Pfeffer said.

Such experiences are central to the mission of CALS, whose land grant ethos now crosses national borders.

CALS’ international commitment is rooted in principles of participation, equality, and problem solving: To teach as well as learn, to help without dictating, to bridge the gap between ivory tower and the individual on the street.

“I think the land grant approach to the world is to take science—the best, cutting-edge science—and use it to help people in making informed decisions on their own,” Pfeffer said. “It aids the democratic approach, in the best sense of the word, because it helps people take control of their own lives.”

BORDERLESS HISTORY

Cornell has been extending the land grant mission beyond its original borders for almost a century.

In the 1920s, Cornell launched its first big international undertaking, when a CALS plant breeder and an economist took their expertise to China. The Cornell-Nanjing Crop Improvement Program not only developed high-yielding varieties of wheat and other crops, it prepared Chinese scientists to continue making advancements in plant breeding.

After World War II, Cornell’s strongest international ties were to the Philippines, according to Ronnie Coffman, Ph.D. ’71, director of international programs for CALS. The federal gov-
ernment matched U.S. universities with countries in need of development and re-building after the devastation of the war, and Cornell was paired with what is now the University of the Philippines at Los Baños. More than 100 professors from Cornell and Los Baños participated in the international exchange.

In the 1960s, Governor Nelson Rockefeller expanded New York and Cornell’s commitment to international development by adding nine new faculty lines for “International Professors.” There are now 73 professors with that title in departments from animal science to sociology, Coffman said.

Today, CALS’ strongest international tie is with South Asia. Grant-funded projects in that region include a partnership to help Indian universities revise their agriculture curricula and a project to develop eggplants with better insect resistance. However, with 523 active international exchange agreements between Cornell and foreign universities, governments, businesses, and non-governmental organizations, the university’s international collaborations span the globe, crossing borders and disciplines.

**BORDERLESS RESEARCH**

Natural resources professor Jim Lassoie and his Ph.D. student, Jamie Herring, came up with a creative way to cross the boundaries that separate conservationists in the field from students in classrooms. While professors struggle to teach students using fictitious case studies, real-world conservation professionals drown in oceans of work. In the best tradition of the land grant commitment, their idea was to build a bridge between teaching, research, and public benefit.

“The practitioners we work with tend to be isolated and very, very overworked. The opportunity to do scholarly internet research is just really difficult for them — many in developing countries don’t have high-speed internet access,” Lassoie said.

Their Conservation Bridge website, www.conservation-bridge.org, introduces real-world problems—from Ithaca, N.Y., to Yunnan, China—through short, high-quality videos, then provides context and questions for students to contemplate. Herring, who creates the videos, came to Cornell with a background in new media, video, and web site design, and he travels the globe, collecting stories that span ocean management in the Arctic to integrated conservation development in Africa.

While Lassoie and Herring certainly aren’t the first to employ real world challenges as classroom studies, their website provides a unique multi-directional flow of information. Conservation professionals provide information and pose research questions, students’ work is actually read by those responsible for solving problems, and policymakers and the YouTube-watching public have direct access to some solutions, aiding advocacy.

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**CONSERVATION BRIDGE CASE STUDY: HUMAN-WILDLIFE CONFLICTS IN BHUTAN**

The kingdom of Bhutan is one of the most isolated and least developed countries in the world. With strict legislation in place to protect the country’s unique biodiversity, the main threat to wildlife stems from human-wildlife conflict in villages that border prime habitat for Bhutan’s charismatic mega-fauna, including tigers, leopards, snow leopards, and elephants, which can attack livestock or damage crops. The loss of one animal can equate to a loss of over 80 percent of a family’s annual cash income, which can lead to retaliation against wildlife, breeding a conflict of interest between local communities and wildlife managers.

The previous scenario is just one of 15 case studies on the Conservation Bridge website and is typical of issues that involve coupled natural and human systems, according to natural resources professor Jim Lassoie.

“The core question posed by our Bhutanese collaborators is what should the government of Bhutan do to protect both wildlife biodiversity and rural livelihoods,” explained Lassoie. “Students in my class consider Bhutan’s current national strategy, design a scheme that would involve the use of payment for ecosystem services, and consider the role of democracy in garnering support for conservation as they prepare resources for park managers and scientists, including a proposal to the Bhutan government with a process for engaging local participation in nine key sites.”

More: periodicals.cals.cornell.edu/bridge
CALS alumni hold prominent positions in governments, agencies, and businesses around the world.

To name just a few:

- **Lee Teng-hui** (Ph.D. ’68 Agricultural Economics) served as president of Taiwan from 1988-2000.

- **Uma Lele** (M.S. ’63 Agricultural Economics; Ph.D. ’65 Economics and Statistics) has served as policy adviser in the World Bank’s Development Economics Department for the Africa, East Asia and Pacific regions.

- **Walter Vergara** (M.S. ’77 Food Science) currently serves as chief of the Sustainable Energy and Climate Change Unit for the Inter-American Development Bank.

- **Esteban Godilano** (Ph.D. ’98 Field Crop Science) is a senior technical adviser for the Department of Agriculture, using geospatial technology to predict climate change-related natural disasters.

- **Anila Dias Bandaranaike** (Ph.D. ’81 Statistics) has served as assistant governor of the Central Bank of Sri Lanka.

- **Robert Zeigler** (Ph.D. ’82 Plant Pathology) serves as the Director General of the International Rice Research Institute in the Philippines.

“I think students, especially at Cornell, really want to feel like their work is relevant and what they’re doing actually means something,” Herring said. “So in terms of motivation, I think it’s been key for students to contribute to somebody who’s working on a really important project.”

Lucia von Reusner ’12 has used Conservation Bridge in two courses, including her natural resources capstone course. She and three other students worked with The Nature Conservancy (TNC) in Skagit Valley, Washington, on balancing the conflicting needs of farmers and migratory birds.

“I thought it was very helpful to talk with practitioners throughout the semester for reality checks along the way and to direct us to variables we might not have thought of,” she said.

Eventually, Lassoie hopes Conservation Bridge will become organic and self-sustaining, connecting professors and professionals all over the world. It’s not just a pipe dream; the project has won three competitive grants so far, and dozens of other U.S.-based teachers are lining up to collaborate.

“This is my passion,” Lassoie said. “Over my career I’ve done extension, I’ve done administration, I’ve done research, and I’ve done teaching, and Conservation Bridge brings all of them together.”

**BORDERLESS LEADERS**

CALS not only strives to prepare its graduates to become good global citizens, it produces world leaders, said Steven Kyle, associate professor of economics and director of graduate studies for the International Agriculture and Rural Development (IARD) Master of Professional Studies program.

“Cornell is the premier agriculture school in the world. You’d be hard-pressed to go to a ministry of agriculture anywhere in the world and not find somebody who either went to Cornell or thinks very fondly of Cornell,” Kyle said.

John Edgar, M.S. ’08, is currently serving as Deputy Team Leader for the Sustainable Economic Growth Office of USAID in Malawi. His work focuses on two presidential initiatives: Feed the Future, the U.S. government’s Global Hunger and Food Security program, and the Global Climate Change Initiative.

“Malawi has a fast-growing population, limited use of modern agriculture inputs, huge amounts of environmental degradation, erosion, deforestation, along with changing weather patterns and lack of family planning. So we have to think about many different issues when we’re talking about achieving food security,” Edgar said.

“At Cornell, I was able to take classes in crop science, animal science, applied economics and management, nutrition—this helped me gain the broad experience I needed to succeed in a very complex environment in Africa.”

**BORDERLESS CLASSROOMS**

By the early 1900s, students from Canada, England, Russia, Brazil, and other countries were enrolled in CALS. Those first international students were pioneers in what has become a college- and university-wide commitment to teach students from around the globe. In the 2010-2011 school year, Cornell hosted 4,357 international students, and it also offers unique fellowship programs for international mid-career professionals to spend a year on campus. The Humphrey Fellows program, for example, has trained more than 300 professionals from Bangladesh to Bulgaria.

This exchange of people and ideas is a two way street, with nearly 200 CALS undergraduates spending at least one semester studying abroad. In fact, several majors require international internships as part of the curriculum, including the undergraduate IARD program. CALS began offering the IARD major ten years ago with just two or three students, but now there are almost 75 students in the program, said director Peter Hobbs, Ph.D. ’72, professor of crop and soil sciences and associate director of academic programs for CALS’ International Programs.
“There’s definitely a trend, not just in international agriculture, but in many different disciplines,” Hobbs noted. “These students want to do something for the world, want to make the world a better place.”

Students have recently traveled to places like Tanzania and Chiapas, Mexico, to work on projects such as water harvesting, labor relations, or setting up kitchen gardens. Hobbs said his primary concern isn’t the particular work they do; it’s that they immerse themselves in the culture for at least eight weeks.

“If they come from a culture like the United States, they don’t understand what it’s like to be in a place where there’s no internet, no telephone, and every day you have to go find food,” he said. “My goal is to get as many CALS students overseas as possible. You can only become a better global citizen if you understand what the issues are. You need to see, learn, interact, and understand what it’s like to be in a developing country.”

**BORDERLESS STUDENTS, LIMITLESS POTENTIAL**

That desire for broader understanding is what drew Henry Wells ’14 to the IARD program. He spent the summer in Chiapas helping an organization assess how farmers might organize into cooperatives. The trip to Mexico was the New York native’s first international experience.

“I see it as absolutely necessary to my career and life to gain perspective on my own country’s impact on the world, and how I should behave accordingly if I am to be a responsible citizen,” Wells said.

Plant breeding Ph.D. candidate Jessica Rutkoski works in the Durable Rust Resistance in Wheat project. She’s using prediction models based on genetic fingerprints to more quickly improve rust resistance, working with plants and people in Ithaca and Njoro, Kenya.

Rutkoski was drawn to Cornell because of its commitment to international work. “In the United States, you look at our agricultural system and it’s so advanced. Then you take a plane ride for a few hours and it’s like a different world,” she said. “There seem to be things that could make a big difference for people with just a little bit of collaborative effort.”

Marshall McCormick, a graduate student in the College of Architecture, Art, and Planning, worked this summer coordinating internships for all the Cornell students who went to Chiapas.

“Cornell has such a presence here and throughout the world—people here don’t care that it’s CALS or IARD, they know students as Cornell,” McCormick said. “It’s amazing. You’ll say, ‘I’m from Cornell,’ and the interaction they’ve had with previous students is so positive, everybody is surprisingly open and welcoming.”

Through a cultivated combination of international research, outreach, and educational programs, CALS’ legacy as the land grant to the world has created an environment with limitless opportunities for students, giving them critical knowledge that can only be obtained from experience.