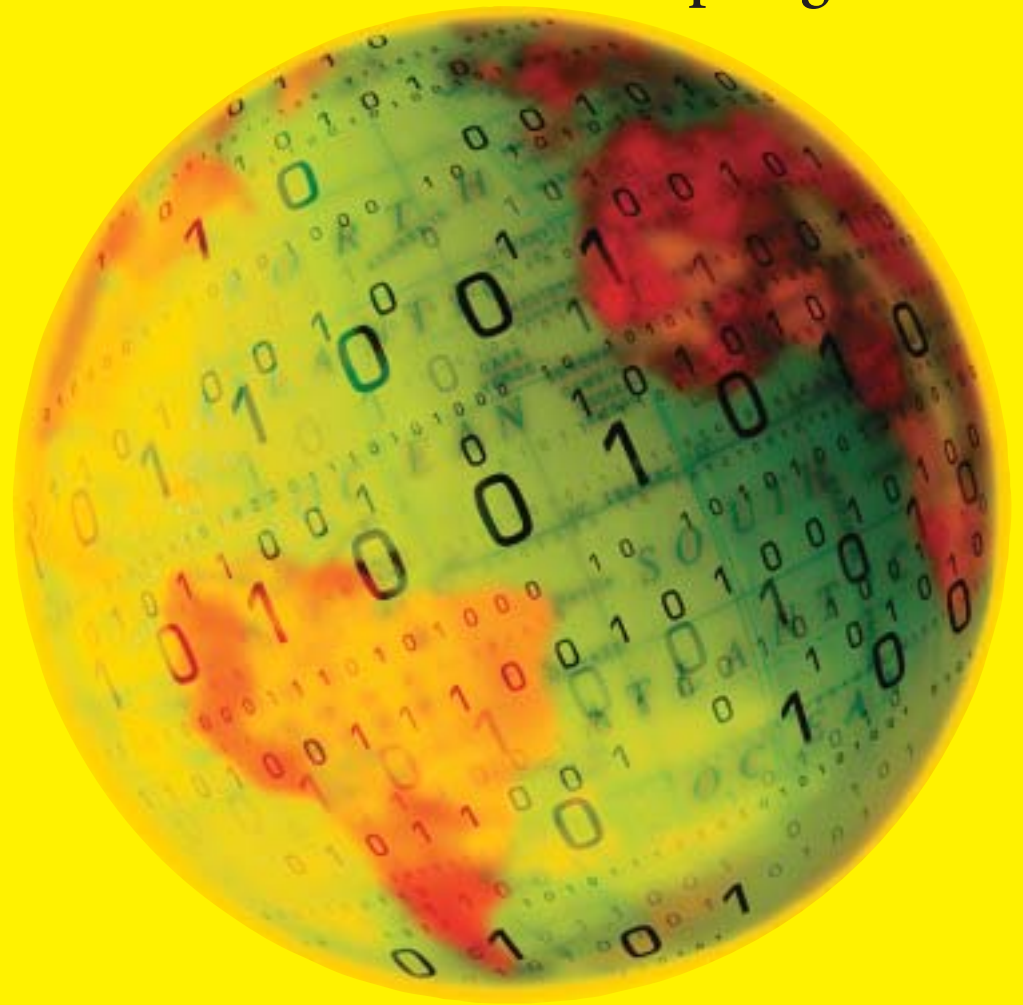


THE JOURNAL OF THE School of Forestry & Environmental Studies

# Environment Yale



Spring 2003



The Environmental Sustainability Index  
*A New Paradigm for Global Decision Making*

Inside: *Yalies Seeking the Middle Path in Bhutan, page 12*

# Still Teaching About the Forest But Trails are Now His Classroom

Although at first glance the 45 miles of immaculately groomed and well-traveled trails of the Nordic Center in Waterville Valley, N.H., seem an unlikely place to view nature as nature intended, they have turned out to be an excellent classroom for retired F&ES Forest Biology Professor William Smith. While giving snowshoe and cross-country ski tours with an eco-twist at the Nordic Center, Smith found opportunities to teach about the ecology and wildlife of the northern forest without leaving the trail.



1. William Smith, Clifton R. Musser Professor Emeritus of Forest Biology, points to evidence of Pileated Woodpeckers feasting on bark beetles and carpenter ants.
2. Balsam Fir, the preferred winter food for moose that can consume 45 pounds a day.
3. Red fox tracks crossing the Mad River.
4. Frost cracks caused by extreme temperature changes in the trunks of towering White Birches.

© Photos and text by Peter Vandermark

# Environment Yale



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### Environment: Yale

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# Commentary

## We Need to Participate in International Policy Meetings to Go Global



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Gordon Geballe

By **Gordon Geballe**

Associate Dean for Alumni and Student Affairs

**D**ean Speth and 23 graduate and undergraduate students, after attending the World Summit on Sustainable Development last summer in Johannesburg, South Africa, brought back to Yale insights into the latest thinking of the world community on development and the environment, and firsthand experiences about the logistics and mechanics of international, policy-setting events. My response was that we had found part of the definition of a global school of the environment. The School of Forestry & Environmental Studies needs to develop mechanisms to participate in international and regional environmental policy-making organizations and events.

Robert Stanton, immediate past director of the U.S. National Park Service and McCluskey Visiting Fellow in Conservation at F&ES last fall, offered an opportunity to test my hypothesis. Bob is ambassador to the Fifth World Parks Congress to be held this September in Durban, South Africa. Through Bob, research associate Lisbet Kugler '01 and I asked for and received permission from the steering committee of the congress to participate in the congress' preparatory phase.

What started as an idea last July is now a three-credit research seminar. This semester, Lisa Curran, associate professor of tropical resources and director of the Tropical Resources Institute, and I, with the assistance of Lisbet, are teaching "Protected Areas Issues and Practices: Challenges for the Fifth World Parks Congress." To assist the steering committee develop stronger links to the young professionals (under 30 years old by their definition) who are working in protected areas around the world, we are contacting via e-mail those who have expressed interest in attending the congress, soliciting ideas that we can include in a youth vision statement that will be presented at the congress. We have secured funding from the Center for the Study of Globalization at Yale to publish a Youth Durban Accord with Jane Coppock '91, assistant dean and editor of F&ES publications. (We hope to follow the example of the book, *Global Environmental Governance: Options & Opportunities*, edited by Daniel C. Esty, director of the Yale Center for Environmental Law and Policy, and Maria H. Ivanova, director of the Global Environmental Governance Project at F&ES, that was widely distributed at Johannesburg.) The youth accord will be a set of statements, submitted by individuals whom we have contacted, that we wish the congress to address as it plans for the future of parks and protected areas. The accord will provide an organized voice of young professionals who are dedicating their careers to park management.

Through the course we are providing research to some of the organizing workshops at the congress. Students are working on issues related to transboundary parks, governance and indigenous people. We also have developed close ties to Aban Kabraji, the World Conservation Union's (IUCN) regional director for Asia, who is visiting F&ES as the McCluskey

Fellow this spring. Aban is providing guidance so that our work is supportive and useful to the IUCN and the congress.

What will develop from these activities? Most interesting to me will be the effects at F&ES of our participation in the congress. We will have had close contact with the IUCN and other supporting NGOs that could lead to internships, research and jobs. F&ES will be known throughout the protected-areas community, which might lead to an increase in applications to our master's degree programs. Of special interest will be the contacts with African practitioners and scholars, a group which F&ES has traditionally not had great access to. We will interact with the NGOs, funders and government officials responsible for protected-areas management, many of whom might visit New Haven, bringing insights from around the world.

Moreover, students, faculty and staff will be attending the XII World Forestry Congress in Quebec City in September. This event, which occurs every six years under the auspices of the United Nations Food and Agriculture Organization, is the largest and most important international meeting of the world's forestry sector.

I will propose that F&ES regularly organize a course linking our faculty and students to the conferences and congresses that interest us. We could choose from Conferences of the Parties (COPs) for various international conventions, and from the long list of various United Nations meetings. One student suggested that we have a course that looks at both the World Economic Summit and the World Social Forum.

My new hypothesis is that we will be able to provide our students with an understanding of the mechanisms and importance of international policy meetings. Armed with this knowledge, our graduates will be better prepared to enter global leadership positions. We need leaders who can make these meetings productive since these forums are where international policy is made.

I am interested in the process of F&ES continuing to become a global school of the environment. Please send me comments on this project or other ideas you might have. You can e-mail me at [gordon.geballe@yale.edu](mailto:gordon.geballe@yale.edu). **EY**



# The Environmental Sustainability Index

## A New Paradigm for Global Decision Making

By Alan Bisbort

It would seem self-evident that, in order for nations to make the best decisions regarding their environmental policies, they must be guided by rigorously and reliably gathered data. Not only that, but these nations—and their governmental policy makers—must have this data regularly and consistently presented so that, year by year, telltale changes can be detected and addressed. Progress reports, if you will.

This is, of course, standard protocol for all successful businesses or fiscally healthy institutions. The question is, therefore, begged: Why are these same high standards and this studied rigor not brought to bear on the one aspect of governance and public stewardship that supersedes all others on the planet—the environment? Or, more to the point, why are environmental policy decisions based more often on ephemeral things like “expert” opinions, best guesses, emotion and rhetoric than on rock-solid numbers?

These questions have long concerned Daniel Esty, director of the Yale Center for Environmental Law and Policy and former deputy chief of staff at the U.S. Environmental Protection Agency. He has seen environmental policy from all sides, as a federal government policy expert, Yale professor and member of his town (Cheshire, Conn.) planning and zoning commission. He has also participated in the World Economic Forum, both as a member of the select Global Leaders for Tomorrow and as director of a task force on the environment. He has been a delegate at the 1992 Earth Summit in Rio de Janeiro and the 2002 World Summit on Sustainable Development in Johannesburg. In short, Esty has seen the big picture but he has also made the small, localized decisions.

At every turn, Esty noticed that, despite the veneer that decisions were being made with all the best intentions, they were too often made on piecemeal data sets, inaccurately assessed cost-benefit analyses or simply political ideology. And the above questions were always there, every step of the way, waiting to be answered.

Esty now has an answer to those questions, or

at least a novel first step toward supplying the answer. It is called the Environmental Sustainability Index (ESI), and it grew out of his work at the World Economic Forum in Davos, Switzerland, as well as a fruitful relationship with Columbia University’s Center for International Earth Science Information Network (CIESIN), which Esty calls “one of the very best environmental data sources in the world.”

The project was blessed from the outset, mostly due to the energy and diversity of the Global Leaders for Tomorrow Environment Task Force, representing eight countries and chaired by Kim Samuel-Johnson, head of the Samuel Family Foundation in Toronto.

“We wanted a group that wouldn’t have worked together otherwise,” said Samuel-Johnson. “We had Dan as the director and we had members of the private sector, like me, and a few people from nongovernmental organizations. We were multinational and multisectoral.”

Once the project was under way, Samuel-Johnson had what she called a “mini-epiphany.”

“When we started, I was not thinking of funding the project. I was just part of the Global

CONTINUED on page 4

# ESI: A New Paradigm for Global Decision Making

CONTINUED from page 3



Kim Samuel-Johnson of the Samuel Family Foundation in Toronto funded the ESI's development because "it needed to get done."

“It sounded  
revolutionary  
simply because no  
one was coming up  
with one single  
measure for  
environmental  
performance...”  
*Kim Samuel-Johnson*

Leaders for Tomorrow. The World Economic Forum gave us all sorts of support, all except financial, which is critical if you're going to do research. I realized it would be hard to get funding for the ESI then, because it was a prototype, a pilot, at that stage. Then I thought 'I can fund this.' It needed to get done. But only to get it started. Then it would be another test of its viability. If something is going to be sustainable, it can't have one funder in the incubation phase and not bring in others later on."

The need for the ESI was never in doubt for any member of the task force. "It sounded revolutionary simply because no one was coming up with one single measure for environmental performance, the way GDP measures economic performance. The ESI would be one measure for environmental performance," said Samuel-Johnson. "I come from the private sector and I could see that what was happening between policy makers in the government is the same sort of thing you go through in the private sector. People doing the environmental program don't have the same quantifiable measures or acceptable measures to show the value of a good environmental performance. I feel that even more today than when we started."

To create the pilot index in 1999—released at the 2000 World Economic Forum—Esty, the eight member countries of the Global Leaders for Tomorrow Environment Task Force, and his Yale colleagues examined data supplied by CIESIN from 56 countries. They identified 65 "core variables" on five main components. The countries were those for which CIESIN could obtain reliable data, the variables were specific numbers (population growth rate, carbon-dioxide emissions, groundwater resources per capita, etc.) and the components (see chart on page 7) were environmental systems (environmental stresses, human vulnerability, social capacity, global stewardship). The resultant 56-by-65 matrix offered what Esty called "something like a batting average or cumulative grade point average."

The structure of the index has since been streamlined to include the original 65 core variables and five components, built around 20 core indicators. And the original number of participating countries has risen to 142, with approximately 97 percent of the world's population represented.

Esty described the general philosophy behind the index, and the need for it, this way: "Whatever gets measured gets taken seriously. This is a lesson from business. Why do businesses have very complex accounting regimes that track various complex things? Because these are the things that matter and they want to measure them and see how they're doing over time. So the idea here is let's take that learning from the business world—what is important gets measured—and apply it to the environmental domain. The broader exercise here is to transform how we do environmental protection into something that is much more analytically rigorous and fact-based."

When the ESI was revealed as a pilot project at the 2000 World Economic Forum, it was, in a sense, Esty's first pitch for a new ballgame. The ESI challenged, and helped direct, world leaders to change the entire paradigm of how environmental policy decisions are, or should be, made. The purpose of the index is remarkably simple and yet heretofore elusive: "to measure the ability of economies to achieve environmentally sustainable development."

Since the success of the pilot index, the first official ESI was released in 2001, a revised ESI was done in 2002, and the next official ESI will be released at the 2004 World Economic Forum. With each index, the process has become more focused, more transparent, more "honed in," as Esty says. (The 2002 ESI and its accompanying report can be downloaded and examined at [www.yale.edu/envirocenter](http://www.yale.edu/envirocenter).)

By 2004, the ESI will be released along with a companion index called the Environmental Performance Index (EPI), the result of feedback from participating countries.

Esty touched on all of this in a recent interview. "The push toward data-driven environmental policy is getting traction," he said. "It's all about a revolution in how environmental decision making gets done and the benefits of having relevant data on which to base a decision at every level—from global-scale decision making to national policy to state, town and city scale, to corporate scale and even household scale."

For his work on the index, Esty received the American Bar Association's 2002 Award for

Distinguished Achievement in Environmental Law and Policy. That award is given to an individual or organization for “accomplishments in the field that lead to significant progress in environmental law and policy.”

All awards and accolades aside, Esty is most pleased with the fact that nations and international-policy wonks are taking the index seriously enough to rethink their policies and to offer feedback (see sidebar on Belgium at right).

Samuel-Johnson said, “Like a business, after three years, the index is viable. And the most interesting feedback I’m hearing from the business community is that if we can quantify environmental performance and establish a link between that and financial markets, then the business world will accept it and see the merit of it. The best validation comes from the bankers and financial community, which is different from traditional business implementing environmental programs.”

The information and numbers produced by the index, she said, have the potential to influence decisions on whether a certain country is worth an investment by a pension fund, or even if a business deal with a country is worth the risk. And some governments are already incorporating the index in their annual progress reports.

“The Canadian equivalent of the U.S. Roundtable is the Canadian Council of Chief Executives,” said Samuel-Johnson. “They’ve been using the ESI since it started as one of the inputs when they evaluate Canada’s competitiveness every year.”

She has noticed other, perhaps more subtle, instances of its influence.

“The fact that people paid attention to it, people with other indexes, the United Nations or the World Wildlife Fund, which has its own Living Planet Index, is a big thing. That they would get up in Davos and offer constructive criticism but also talk the way a competitor talks made me think that ‘you wouldn’t do this if you didn’t take it seriously.’ So I thought that was another mark of the ESI’s success.”

The need for something like the ESI is more profound than ever, Esty believes.

“My secret hope here is that this will help us get beyond the polarized debate that I think has broken down environmental progress,” he said.

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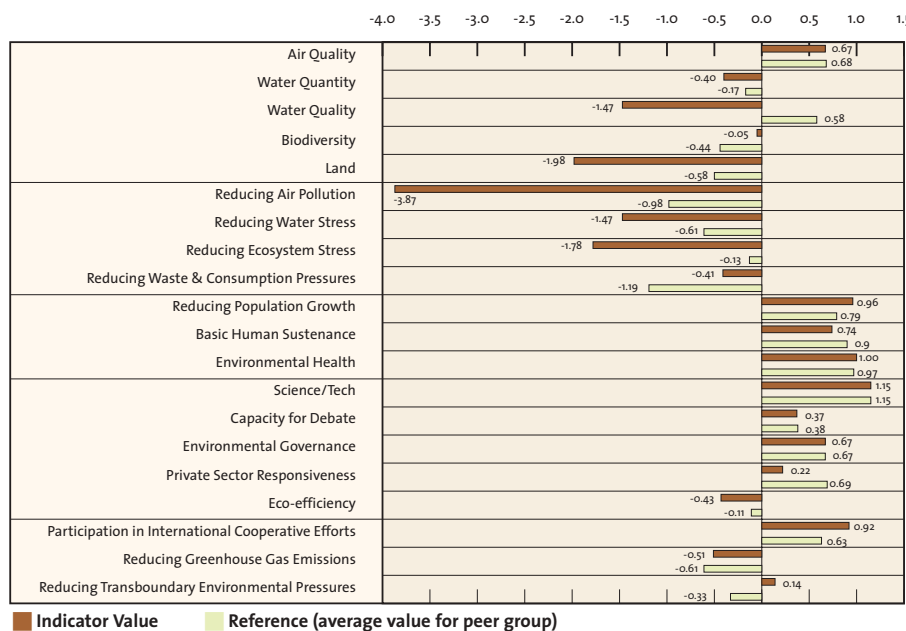
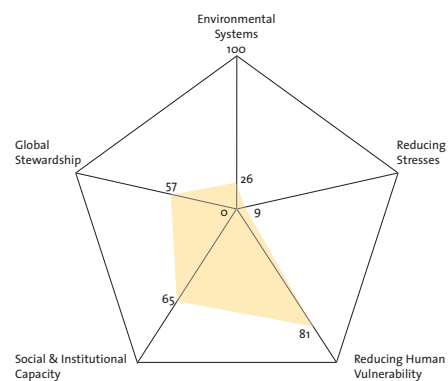
## Although Critical of Its Ranking, Belgium is Taking It Seriously

The Environmental Sustainability Index ranking of Belgium over the course of two official indices has proven to be a bone of contention, but not necessarily in a bad or unconstructive way. The Belgians have taken their environmental problems seriously, and yet their “performance”—based purely on the data—indicates that they are not doing well in comparison to their peer group, which includes many of their neighboring European countries. Dan Esty was invited this past February to a forum hosted by the Belgian government to discuss the results of the ESI.

He said, “They had a prime minister there who had to answer to parliament about these low rankings. A dozen major news stories had been written about the ESI and five or six were front-page stories. ... Belgians were outraged to find how bad they were doing. ... dirtier than the Netherlands, England or Germany. ... They said, ‘We think your analysis is wrong. We weren’t in 125th place.’ They then redid the numbers and came up with new numbers, explaining that their water quality data looked bad because they were sampling along the French border. And I said, ‘You still have to drink that water. ... You can pick other sampling points. We are just using data you yourself generated.’ So they redid the numbers with more up-to-date data from different sampling points. And the bottom line, was that Belgium still unofficially was in 75th place in the ESI rankings. I said, ‘You still have 74 countries doing better than you, and 55 of them are poorer countries, and this is when you used your best possible data.’ Now, of course, we can’t with any certainty pinpoint Belgium’s ‘true’ ranking with razor-sharp precision. But the ESI does clearly show that they’re not doing as well as they should be doing. ... We’re very transparent with the index. We publish all the data, every bit of it, and we lay it out for anyone to look at. Transparency is another measure of how good policy gets done. So more power to Belgium for taking it seriously enough to want a re-ranking!” **EY**

### Belgium 2002

|                               |          |
|-------------------------------|----------|
| ESI:                          | 39.1     |
| Ranking:                      | 125      |
| GDP/capita:                   | \$24,533 |
| Peer group ESI:               | 54.5     |
| Variable coverage (out of 68) | 64       |
| Missing variables imputed:    | 2        |





# ESI: A New Paradigm for Global Decision Making



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Daniel Esty, director of the Yale Center for Environmental Law and Policy

“Whatever gets measured gets taken seriously.”

*Daniel Esty*

CONTINUED from page 5

“My own view is that we’ve done very little on the environment in the past 10 years. Made very little progress. ... We did a first generation of environmental protection where we got at all the stuff that was so obvious we could see it plainly and where that expert judgment and emotion and rhetoric would get us where we needed to go. Now, we have hard choices to make, about how far to go, how far to push pollution controls, what policy is going to work best, what approach or technology to get us down the track the farthest. To do that, we need to be much more analytically rigorous and data-driven, and what I think this ESI shows is the promise of that kind of approach to environmental problem solving.”

The most elusive part of the index has proven to be a universally accepted definition of the term “sustainability.” This is not merely a semantic matter. For Marc Levy, at CIESIN, whose task is to amass the numbers on (to measure, as it were) environmental sustainability, it is the underlying challenge of the entire ESI project.

In the chapter Levy contributed to *Environmental Performance Measurement: The Global Report 2001-2002*, edited by Esty and Peter Cornelius (Oxford University Press), he writes, “For many decades, sustainability in an environmental context meant something quite simple: carrying capacity. ... Beginning in the 1980s [however], this connection between sustainability and carrying capacity weakened as the emergence of the sustainable development framework focused attention on the environment-development connection as the central pillar of sustainability.”

The genesis of the term “sustainable development” can be traced to the so-called Brundtland Report in 1987. Dr. Gro Harlem Brundtland, prime minister of Norway, was also chair of the U.N. Commission on the Environment and Development. Her commission used that term to suggest that environmental progress could not be made independently of economic indicators and forces. Their concept of sustainable development was, said Esty, “development that meets the needs of the present without compromising the ability of future generations to meet their own needs. ... That’s essentially the message: not sacrificing the longer term just to achieve shorter-term economic growth. It was an important lesson about the economic-environmental interface and the need to manage over time and not just look at a snapshot of the short term.”

For Levy, the changing definitions lead to a very pragmatic question: What are we trying to measure?

He, Esty and their colleagues have, therefore, embraced “multidimensionality” as the guiding feature of the index. They decided that environmental sustainability can be presented as a function of five phenomena: 1) the state of the environmental systems, such as air, soil, ecosystems and water; 2) the stresses on those systems; 3) the human vulnerability (basic health and food needs met); 4) the social and institutional capacity to cope with environmental challenges; and 5) the ability to respond to the demands of global stewardship. Environmental sustainability, then, requires high levels of performance on each of these five phenomena, which are the core “components” of the ESI (see ESI structure on next page).

The ESI has not met with universal praise, of course, nor was that expected or intended when the pilot version was first released. Since that time, Esty and Levy have taken into account the criticisms and suggestions and streamlined the index accordingly. Some of the initial criticism, summed up by Levy, was that it “assumes a particular set of weights ... that imply a set of priorities and values that may not be shared universally,” relies on limited data sources for some countries, suffers from gaps due to a “lack of comparable data on a number of high-priority issues” and lacks “time series” data (a critique addressed directly by the Environment Performance Index).

More recently, the 2002 Johannesburg Summit proved to be frustrating and sobering for many in the environmental policy world, Esty said.

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| COMPONENT   | INDICATOR  | VARIABLE   |
|---|--|--|
| Environmental Systems                                     | Air Quality  | Urban SO <sub>2</sub> concentration                                    |
|   |  | Urban NO <sub>2</sub> concentration                                    |
|   |  | Urban TSP concentration  |
|   | Water Quantity   | Internal renewable water per capita                                    |
|   |  | Per capita water inflow from other countries                           |
|   | Water Quality  | Dissolved oxygen concentration   |
|   |  | Phosphorus concentration   |
|   |  | Suspended solids   |
|   |  | Electrical conductivity  |
|   | Biodiversity   | Percentage of mammals threatened                                       |
|   |  | Percentage of breeding birds threatened                                |
|   | Land   | Percent of land area having very low anthropogenic impact              |
|   |  | Percent of land area having high anthropogenic impact                  |
| Reducing Stresses   | Reducing Air Pollution                                     | NO <sub>x</sub> emissions per populated land area                      |
|   |  | SO <sub>2</sub> emissions per populated land area                      |
|   |  | VOCs emissions per populated land area                                 |
|   |  | Coal consumption per populated land area                               |
|   |  | Vehicles per populated land area                                       |
|   | Reducing Water Stress                                      | Fertilizer consumption per hectare of arable land                      |
|   |  | Pesticide use per hectare of crop land                                 |
|   |  | Industrial organic pollutants per available fresh water                |
|   | Reducing Ecosystem Stresses                                | Percentage of country's territory under severe water stress            |
|   |  | Percentage change in forest cover 1990-2000                            |
|   | Reducing Waste & Consumption Pressures                     | Percentage of county with acidification exceedence                     |
|   |  | Ecological footprint per capita  |
|   | Reducing Population Growth                                 | Radioactive waste  |
|   |  | Total fertility rate   |
|   | Reducing Human Vulnerability                               | Basic Human Sustenance   |
| Proportion of undernourished in total population          |  |  |
| Environmental Health                                      |  | Percent of population with access to improved drinking-water supply    |
|   |  | Child death rate from respiratory diseases                             |
| Social and Institutional Capacity                         | Science and Technology                                     | Death rate from intestinal infectious diseases                         |
|   |  | Under-5 mortality rate   |
|   |  | Technology Achievement Index   |
|   | Capacity for Debate  | Technology Innovation Index  |
|   |  | Mean years of education  |
|   |  | IUCN member organizations per million population                       |
|   | Environmental Governance                                   | Civil & political liberties  |
|   |  | Democratic institutions  |
|   |  | Percentage of ESI variables in publicly available data sets            |
|   |  | WEF survey questions on environmental governance                       |
|   |  | Percentage of land area under protected status                         |
|   |  | Number of sectoral EIA guidelines                                      |
|   |  | FSC-accredited forest area as a percent of total forest area           |
|   | Control of corruption                                      |  |
|   | Private Sector Responsiveness                              | Price distortions (ratio of gasoline price to international average)   |
| Subsidies for energy or materials usage                   |  |  |
| Subsidies to the commercial fishing sector                |  |  |
| Number of ISO14001-certified companies per million \$ GDP |  |  |
| Dow Jones Sustainability Group Index                      |  |  |
| Eco-efficiency  | Average Innovest EcoValue rating of firms                  |  |
|   | World Business Council for Sustainable Development members |  |
|   | Private sector environmental innovation                    |  |
| Global Stewardship  | Participation in International Cooperative Efforts         | Energy efficiency (total energy consumption per unit GDP)              |
|   |  | Renewable energy production as a percent of total energy consumption   |
|   |  | Number of memberships in environmental intergovernmental organizations |
|   |  | Percentage of CITES reporting requirements met                         |
|   |  | Levels of participation in the Vienna Convention/Montreal Protocol     |
|   |  | Levels of participation in the Climate Change Convention               |
|   |  | Montreal Protocol multilateral fund participation                      |
|   | Global environmental facility participation                |  |
|   | Reducing Greenhouse Gas Emissions                          | Compliance with environmental agreements                               |
|   |  | Carbon lifestyle efficiency (CO <sub>2</sub> emissions per capita)     |
|   | Reducing Transboundary Environmental Pressures             | Carbon economic efficiency (CO <sub>2</sub> emissions per dollar GDP)  |
|   |  | CFC consumption (total times per capita)                               |
|   |  | SO <sub>2</sub> exports  |
| Total marine fish catch                                   |  |  |
|   |  | Seafood consumption per capita   |

**KEY:**  
tsp: total suspended particulates  
vocs: volatile organic compounds  
EIA: environmental impact assessment  
ISO14001- Internationally-certified certified: environmental management system  
IUCN: World Conservation Union  
CITES: Convention on International Trade in Endangered Species  
NO<sub>2</sub>: Nitrogen Dioxide  
SO<sub>2</sub>: Sulfur Dioxide  
CFC: chlorofluorocarbon  
WEF: World Economic Forum  
FSC: Forest Stewardship Council  
NO<sub>x</sub>: Nitrogen Oxide

# ESI: A New Paradigm for Global Decision Making

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“From a political point of view, that term ‘sustainable development’ seems to have been captured by those focused on poverty alleviation,” he said. “Johannesburg’s summit was more about poverty and much less about the environment than Rio 1992. ... So for those of us who care about environmental progress, Johannesburg seemed a step back from Rio. From the point of view of this project, there’s a separate problem with sustainable development. ... It combines too much together in a big jumble. Johannesburg covered so much ground because this huge social agenda was all on the table at the same time—poverty, human rights and the role of women. And when everything is on the table some things get crowded out, and the environment was one of those things. And you end up talking on a very generalized level.”

Partly because of this and the earlier critiques, the need for a companion to the ESI became increasingly clear to Esty, Levy, Samuel-Johnson and Cornelius, who is director of the Global Competitiveness Program at the World Economic Forum. Thus, the pilot version of the Environmental Performance Index was released in 2002.

Esty explains, “To measure sustainability, you have to look at three things all at once. First is the starting point of a country, which is a function of its natural resource endowments—what God put in that place. And what they’ve done with it historically. Second, you have to look at the current performance of a country: How are they managing current stresses, air pollution, water pollution, etc.? And one needs to analyze current performance separate from past performance. But third, and this is the trick with sustainability, there’s this future dimension, as well. If a country has good trends, will they be able to carry this forward over time? Or, if they have bad trends, are you going to be able to reverse them and stop the harm? From a policy standpoint, these questions are critically important.”

The thinking behind the EPI derives from those policy makers around the world who have told Esty and his colleagues that, “You’re judging us on a whole lot of stuff we can’t do anything about. What we’ve inherited is the

hand we were dealt and some of this stuff about the future is also beyond our control, it’s about the social institutions of the society. So, why don’t you judge us more narrowly on the current performance?”

That’s the basis behind the EPI, an outgrowth of the ESI. The possibilities of both indices, to be published jointly every other year, are as challenging as they are exciting.

“What we’re trying to do is to say let’s think about this more empirical approach to environmental problem solving. We are actually trying to go out and measure what’s going on; decide where your problems are, based on what the data show; and then check on your policy response on the same basis. Then we can see whose policy seems to be working and not based on guesses, but on actually measuring who’s reducing the harms. And what we’ve learned as we tried to move out in this empirical direction is that some of this stuff that we were tracking in our original index seemed beyond the scope of policy-making control and it frustrated policy makers that they were getting a grade based on things that they didn’t really have control over.”

Samuel-Johnson said, “One of the key points that Dan has really impressed upon me, no matter what direction this index goes, is that it’s not about where you start on the list, it’s about where you move on the list.”

Esty took a year’s sabbatical from Yale in 2002 to study at INSEAD, one of the leading global business schools located in Fontainebleau, France.

It was there that he had a bit of an epiphany. “I was sitting in the business school at INSEAD wondering why there was so much emphasis on accounting, accounting, accounting, and feeling like it was a waste of time to spend so much time on something that seemed so boring. Then I realized that this is what I am doing with these indices, and that it’s not boring at all. I realized that, essentially, what I was doing was an accounting for the environment.”

Therein lies the simple but exciting transformation in environmental policy, as Dan Esty sees it. **EY**



Marc Levy of CIESIN

## ESI’s Accuracy Relies on a Diligent Columbia Team

**Marc Levy is associate director for science applications at CIESIN in the Columbia University Earth Institute. He has worked closely with Dan Esty from the inception of the pilot ESI in 1999.**

*Q: One hundred and forty-two countries now participate in the index and that number has increased each year. How in heaven’s name do you get 142 sets of reliable data from 142 countries? Do you have people out in the field assembling this for you?*

*A: Fairly early on we adopted a core strategy of relying for data on sources that were already collecting information from multiple countries.*

Rather than us go individually to each country and say, ‘Give us your data on all these 60 variables ... which frankly would have been impossible, we went to major U.N. organizations, major think tanks and a handful of NGOs (nongovernmental organizations) that were doing this. We didn’t have to worry about playing favorites. We did have countries offer us their data, but then we’d have to worry about whether it was comparable to data from other countries and if we were making it easier for some countries to present themselves in a favorable light.

*Q: That’s an important aspect of the index’s reliability. On the Columbia University end of it, then, how many people sit in an office accumulating the data?*

*A: CIESIN is fundamentally a data center on human-environment interaction. We’ve been designated by the International Council on Science*

CONTINUED on page 27

## Index Bursts Myths About U.S. Performance

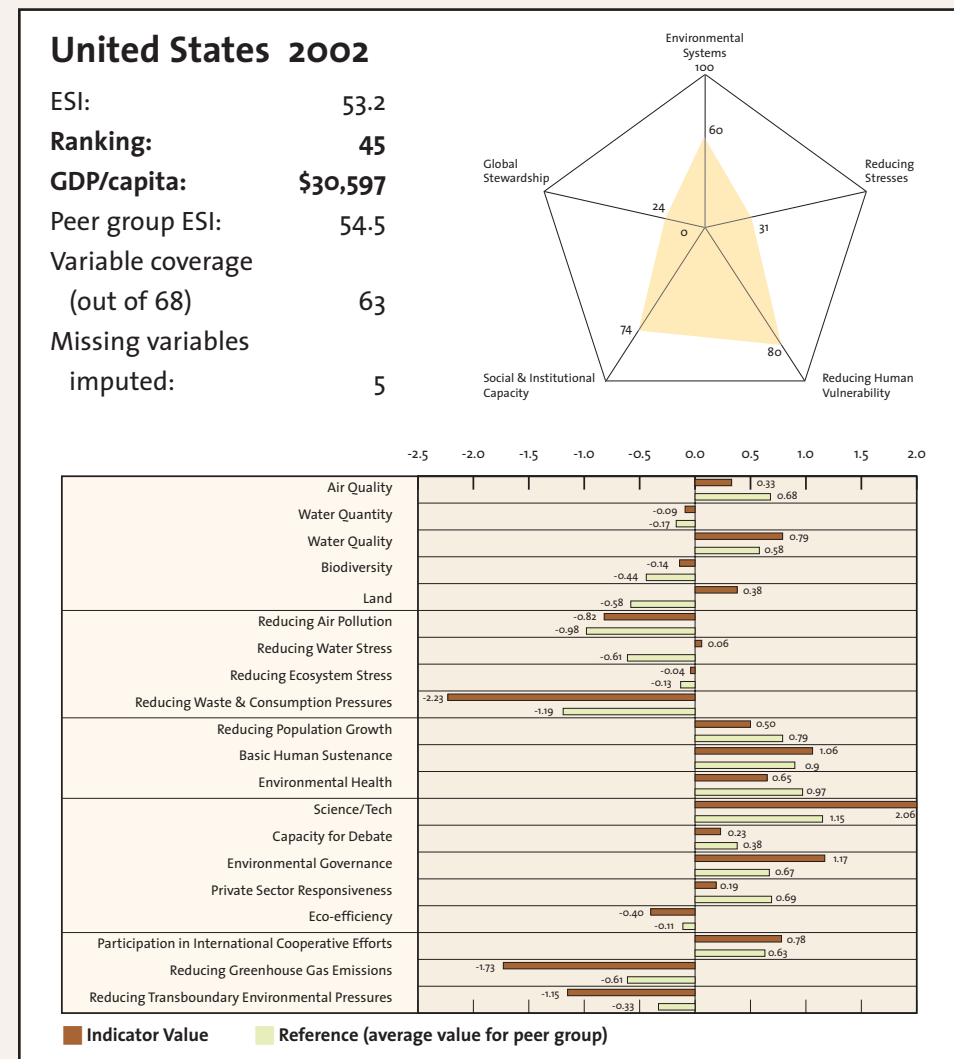
The first official ESI ranked the United States 11th in the world, but the second ESI, released in 2002, put the United States in 45th place. The shift is attributable to the addition of nearly 100 countries to the analysis, a refined methodology and the addition of new data. Esty cautions, “This does not mean that the United States’ performance has precipitously fallen. The two analyses are based on almost the same data. ... but we have much more confidence that the ranking and structure of the 2002 index is a better and more serious approach.”

Regardless of its ranking, the United States has pressing environmental issues, and they show up most graphically in the 2002 Country Profile. Among the findings: The United States is below its peer group’s average in air quality, reducing waste and consumption pressure, reducing population growth, environmental health, capacity for debate, private sector responsiveness, eco-efficiency, reducing greenhouse gas emissions and reducing transboundary environmental pressures. The United States is above its peer group’s average in water quality, biodiversity, land protection, reducing air pollution, reducing water stress, basic human sustenance, science and technology, environmental governance and participation in international cooperative efforts.

Again, this points out what Esty said after the initial pilot index results were released: “You would think that if there was a direct correlation between economic wealth and environmental health, the United States would be first in both. So there is a significant percentage of people in this

country whose reaction is ‘The United States is doing so poorly, what’s going on?’ But there’s a surprised reaction, particularly from Europeans who perceive the United States as dragging its feet on critical issues of climate change, that the United States was ranked as high as it is. The answer is that both myths get burst. That the United States is riding high and everything is fine and we’re doing perfectly is, of course, not true, and this puts numbers to that reality. But, similarly, the perception of some Europeans and environmental groups that the United States is abominable is also not true.”

Esty offers a more recent counter-example: “Russia ranks much higher than anyone would have ever guessed on the ESI (73rd), because the scale and size of the country masks huge problems. They’ve ruined a huge amount of their water supply and yet they have more fresh water than any country in the world. They have a lot of fresh water in Siberia. But that doesn’t mean they don’t have terrible problems. They’ve polluted every river in western



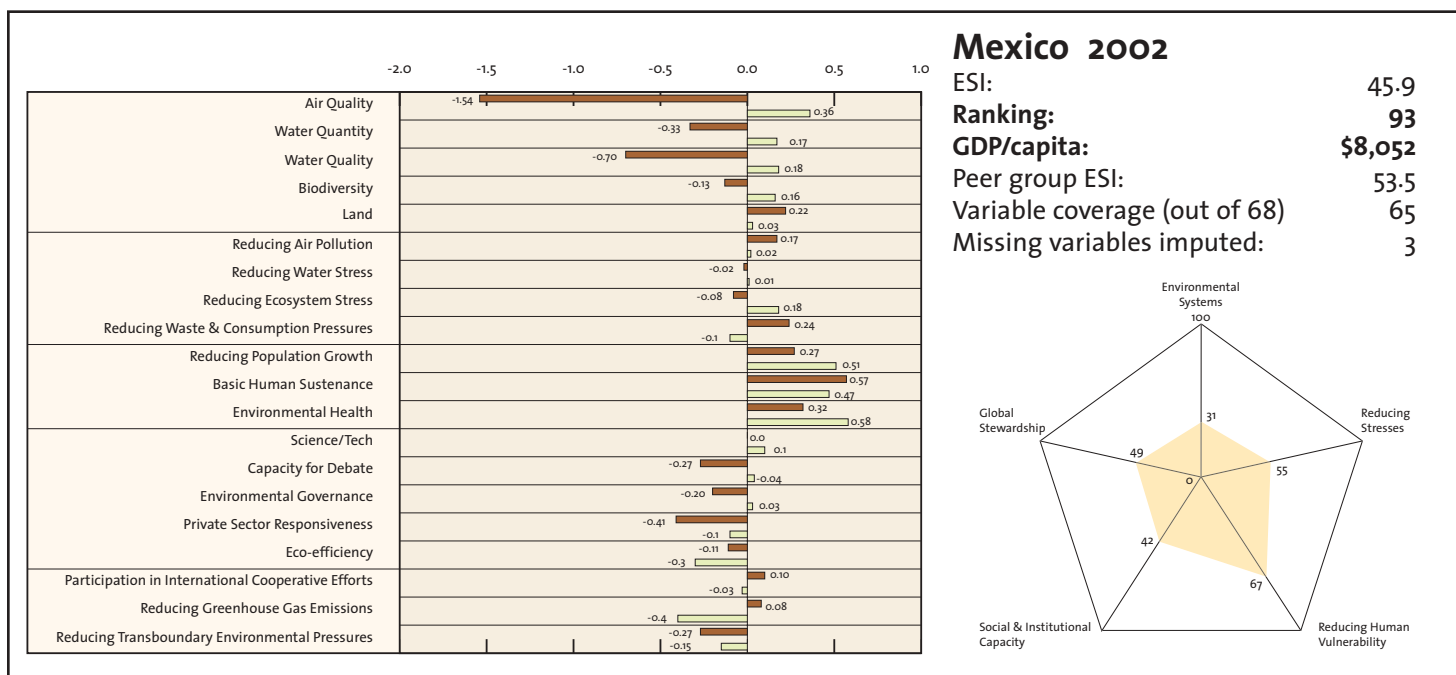
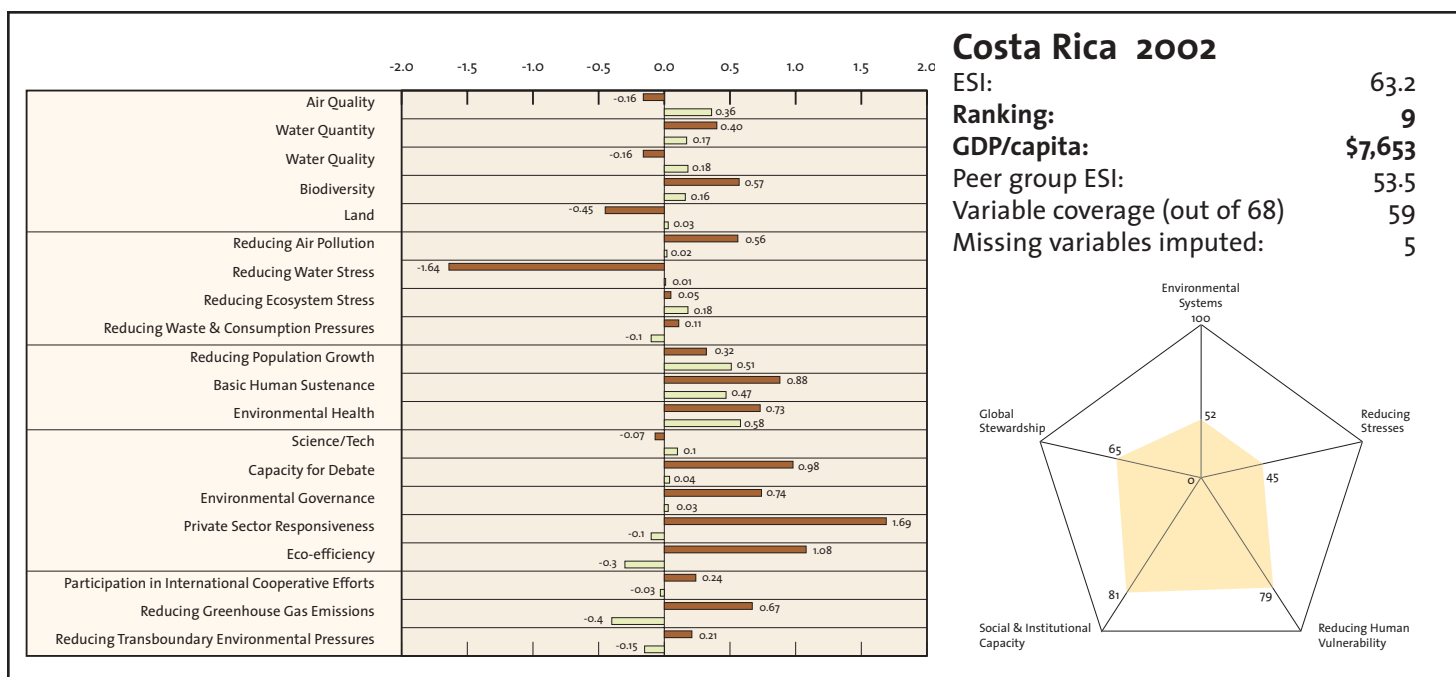
Russia that feeds the people, and this is a serious issue. But they aren’t running out of drinking water. It’s pollution vs. land area, the very opposite of the case in a place like Singapore. Russia has a huge endowment that they don’t manage well at all.” **EY**



## Wealth Not Sole Determinant of a Country's ESI Ranking

The 2002 Environmental Sustainability Index offers a straight ranking of all 142 countries for which data were available, but it also offers a more detailed breakdown. That is, countries are placed in “peer groups” based on their GDP/capita, and in that way their policy makers can better gauge how they are doing based on comparisons with nations in the same income bracket, so to speak. Esty said, “Getting data on relevant peer groups is important. ... What we have come to learn is that people, and nations, are driven by comparisons with those who are like them and with whom they think they should compete.”

For example, comparing a lower-ranked and economically-less-well-off nation such as Mexico with the wealthy and top-ranked Finland is not nearly as relevant to Mexicans (or Finns) as comparing Mexico with a country to which it bears some economic similarities. Costa Rica is close enough to Mexico in GDP/capita (\$7,653 and \$8,052, respectively) to be placed in its peer group (the 4th-highest GDP quintile). The environmental issues of concern in Mexico, then, might be expected to fall into similar patterns as those faced by Costa Rica. And yet, when one compares the country profiles for Mexico and Costa Rica, one can immediately see that Mexico is not doing nearly as well as Costa Rica with its environmental issues. Nearly every one of the 20 indicators (listed in country profiles below) is lower for Mexico than for Costa Rica. Mexico



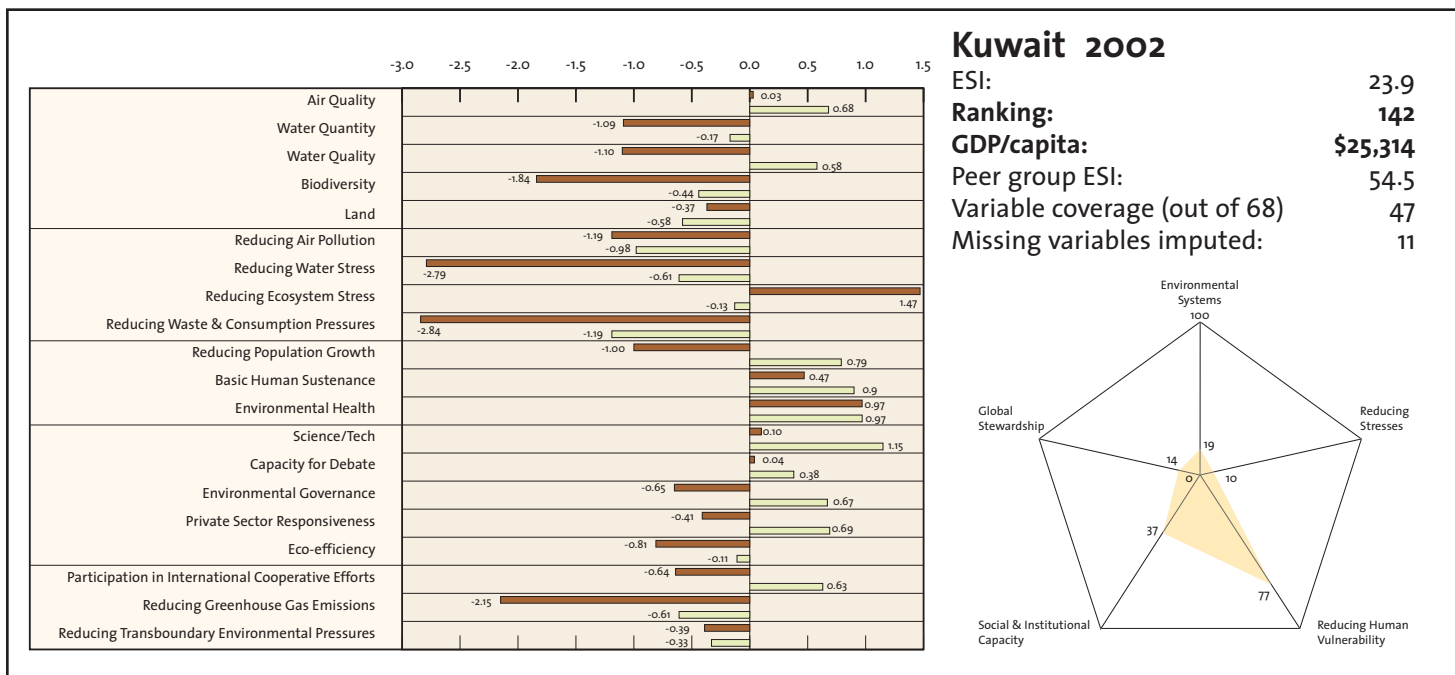
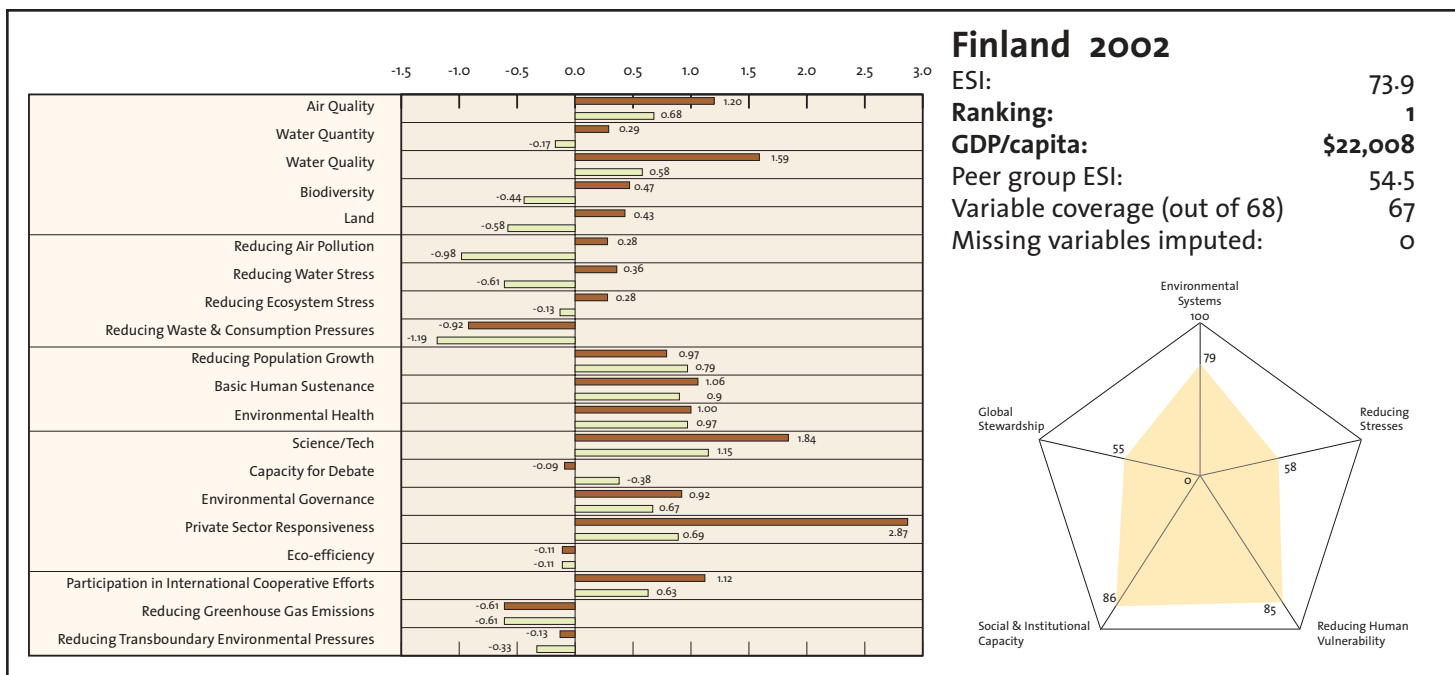
came out ahead of Costa Rica only on land impacts, reducing water stress and reducing waste and consumption pressures (and was virtually identical on science/ technology). Mexico was also below the average value for its peer group on most indicators. Costa Rica, on the other hand, is exceeding the average performance of this same peer group on nearly every indicator, and most of its overall values are on the positive side of the ledger. Costa Rica is ranked ninth on the 2002 ESI, while Mexico is ranked 93rd, virtually tied with Cameroon.

Dan Esty said, "This shows that, yes, the economic starting point is a huge factor, but some poor nations outperform what they think they should do because they're taking environmental issues seriously and managing them well. If you asked environmental experts to name a country that is thoughtful about the environment, Costa Rica would come up on a lot of lists. They have nurtured eco-tourism, they kicked out foreign investments that were dirty, they made a play for clean investments

and they got a big Intel factory and turned down oil refineries."

On the other side of the coin, literally, are Finland and Kuwait, who have similar GDPs/capita (\$22,008 and \$25,314, respectively) and are thus in the same peer group. Comparing their country profiles also reveals some startling truths. For one, Finland is first and Kuwait is 142nd, or dead last, in the straight ESI rankings. There are, of course, great differences in the natural resources and ecosystems of these nations. But this comparison breaks down the myth that the wealthier nations are guaranteed to do well on environmental issues. Indeed, three of the bottom five in the ESI rankings are rich nations: Kuwait, United Arab Emirates and Saudi Arabia, all arid, but badly polluted, oil-producing nations.

Esty said, "What it shows is that your monetary position or economic standing is a factor but not the only factor—in both directions. A relatively poor country can do well if it focuses on the environment, and a rich country can do poorly if it doesn't." **EY**



■ Indicator Value ■ Reference (average value for peer group)



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# Seeking the Middle Path

## Deeply Buddhist, Deeply Bhutanese and Often Old Blues, Environmental Leaders Balance Conservation and Development

By Richard Conniff

The outsider lucky enough to visit Bhutan wakes repeatedly to scenes that are like visions: Your eye drifts across a mountaintop *dzong*, an administrative and religious center, then catches on a young monk dancing on the roof, six stories high, his red robe weaving and fluttering in the wind, the sunlight glinting off the golden finial behind him. You stagger out of your tent at 15,000 feet and watch the dawn catch on one mountain peak after another, each peak tearing a hole in the fabric of the sky, each hole spilling a flood of light down into another forested valley. Your eye drops to the valley at your feet, where the clouds form themselves into a river and tumble over a precipice like a waterfall. The frozen rhododendron leaves start to drip. A swarm of insects gathers. A yak herder calls out to his animals somewhere down below.

At the top of the world, day has begun, and it all feels a little unreal. Because this is a remote Himalayan kingdom, a little bigger than Switzerland, not quite as big as West Virginia, visitors often arrive bearing naive ideas about Shangri-La, or even perhaps “The King and I.” In its own language, Bhutan is *Druk Yul*, “the Land of the Thunder Dragon.” King Jigme Singye Wangchuck has established an official policy of “gross national happiness,” a phrase that invariably causes visitors to smile.

It can take a while to recognize that the men dressed in traditional *gho*—the colorful belted robe, often worn with knee socks and leather shoes—and the women in their ankle-length *kira* are talking perfectly modern sense. Having

witnessed the environmental devastation in other countries, Bhutan has set itself on what it calls “the middle path” toward happiness. It’s a perilous balancing act aimed at achieving economic and social development, but without stripping away the forests that still cover 72 percent of the country, and without having its culture trampled underfoot by well-meaning tourists.

The people devising this middle path are deeply Buddhist and deeply Bhutanese. Surprisingly often, they are also Old Blues. Over the past decade, 11 Bhutanese students have earned advanced degrees from the Yale School of Forestry & Environmental Studies. The roster of influential alumni now includes the director of

Bhutan’s national park service (Sangay Wangchuk ’93), the head of species conservation (Deki Yonten ’01), the chief executive of the Bhutan Trust Fund for Environmental Conservation (Tobgay S. Namgyal ’98) and the scientist charged with creating Bhutan’s first museum of natural history (Tashi Wangchuk ’99). It is in fact difficult to accomplish any environmental project in Bhutan without the involvement of Yale F&ES graduates. When the government recently commissioned a *Field Guide to the Mammals of Bhutan*, for instance, four of the seven authors were Yalies.

For a country the size of Bhutan, with just 800,000 people, “it’s obviously a pretty hefty load

Above: Phobjika Valley, Black Mountains, in central Bhutan. The view is of the approach to Gantay Gompa, one of the most sacred and ancient monasteries in central Bhutan. Gantay Gompa is famous for being the winter roosting grounds of the black-necked crane, considered by the Bhutanese to be *bodhisattva*—the enlightened beings who, rather than going to nirvana, elect to return to *samara*—our world of pain—to help others achieve enlightenment.



“It just seemed a natural to try to build a bridge between Yale and Bhutan.”

*Bruce Bunting*

of Yale graduates,” says Dean Gus Speth. “They joke about having a Yale Mafia. But does it help the country? Or is it harmful?” It’s an important question for Bhutan, not least because a year at Yale now costs more than 50 times the national per capita income. (By way of perspective, this is like the United States sending people to a school costing almost \$2 million a year.) Outside funding is scarce, and when Bhutan allocates its limited education budget, a university in the Philippines, say, can look like the better choice, at least in the short run. Prime Minister Lyonpo Kinzang Dorji describes “an active collaboration with Yale” as critical for his country’s future. But this year, for the first time in a decade, Bhutan sent no one to Yale.

It’s also a timely question for Yale, because the large alumni contingent in Bhutan is partly a product of a long-standing F&ES commitment to become what Speth calls the “first global school of the environment.” About a third of the student body now comes from abroad, up from a quarter when Speth took over as dean three years ago. “My agenda is to show that this school can train people from countries as different as Bhutan is from the United States, and as far away,” says Speth, “and have them go back to their developing country homes and take positions of real responsibility. It’s not a brain drain.”

Speth’s question about whether such a concentrated dose of Yale graduates is good for a country also resonates on a larger stage: Many conservationists hope Bhutan’s middle path will serve as a model for other developing nations. (The Bhutan Trust Fund for Environmental Conservation has already become the blueprint for such funds in 40 other countries.) The middle path also incidentally reflects back on how we live in our world. In a recent paper about gross national happiness, or GNH, for instance, two Bhutanese environmental leaders—Tobgay Namgyal and Tashi Wangchuk—noted pointedly that GDP, or gross domestic product, the standard Western measure of social progress, “treats crime, divorce and natural disasters as economic gain” and considers “biodiversity depletion as net income.” Reading this, a visitor is suddenly less inclined to smile at the concept of gross national happiness. It comes to mind that another country once also put “pursuit of happiness” on its national agenda. We just never bothered to think too hard about what it means.

The Bhutanese connection got started because a World Wildlife Fund (WWF) delegation, including Ed Bass, B.S. ’67, Art.A. ’72, was working in the Himalayas in the late 1980s just as Bhutan was broadening its connection to the outside world. The Bhutanese government was looking for someone to help direct the training of conservation staff. WWF suggested William Burch of the F&ES faculty, whose work with forestry education in Nepal made him the logical candidate. “It just seemed a natural to try to build a bridge between Yale and Bhutan,” says WWF Vice President Bruce Bunting.

Burch, the Frederick C. Hixon Professor of Natural Resource Management, is a boyish figure, tall and thin, a swath of gray hair falling across his forehead, his blue jeans belted with his father’s Zuni buckle. When he says he’s 69 years old, he adds, “And I’m not retiring.” Burch specializes in strengthening the role that communities play in managing the natural resources around them, and Bhutan seemed like a perfect opportunity. “You’re at the top of the world, and all the water flows downhill.” Establishing a core of trained scientists with a shared set of values, particularly an orientation to the needs of the local community, looked to him like “the last hope in that region for any widespread conservation.”

It also looked like a chance to help avoid the mistakes of Nepal, particularly the ones imposed from outside. In the past when people from developing countries trained as Western scientists, says Burch, they often came to regard customs back home as “out of date, or inappropriate, or rural, or stupid, because the way we do a lot of our scientific teaching is arrogant.” So Burch had evolved his own middle path, emphasizing what scientists can do for local communities and also what local knowledge can do for science.

Burch and Bruce Bunting both interviewed all 11 eventual F&ES students, then worked with the Yale admissions department to evaluate applicants from schools no one had ever heard of. They also lobbied international agencies to join with the WWF in providing the scholarship money. Having

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gotten them to Yale, Burch also sometimes intervened to help the Bhutanese students make the radical adjustment to what one of them now fondly remembers as “life amongst the talkative chillips” of Sage Hall. (“Chillip,” the Bhutanese term for “foreigners with yellow hair,” is undoubtedly too narrow a description for the F&ES student body. But talkative? Surely.)

Burch’s Bhutanese protégés (in addition to Sangay Wangchuk, Tobgay Namgyal, Tashi Wangchuk and Deki Yonten) now include Tshering Gyaltshen ’93, a lecturer in environmental studies at Sherubtse College; Jigme Palden ’96, a lecturer at the Natural Resources Training Institute; Chado Tshering ’97, park manager at Bumdeling Wildlife Sanctuary; Karma Loday Rapten ’98, head of the research monitoring and statistics section at the National Environment Commission; Kuenzang Chhimi ’01, a program officer at the Sustainable Development Secretariat; Dechen Dorji ’01, a regional manager in the Department of Forestry Services; and Karma Yangzom ’01, a consultant to international agencies on rural development schemes.

## Bhutanese Head of State Encourages F&ES Affiliation

**A**s chair of Bhutan’s Council of Ministers, Lyonpo Kinzang Dorji is the equivalent of prime minister. He’s also minister of agriculture and chair of the Bhutan Trust Fund for Environmental Conservation, and has worked closely with many of the F&ES graduates. He writes:

“Through the wisdom of past generations, Bhutan today has one of the most pristine natural environments. Coincidentally, our modern environmental programs are almost synonymous with Bhutan’s Yale graduates. Yale has contributed immensely to Bhutan through its outstanding education of competent Bhutanese scientists and managers. Today, Yale graduates oversee our conservation programs and manage a quarter of the country protected as national parks. Other sectors, such as nongovernment institutions, the important hydropower generation industry, our own premiere Sherubtse College, and the National Environment Commission, our apex environmental agency, have also benefited from graduate training at Yale.

“In keeping with His Majesty King Jigme Singye Wangchuck’s advice to every school child that Bhutan’s destiny lies in our own hands, it is highly appropriate that an upcoming generation of Bhutanese leadership has a strong affiliation to Yale, one of the most distinguished global centers of excellence. The rapid advent of globalization and our own decentralization of governance require the best-trained managers to address complex dynamics and ensure that a sustainable future for our people, one based fundamentally on the health of our environment. The past generosity of our development partners enabled Bhutanese to attend Yale on government scholarships. However, with fewer resources now available for private school tuition, we risk losing such high-value education. Thus, it is critical that we develop an active collaboration with Yale, to ensure Bhutan continues to pioneer a successful blend of culture and environment with state-of-the-art technology for the common good.”

Back in Bhutan, the middle path, like the roads that wind through the Himalayas, can take unusual twists and turns. For example, Tashi Wangchuk is a molecular biologist, specializing in the systematics of golden langur monkeys. He recently discovered a new subspecies, and has also sorted out a reversal in sex roles between low- and high-elevation populations. When he returned from Yale, Wangchuk took the job of creating a research-oriented natural history museum in Thimphu, the capital city.

The job presented several potential conflicts between modern science and Bhutanese culture: Himalayan Buddhism frowns on the needless killing of animals, much less displaying stuffed specimens in a museum. The culture is also rich in religious beliefs about places and species. For instance, legend says that the nation’s founding father arrived by air 1,200 years ago, flying in on the back of a tigress—the sort of lore a Western-trained scientist might once have dismissed. But Wangchuk devised ways to combine biology and culture: “Yale gave me this opportunity to transcend boundaries which I enjoyed thoroughly. My job, like all conservation jobs in Bhutan, requires this interdisciplinary focus—being able to interpret and use science within the cultural context of our unique country.”

Wangchuk’s solution to the specimen question is a compromise: Where necessary, the museum will include preserved animals—for instance, the holotypes of new species. But it will rely more heavily on DNA samples from scat and hair, along with “virtual specimens”—that is, detailed anatomical images made available online. As it happens, this path fits both with Buddhism and also with a trend toward digitized taxonomy at major natural history museums worldwide. The museum will also use virtual displays: “We will be able to create a 3D image with the roar of a tiger and a tiger’s pungent scent to provide a more realistic experience.” The display will also include the flying tigress, in part because such cultural beliefs encourage people to protect tigers as sacred animals.

On grittier economic questions of development vs. conservation, the answers are seldom so neat. Sangay Wangchuk’s first job after Yale was to use his new training as the scientific basis for figuring out



The summit of Rodung-la pass, which according to local folklore is a place frequented by the *migyur*, the Bhutanese name for the Abominable Snowman. A Bhutanese saying goes: “Rodung-la makes all men equal”—no matter how wealthy, everyone has to dismount from their horse and walk.

Seeking an  
alternative path,  
Sangay Wangchuk  
thought back to the  
“community-based  
approach” he’d  
learned at Yale.

which areas of the country to protect. (Sangay and Tashi Wangchuk are unrelated. Bhutan doesn’t follow the Western system of family names, and when monks name newborns, Wangchuk is a common choice.) Sangay Wangchuk’s second job was to take the protected areas from paper to reality. He now runs a system of nine national parks or sanctuaries, protecting 26 percent of the country, plus another 9 percent in corridors between parks. (Bhutan also has an overall goal of keeping more than 60 percent of its land in forest. By contrast, just 29 percent of the land in Nepal is still forested.)

The scale of Wangchuk’s job is daunting: Six of the parks are actually operational. At the largest, Jigme Dorji, a handful of staffers administer an area as big as Grand Canyon National Park (but far more convoluted and inaccessible). The park is also home to 6,000 people, mostly farmers and yak herders whose families have always lived there. It’s exactly the sort of situation Wangchuk often heard about in classes at Yale, where “locking up the land” is impossible and the best strategy is to give local people a stake in sustainable land use.

But this advice, and Bhutan’s official policy of improving the lives of park residents while simultaneously protecting biological resources, can also often seem impossible. In one area called Lunana, at an elevation of 12,000 feet, the community of yak-herding families complained that they were spending literally half their lives backpacking cheese and other products down to town and hauling grains back up, an eight-day trek each way. The park responded by using rock drills and explosives to create a mule path. A horse or mule can now deliver a family’s entire annual supply of grains in a single trip, an almost miraculous leap in the Lunana share of gross national happiness. But the pack animals increase grazing pressure in the uplands of the park. And the new path makes it easier to smuggle out illegal products like *Cordyceps* fungus, prized in China as a medicinal.

In the past, says Sangay Wangchuk, poachers got hauled down to Thimphu to be fined and threatened, with little long-term effect. Seeking an alternative path, he thought back to the “community-based approach” he’d learned at Yale. It helped that he was working with colleagues like Deki Yonten and Chado Tshering who’d come through the same training. Instead of fines, says Wangchuk, “we seized some *Cordyceps* from some of the herders and then started talking to them about why they do it and where they sell it and whether they could do it more sustainably.” The herders, it turned out, were getting only one-tenth of the market price in China. Likewise, people illegally harvesting matsutake mushrooms, which grow in blue pine forests at lower elevations, were not getting anything close to the Japanese market price of \$2,000 a kilogram. The effort to get acquainted and build trust with the poachers resulted, according to Wangchuk, in an agreement to refrain from poaching for two years while the government develops a harvesting program that’s



# Seeking the Middle Path



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William Burch, the Frederick C. Hixon Professor of Natural Resource Management, helped train conservation staff in Bhutan.

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sustainable—and possibly also more lucrative for local residents. Without such a program, says Wangchuk, no traditional form of enforcement could keep world market pressures from demolishing the resource.

But this is still too neat to suggest just how potholed and convoluted the middle path can be. “What I learned at Yale is that basically it’s not that simple,” says Deki Yonten. “Implementing something requires a lot of thought. I can’t just jump right into it. I need to spend a lot of time in the planning stages.” As head of species conservation, Yonten oversees familiar-sounding projects like the Tiger Conservation Fund, which tries to mitigate hostility toward parks and other protected areas by compensating farmers who lose livestock to tigers. But she’s currently also leading a pilot project that might seem anathema on traditional religious and environmental grounds—distributing snares to farmers in two small test areas where the wild boar population is booming.

The typical family in Bhutan has a farm of just three or four acres to feed two parents, three kids and two grandparents. When wild boars raid the potatoes or the rice paddies, they can destroy the family’s entire livelihood for a year. Once when Yonten was visiting a village, a farmer got her out of bed to show her the damage done by boars that night. “His children had been sent to guard the crops, in the little guard huts in the field, and had apparently fallen asleep. Since they were so afraid of their father, they had tied bundles of paddy to make them stand erect, hoping to minimize the damage.”

The farmers themselves are divided on whether snares are an acceptable answer in a Buddhist culture. But the culture is also changing. “In the past,” says Yonten, “people were not that vocal about their losses. They thought that was life. They didn’t have anywhere to report it. But now the information channels are more direct.” Though Yonten does not put it this way, the farmers have someone to blame, and perhaps rightly so. In the mid-1970s, the national government launched a campaign to poison Asiatic wild dogs, because of complaints from farmers about devastating losses to livestock. But the poisoning turned out to be a case of jumping into a program without proper planning: Wild dogs are the main predators of wild boars, and boar populations boomed as a result.

Yonten’s boar-control experiment will not be so rash. “I want to look at wild dogs and wild boars in selected areas over the country,” she says, “and say, ‘Maybe poisoning wild dogs wasn’t a good idea, and we should look at conservation of both wild boars and wild dogs.’ So maybe it’s not necessary to do this trapping and culling. We’re going to collect as much data as possible, so we can give decision makers options. It’s not one-sided.” Farmers in some areas have already begun to complain about a wild-dog recovery. So it remains to be seen if even a Buddhist culture can accept protection of two “pest” species as a middle path to happiness. But Yonten will at least ask the question.

In Bhutan as elsewhere, the compromises can be daunting. “I think I work in the trenches at the front line of this noble endeavor,” Tashi Wangchuk remarks, “and sometimes perhaps it is better to just get the job done than reflect too deeply on what I am doing. Doubt does creep in at times. Can conservation and development really be balanced?”

But the willingness of the Yale contingent to ask this question, over and over, in a thousand different contexts, is ultimately the best sign that the investment in Yale-trained environmentalists is a good thing for Bhutan. It can no doubt also be irritating at times. “Some of the senior ministers who didn’t have the opportunity to go to Yale, they joke about these Yale graduates,” says Bruce Bunting of the WWF. “They call them, ‘When-I-was-at-Yale’” because so many environmental discussions start with the phrase, “Well, when I was at Yale . . .” But the net effect of this educational background, says Bunting, has been “incredible. Talk to people at the World Bank. Talk to people at the United Nations. The Bhutanese have the capacity to do these conservation programs all on their own. They don’t need a lot of outside experts anymore. In fact, a number of Bhutanese are now becoming outside experts themselves, going out and playing international roles.”

Their education has given them the tools to challenge accepted practice both at home and abroad. For instance, when Tashi Wangchuk and Tobgay Namgyal were at Yale as graduate students



Dean Speth visits with Yalies while on a recent trip to Bhutan.

in Bill Burch's class, they set out to scrutinize the notion of gross national happiness. Having pointed out the flaws in Western measures like gross domestic product, the two students went on to their real point—that their country's vaunted middle path lacked “critical performance indicators,” and that the discussion of GNH had proceeded in the absence of “any intellectual quantification to properly measure social well-being.”

The two authors detailed the potential variables that needed quantifying, from ecosystem structure and ecosystem stress to economic self-reliance and quality of life. Then they constructed a “path analysis model to measure gross national happiness.” They even had the audacity to put it in an equation:  $GNH = b_{y9}X_9 + b_{y10}X_{10} + b_{y11}X_{11} + b_{y12}X_{12}$ .

Anywhere else in the world, this would have been little more than a grad school intellectual exercise. (In some countries, questioning a national leader's most cherished idea might have been treason.) But when Wangchuk and Namgyal's paper was published in Bhutan, it became part of a national debate on the meaning of gross national happiness. The government ultimately developed its own formula for assessing proposed developments, incorporating some of the two students' ideas in the final algorithms. The government formula, says Wangchuk, leans even farther than their own proposal toward conservation. It's due to go into use later this year.

So when the electrification of a remote village comes up for discussion, Bhutan will have a systematic way to balance costs (Will the route impinge on valuable habitat?) and hidden benefits (Will electrification reduce Bhutan's heavy dependence on fuel wood?) before deciding whether to give the go-ahead. When a new road goes in on the steep Himalayan slopes, the builders are already being required to use methods that take three times as long and cost three times as much, but also protect vital creeks and other habitats.

In the endless negotiation between conservation and development, answers seldom come easy. But Bhutan, more than almost any other nation on Earth, has learned how important it is to ask the questions. **EY**

## Ed Bass: Bhutan a ‘Wonderful Place’ to Focus Yale’s Resources

**E**d Bass, currently a fellow of the Yale Corporation, a director of the World Wildlife Fund and co-chair of F&ES' Leadership Council, first visited Bhutan as part of a WWF delegation in the late 1980s. That visit was the start of Bhutan's long alliance with F&ES.

“In Bhutan, there was still such an incredible opportunity for conservation,” Bass recalls. “First, the resources are substantially intact. Second, the people very much value their environment. It really means something to them, and they want to invest significant resources into conservation. The third thing Bhutan needed was the skilled leadership to apply to this goal. And that's what the education of a cadre of very bright, ambitious young people has brought to the challenge.”

Early on in their work with Bhutan, Bass and WWF helped create the Bhutan Trust Fund for Environmental Conservation. (At the time, debt-for-nature swaps were big news in the developing world, and Bhutan was looking for a similar way to fund long-term conservation efforts. “The only problem,” one Bhutanese leader admitted, “is that we don't have any debt.”) The new Trust Fund's endowment ultimately helped to send many of the Bhutanese students to Yale, as did WWF's Russell E. Train Education for Nature Fund, for which Bass also provided seed money.

“There are many people in Bhutan who have trained at places other than Yale, including programs in India, the Philippines and Thailand, where it doesn't cost so much per person,” says Bass. “But essential to that whole structure are the people who receive advanced graduate education and can become the real leaders, and to a large extent these are the people who have gone to Yale.

“You now have an F&ES network in Bhutan, a number of people whose common educational experience gives them shared values, a basis for communication and the means of achieving their goals, and it really makes things happen. It's not a Yale Mafia. It's not about control. It's about results.”

Bass argues that the narrow focus on Bhutan will ultimately yield much larger results: “Conservation worldwide is a very daunting task. If you look at the big picture, it's almost overwhelming. But what's really valuable is to focus upon a finite area and approach that really works. And Bhutan really works, on a conservation and environmental protection basis.

“It's a wonderful place for Yale to be putting its resources. You have to have examples of success to serve as a model and inspiration for areas where success seems more difficult to achieve. So we should really be looking at putting more of these bright, hard-working Bhutanese students through the kind of educational experience that they can get at Yale, because this translates directly into leadership that is effective and successful.”

Beyond Bhutan, Bass suggests, F&ES alumni have connections around the world. “Looking for other countries that have a potential for the same type of success is a great way to focus Yale's resources, as opposed to shotgunning and dispersing the school's resources in a less-focused fashion. Bhutan is a great model for what might be done in other countries.”

# A Longtime Observer of an Indonesian Forest Watches It Fracture

By Christine Woodside

This is an El Niño year. The warmer Pacific alters weather cycles, setting off a drought on the island of Borneo near the Equator in southeastern Asia. In March, Lisa Curran, associate professor of tropical resources at the Yale School of Forestry & Environmental Studies and director of its Tropical Resources Institute, left New Haven for Borneo. This was her 40th research trip in 20 years to West Kalimantan, an Indonesian province on the island where, since 1984, she has spent part of every year. In her first years there, she helped to establish a long-term ecological research program of a new national park called Gunung Palung. Then she studied the unusual way the native trees produce fruit and how the animals react to the fruiting cycles. Since the mid-1990s, she has changed her focus dramatically.



Lisa Curran, associate professor of tropical resources, in a lowland dipterocarp forest in Gunung Palung National Park in 1986. The trees are *Shorea pinanga* and *Shorea pauciflora* (*Dipterocarpaceae*). She is establishing plots for the long-term monitoring of dipterocarp ecology.

Since then, loggers have removed so many of West Kalimantan's most valuable timber trees, the hundreds of species of dipterocarps, that great hunks of the forest cover have vanished. Now Curran is studying what happened to the large reserves of carbon that used to be stored where the trees once stood. She also is observing what happens to trees and animals when their home breaks up into disconnected forest patches.

The Indonesian political climate and economy seem to be in chaos—entrepreneurs and criminals alike are in a sprint to sell whatever they can get from the dipterocarps, the giant, old trees that make plywood, Formica and other home improvement materials, and the palm oil pressed from the fruit of oil palm trees, which industries grow on plantations. Curran's field site today is a patchwork of disconnected native forest, logged areas and plantations of African oil palm trees. In this setting, she is working to quantify the alteration of an ecosystem.

She expected her latest trip to be short, only three weeks long. She went to survey the forests of Gunung Palung and several intact forest fragments throughout the region and to see whether this year's El Niño was triggering wildfires. The Bornean forests by nature are supposed to remain wet, but today Curran believes that all of the wet areas, peat forests, have experienced more severe and extended droughts because the trees are gone. The last El Niño, in 1997-98, set off one of the worst forest fires in world history. (This year's El Niño is not as strong as the previous one.)

Curran has been considering the impact of the El Niño on Borneo her entire career. In research published in the journal *Science* in 1999, she proved that El Niño years are the only time when dipterocarps produce fruit. Animals such as wild boars and orangutans gorge themselves on the fruit because it comes only every few to several years. Are the patches of forest healthy enough to fruit this year? If the animals can't find the fruit because the forest is fragmented, what will they do?

In the draft of another article to be published in *Science* later this year, Curran writes that more



“The rate and extent of lowland forest conversion in Kalimantan are staggering...”

*Lisa Curran*

than 66 percent of West Kalimantan’s protected forest areas, such as national parks, has been highly degraded, mostly through logging. “The rate and extent of lowland forest conversion in Kalimantan are staggering and far exceed previous projections, especially within protected areas,” she writes. “In the absence of sound policies and leadership, combined with commitment to enforcement of regulations and mechanisms to redress land-use conflicts, this region is poised to experience another environmental catastrophe similar to the one experienced during the fires of 1997-98.”

Curran uses Borneo for her field site in five overlapping projects. She has received three grants from NASA that total about \$1 million. She is the principal investigator for her largest project, for which NASA granted \$800,000. This study will consider how logging, climate and forest fires have changed the carbon cycle of West Kalimantan. The original forests once stored great reserves of carbon in the soil and trees. The release of carbon into the atmosphere causes the buildup of greenhouse gases that scientists believe is contributing to climate change. Today, the region can’t store as much because there are so many barren areas. Instead, the land actually releases large amounts of carbon through the more frequent fires. Using remote sensing imaging, Curran is mapping the extent of the tree cover over West Kalimantan. She also is working on formulas that assess carbon loss and storage of the original forest and other land uses such as logging and oil palm plantations.

Besides this, Curran is studying how animals such as wild boar and orangutan, which rely on dipterocarps for food, deal with the loss of the trees. She is working on a long-term assessment of how commercial logging hurts the traditional life of the rural subsistence farmers in and around the national park. She also is part of a NASA-funded study, involving many scientists around the world, of which species are thriving in national parks and how land use surrounding parks affects wildlife.

Curran’s work matters to NASA because she is improving techniques to map forests. NASA could use these techniques elsewhere. Her work matters to the average person because a place like Borneo doesn’t burn in a vacuum, especially when that place once stored large reserves of carbon. Curran says that southeastern Asia, particularly Borneo, is off the radar screen of many people, but that because of the changes that hit it the last 15 years, it’s as volatile a region as Brazil’s tropical forests. As she writes in her NASA grant proposal, timber companies have exported more tropical wood from Borneo over the last 30 years than from all of tropical Africa and Latin America combined. In 1993 scientists estimated that tropical forests of the world hold more than half of the world’s carbon in their trees and 28 percent of it in their soil. In the mid-1990s alone, deforestation of the world’s tropical forests released 20 to 30 percent of the human-produced greenhouse gases.

Curran first visited Asia as an undergraduate when she took a research trip to Nepal. She earned a bachelor’s degree in anthropology from Harvard in 1984. After she graduated, she decided to try a job on a Harvard team studying the forest of Indonesian Borneo, and she immediately fell in love with the region. For the next several years, she worked for a procession of groups, most of them nonprofit research or conservation organizations or donors (U.S. Agency for International Development), in West Kalimantan. She returned to the United States for graduate school, earning master’s and doctoral degrees in ecology and evolutionary biology at Princeton in 1991 and 1994, all the while continuing to study the forest in Borneo. She was an assistant professor in tropical ecology and ecological sustainability at the University of Michigan for five years before joining F&ES in 2001.

She has found that science and politics tend to merge in Indonesia. For more than 15 years, as loggers moved through West Kalimantan cutting and burning, many of them had the blessing of the government under long-term President Suharto (who resigned in 1998). Their zeal seemed to intensify in the mid-1990s when they started logging in the national parks and no one seemed to stop them. Curran says that it is difficult to tell how old dipterocarp trees are because they don’t have any tree rings. Thus she can’t predict how long it will take for them to grow back. But right now there are many people who don’t worry about this, who are willing to cut them aggressively and to sell them for plywood or sawn timber because they bring in so much money. The cutting is starting to

CONTINUED on page 21

# AT THE School

## Historically Underrepresented Students to Get Scholarships to Attend F&ES

Up to five students from historically underrepresented U.S. communities will receive full financial support to pursue master's degrees from the School of Forestry & Environmental Studies, thanks to a \$100,000 grant from the GE Fund.

"The School of Forestry & Environmental Studies is a recognized center of excellence on environmental and natural resources issues. It develops the leaders needed to manage these important issues for the years ahead," said Steve Ramsey, GE vice president for environmental programs. "This GE Fund grant will help attract more diverse talent into the program and ultimately into industry and the nonprofit sector."

The goal of the GE Fund Environmental Scholars Program is to increase the number of applicants and enrollment of master's students from historically underrepresented communities in the United States, which comprise urban and rural poor, ethnic and racial populations including Native Americans. With matching funds from Yale and other sources, the students will have full financial support for both years of study.

Dean Speth said that the school's success relies on its ability to attract the best and brightest students with high leadership potential. "While the school has an outstanding track record in preparing students to become environmental leaders, it has been less successful in attracting underrepresented students from the United States. Rising tuition costs, coupled with modest permanent sources of scholarship funding for master's students, complicate the effort," he said. "The GE Fund's generous grant will help us achieve the school's strategic goal of educating a new, more diverse generation of environmental professionals."

The tuition for 2002-03 is \$21,990 annually to obtain a two-year master's degree in environmental management, environmental science, forestry or forest science. F&ES provides \$1.5 million a year in scholarship aid to its 260 master's students, 33 percent of whom come from outside the United States. Seventy-five percent of master's students receive grants or loans. Admission to F&ES master's programs is not based on financial need.

The GE Fund ([www.gefund.org](http://www.gefund.org)), the philanthropic foundation of the General Electric Company, invests in improving educational quality and access and in strengthening community organizations in GE communities around the world. GE, the GE Fund and GE employees and retirees contributed over \$100 million to community and educational institutions last year.



Oswald Schmitz

© William Sacco



David Skelly

© Michael Doolittle

## Skelly Named, Schmitz Reappointed, to Editorial Board of Prestigious Ecology Journals

Oswald Schmitz, professor of population and community ecology, and David Skelly, associate professor of ecology, have been appointed to the editorial board of the journals *Ecology* and *Ecological Monographs*, which are published by the Ecological Society of America. This is Skelly's first appointment to the board, while Schmitz will be serving his second three-year term.

*Ecology* and *Ecological Monographs* are the premier journals within their discipline. "This is solid recognition of the strength of ecology at our school and at Yale," said Dean Speth.

The appointments of Schmitz and Skelly build on a long tradition of service by F&ES faculty to the Ecological Society of America. Professors Emeriti Herb Bormann and the late Rick Miller each served as society president during the 1970s.

## Xuhui Lee Granted Tenure

Xuhui Lee, associate professor of forest meteorology and micrometeorology, has been granted tenure. Lee joined F&ES in 1994 as an assistant professor. In 1999 he became an associate professor and received an award for excellence in teaching. He holds a Ph.D. in soil science from the University of British Columbia and master's and bachelor's degrees in meteorology from the Nanjing Institute of Meteorology in Nanjing, China. He is a member of the American Meteorological



Xuhui Lee

© Dana Keeton

Society, the American Geophysical Union, the Canadian Meteorological and Oceanographic Society and the Society of Agrometeorology of Japan.

Lee's research concerns the states and principles that govern the exchanges of radiation, heat, water and trace gases between vegetation and the atmosphere. In particular, he seeks to better understand forest-atmosphere interactions through both modeling and experimental approaches. His areas of interest include forest meteorology, boundary-layer meteorology, air pollution modeling, micrometeorological instrumentation and remote sensing. His current research projects focus on nocturnal atmospheric exchange of carbon dioxide in forests, observational and modeling studies of surface-air exchange in non-ideal conditions, and gaseous mercury cycling in the environment.

## Dean Speth Uses Prize Money to Establish Fellowships

Dean Speth has chosen to designate the lion's share of his \$400,000 Blue Planet prize in ways that benefit the School of Forestry & Environmental Studies. Two of his gifts establish fellowships at the World Resources Institute (WRI) and Natural Resources Defense Council (NRDC), both nonprofit environmental organizations, to provide for an annual summer or similar internship at each organization beginning this year. The fellowships, named in honor of his wife of 34 years, Cameron C. Speth, will normally be awarded to students at the F&ES, from the

developing world or from Japan. He also has made a substantial gift directly to the school, which supports research, and communication and outreach activities.

Dean Speth founded WRI in 1982 to search for independent, science-based solutions to large-scale environmental threats. After leading WRI for a decade, he left to become the administrator of the United Nations Development Programme. He is credited as among the first leaders to call for global action on climate change. He co-founded the NRDC in 1970 and led programs in energy and water there until 1977. **EY**

# A Longtime Observer

CONTINUED from page 19

slow down now only because there aren't as many trees left. There were once 72 logging concessions, Curran says, but so much of the forest is cut now that today only six companies are still logging. However, illegal logging is everywhere. The *Sydney Morning Herald* reported this winter that at the rate of logging in West Kalimantan in 2000 and 2001, the province would be a desert by 2040. There are more than 433,000 sawmills, most of them illegal, in the province. Peat bogs have all been logged and are highly susceptible to drought, Curran says, and now these ignite easily, too.

Entrepreneurs clear and then replant many of the cut areas with plantations of African oil palm trees. Their fruit gets pressed into palm oil, an ingredient in packaged cookies and snacks. Curran says that oil palm trees certainly store some carbon, but she doesn't know how much yet. Curran and Florence Miller are in the process of analyzing their summer field results to estimate the carbon stocks in oil palms of different ages. Companies cut them down after about seven to 10 years of growth. "It's hard to think of oil palm trees as a good thing for Borneo," Curran says it was the burning of land for oil palm plantations that caused the horrible fires of the last El Niño. She watched a lot of it unfold. She was there for six months in 1997 and four months in 1998. Living in camps and breathing the smoke left Curran with a case of bronchitis that lasted a year and a half. "We'd wake up every day covered with ash. It was really, really dry, and then there was haze. You couldn't see the tops of the trees."

Indonesian Borneo is far more than a field site. Curran says that she feels an instinctive bond with the way Indonesians work and relate to each other. "There are things about an Asian country that make it hard for me back here," she says. "In Asia, those in charge of a group don't get angry in public, and they rely on self-deprecating humor and bringing out the best in their underlings." She finds it very different from the Western attitudes of self-promotion and public criticism. She believes that Asian life imprinted itself on her when she was an undergraduate doing research in Nepal.

Life in Asia can be very rough, though. She lives in logging camps with Indonesian workers and scientists and a few American graduate students. There are almost no other women. She eats a lot of rice, avoids leeches, deals with mosquitoes and her clothes seem always dirty. She's been in danger, too. A few years ago while surveying a new national park, she



Curran assisted in the establishment of ecological surveys and monitoring of the Bentuang Kerihun National Park, above, during a survey of the new park in 1996. This transborder national park (Indonesia and Sarawak, Malaysia) contains the last remaining large areas of intact dipterocarp forests across Indonesian Borneo. Her new NASA project shows that this is a critical area for conservation and management of dipterocarp forests and their biodiversity.

encountered a group of men mining gold who beat her up.

"I do get burned-out there, and I've been disturbed and frustrated by the corruption," she says. "You can get too much of Indonesia and it drives you nuts and you have to leave. I have never wanted to be there full time."

Nevertheless, the rewards of her part-time life there have been huge. In 1986 she had just placed a tag to identify a flowering dipterocarp when she collapsed from what turned out to be cerebral tuberculosis. The disease is usually fatal and it left her temporarily blind and ill for several weeks. Christian missionaries at a hospital in the bush nursed her. She was well enough to witness her first El Niño-driven fruiting of the dipterocarps that July. She didn't feel very well, but she went out to see the tree she had tagged, and the fruit was there.

"Nature cooperated with this experiment," she remembers. "All the animals migrated in, and there was massive movement of boar and parakeets, and we'd never seen parakeets before." It was like a little miracle, her getting back her health in time for the explosion of life in the tropics. Seeing the fruit and questioning what she saw was the event that formed the rest of her career. **EY**

# National Conservation Leader's \$2 Million Gift to Aid Students



Strachan Donnelley YC '64

“Yale’s major push to be a home for global environmental studies is a very exciting and significant venture.”

*Strachan Donnelley*

By John Courtmanche

In hopes of developing a new generation of environmental leaders, Strachan Donnelley, a national conservation leader, has pledged \$2 million as a scholarship endowment gift to the School of Forestry & Environmental Studies.

“Yale’s major push to be a home for global environmental studies is a very exciting and significant venture,” said Donnelley YC ’64. “In that venture, scholarship money is really needed.” Donnelley has been an active member of the F&ES Leadership Council since its founding more than two years ago, and is a long-time patron of environmental studies at Yale.

About the new Strachan and Vivian Donnelley Endowed Scholarship Fund, Dean Speth commented, “What this wonderful and generous gift will ensure is a steady stream of Donnelley Fellows attending our school—outstanding young leaders who otherwise could not afford to be here.”

Donnelley currently serves as president and founder of The Center for Humans and Nature, a recently organized nonprofit organization with offices in Chicago, New York and South Carolina. From 1998 until last year, Donnelley was head of the Humans and Nature program at the Hastings Center, a leading research and educational institution based in Garrison, N.Y. Since 1985, he has held senior positions at Hastings, and he’s credited with founding the center’s Environment and Ethics program.

The new Center for Humans and Nature reflects many of the concerns of the Gaylord and Dorothy Donnelley Foundation, of which Strachan Donnelley has until recently served as chair. Based in Chicago, the foundation is named for Strachan’s late mother, Dorothy, and late father, Gaylord Donnelley YC ’31, the conservationist and former chairman of R.R. Donnelley & Sons, one of the largest U.S. printing and communications companies. The foundation supports efforts to promote healthy human communities and natural environments in the Chicago region and the “low country” of South Carolina, comprised of Charleston and its surrounding counties. Specifically, the foundation supports efforts to preserve natural lands permanently, restore degraded natural lands and inform community debate on these issues.

The Center for Humans and Nature has similar goals; it is dedicated to ensuring the collective well-being of human communities and nature by exploring, articulating and promoting social and ethical responsibilities to humans and nature. The center works toward this mission using interdisciplinary research, education and outreach.

Donnelley explained that in most communities today, the concerns for human beings and those for nature are treated separately. For instance, land use, wetlands or biodiversity wouldn’t naturally be taken into account on transportation issues. Likewise, human cultures and communities aren’t usually taken into account on land use matters.

Donnelley is hoping to change that. “That’s probably one of the unique, singular dimensions of our center. We take ethical concerns for humans and nature equally,” he said. Donnelley said that the philosophy and ethics behind the evolving discipline are in the formative stages.

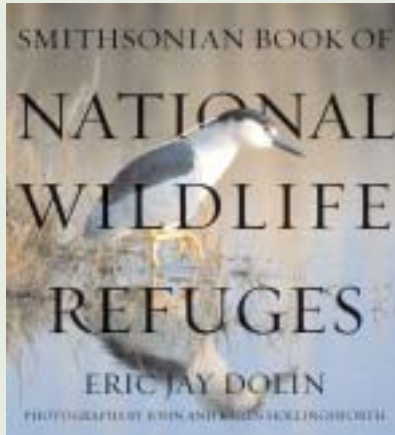
On the practical side, Donnelley said the center has begun working with civic organizations on development, open space and land conservation issues. The center’s goal is to inform social organizations, business groups, politicians and others in helping to educate the community about human responsibility to nature. Toward that end, the center has begun organizing public forums and producing publications to present its research and views. Last year in Chicago, the organization hosted a civic forum called “City Mouse, Country Mouse, Global Cat,” which explored environmental issues that affect both metropolitan communities and the global community. The meeting attracted over 90 people from a broad range of Chicago-area organizations.

Donnelley’s patronage of environmental studies at his alma mater began in 1994 when he contributed to a \$3 million family gift to The Yale Institute for Biospheric Studies (YIBS), a memorial gift honoring his father that established both a Fund in Studies in the Environment and an Environmental Fellows Program. He still serves on the YIBS external advisory board. In 1999, he gave \$1 million to F&ES’ New Century Fund.

“It is great to see the greening of Yale and New Haven,” Donnelley said. “Let’s hope that the White House, Washington and North America, in general, quickly follow Gus Speth and F&ES and face their long-term global responsibilities to both humans and nature.” **EY**



# BookShelf

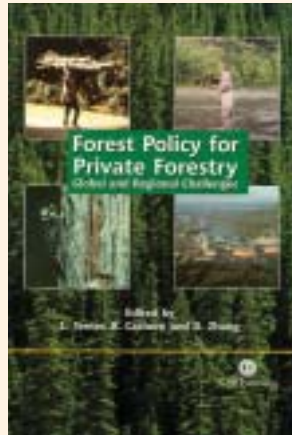


## Smithsonian Book of National Wildlife Refuges

From the cypress swamps of Okefenokee to the marshes of San Francisco Bay and pristine remoteness of the Alaskan National Wildlife Refuge preserve, America's most treasured natural habitats have been protected as National Wildlife Refuges for 100 years. Initiated in 1903 when Theodore Roosevelt signed a proclamation that preserved Florida's Pelican Island as the first of 538 National Wildlife Refuges, they now occupy 95 million acres of the American landscape.

In his *Smithsonian Book of National Wildlife Refuges*, Eric Jay Dolin '88 draws on the rich history of the refuges to reveal an interconnected story of people and nature. Dolin explains how the fledgling conservation movement found in Teddy Roosevelt a champion who initiated one of the greatest conservation movements the world has ever seen. The book, published in March to coincide with the 100th anniversary of the National Wildlife Refuge System, is accompanied by photographs by John and Karen Hollingsworth who, as a team, have photographed refuges for a variety of periodicals including *National Geographic* and *Field and Stream*.

The book is published by Smithsonian Institution Press. To order a copy, call 800-782-4612 or visit [www.si.edu](http://www.si.edu).



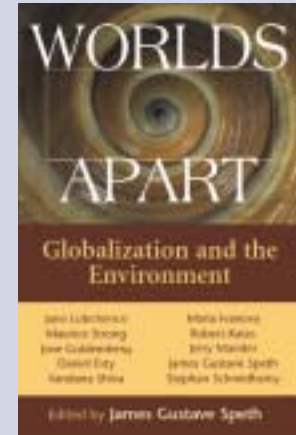
## Forest Policy for Private Forestry: Global and Regional Challenges

Increasing concerns at the global, national and regional levels about the role of private forestry in enhancing forest sustainability are converging to provide new opportunities for refocusing forest policy debates, asserts *Forest Policy for Private Forestry: Global and Regional Challenges*.

"The book is important because it focuses on the environmental, economic and social aspects of forest sustainability, and the innovative approaches emerging to address these issues," said co-editor Benjamin Cashore, assistant professor of sustainable forestry management and chair of the Forest Certification Program at the School of Forestry & Environmental Studies.

Recently published by CABI Publishing, *Forest Policy for Private Forestry* addresses key issues shaping the future of private forestry in four parts: the emergence of a new paradigm for public involvement in private forestry, the challenges of sustainability, forest certification programs, and experiences of countries from the Americas, Europe, Asia and Oceania.

In addition to Cashore, the editors of the 307-page book are Larry Teeter, director of Auburn University's Forest Policy Center, and Daowei Zhang, also at Auburn. To order a copy, call 212-481-7018 or visit [www.cabi-publishing.org](http://www.cabi-publishing.org).



## Worlds Apart: Globalization and the Environment

*Worlds Apart: Globalization and the Environment* presents a cohesive set of essays by leading thinkers on the subject of globalization, offering a thoughtful overview of the major environmental issues related to globalization. Framed by Dean Speth's introduction and conclusion, essays include Jane Lubchenco's discussion of the scientific indicators of global environmental change, Robert Kates' examination of the prospect that our growing global interconnectedness could lead a transition to a more sustainable world and Vandana Shiva's impassioned plea for a new "living democracy" that counters the degrading and dehumanizing tendencies of the global economy.

Other contributors include Maurice Strong on the Rio Earth Summit and the future course of environmentalism, José Goldemberg on energy, Jerry Mander on the inherent destructiveness of the global economic system, Stephan Schmidheiny on the forestry industry and Daniel Esty and Maria Ivanova on global environmental governance.

Edited by Dean Speth, who helped found the Natural Resources Defense Council and the World Resources Institute, the 192-page book, published by Island Press, brings together the most respected thinkers and actors on the world stage to offer a compelling set of perspectives and a solid introduction to the social and environmental dimensions of globalization. To order a copy, visit [www.islandpress.org](http://www.islandpress.org).

# Leadership Council

meeting showcases diverse talent, energy at F&ES

**M**ore than 50 members attended the Leadership Council meeting last October, and several remarked that it was the best one yet. Particularly noteworthy was the strong and enthusiastic participation of members—in leading discussion sessions and in responding and contributing to the program. “Dean Speth and the faculty benefited from many excellent suggestions and ideas from the members, while the members went away inspired, informed and prepared better than ever to work on behalf of the school,” said Frederick Regan, director of development.

## Highlights of the meeting included:

Ernesto Zedillo, former president of Mexico and now director of the Yale Center for the Study of Globalization, led a lively discussion on one of the major challenges facing the global community—integrating and balancing the imperatives of economic development, environmental sustainability and effective governance in the context of our increasingly global economy and society.

In two discussion sessions, members had the opportunity to hear from—and get to know—a cross section of F&ES students. In the earlier session, two master’s degree students and two Ph.D. students led a discussion focused on “international leadership training.” In the following session, students representing the five-year joint degree program with the Yale School of Management, the one-year degree program and the new undergraduate environmental studies major were featured.

Both discussions underscored F&ES’ progress in becoming a truly global school, with emphasis on preparing leaders for the developing world. It also underscored the diversity, talent and determination, as well as the character, of F&ES students.

Equally interesting was a panel discussion on the World Summit on Sustainable Development, which occurred last August and September in Johannesburg, South Africa. The panelists agreed that the summit represented a major missed opportunity, and saw in its failure evidence that the era of major international environmental conferences may be over. Indeed, a recurring theme was that rather than a single approach, progress on the environment will involve many organizations and individuals pursuing many different paths simultaneously. Dean Speth noted that 24 Yale students attended the summit and called this “a once-in-a-lifetime learning experience” that the students will benefit from for the rest of their lives.

Dean Speth led a discussion on the school’s progress over the past year in implementing its strategic plan, remarking on the five-year “trends data” on F&ES.

Ed Bass and Frances Beinecke, Leadership Council co-chairs, reported to members on the continuing success of the school’s campaign. With a total goal of \$60 million, they were pleased to announce that including all pledges, gifts and grants raised, the total raised stood at \$46 million, of which \$37 million is targeted for endowment and new facilities.



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1. Coley Burke, B.A. '63
2. Sherry Huber
3. Ralph Schmidt, B.A. '69, M.F.S. '78
4. Ian Cheney, B.A. '02, Claudia Martinez-Zuleta, M.E.S. '89, M.A. '89
5. Jody Bush, chair of the URI board of directors, Vicki Assevero-Mottley, B.A. '73, Xuemei Bai, associate professor in the practice of urban ecology
6. Ed Bass, B.S. '67, Art.A. '72, President Rick Levin, Dean Gus Speth

7. George Frampton, B.A. '65, Bill McDonough, M.Arch. '76, Thomas Lovejoy, B.S. '64, Ph.D. '71
8. Steve Kellert, Tweedy/Ordway Professor of Social Ecology, Joan and Dick Tweedy
9. Ernesto Zedillo, M.A. '76, M.Phil. '77, Ph.D. '81, director of the Yale Center for the Study of Globalization, Frances Beinecke, B.A. '71, M.F.S. '74, Chad Oliver, M.F.S. '70, Ph.D. '75, director of the Global Institute of Sustainable Forestry, President Rick Levin

10. Monica Araya, M.E.M. '00, Kelly Levin, B.A. '02, Carlos Linares and Curtis Robinhold
11. Wendell Mottley and David Syre
12. Rick Weyerhaeuser, B.S. '77, Victor Gonzalez, M.F.S. '80
13. Kath Schomaker, M.E.M. '96, director of alumni/ae affairs, Adelaide Hixon, Tom McHenry, B.A. '77, M.F.S. '80

Photos: © Carl Kaufman

# Blazing a Trail for Profitable and Sustainable Forestry

By James McElroy

**M**any harvesters of timber enter a forest, cut down everything they can find of value and leave, never to return. Such practices are obviously unsustainable and bad for the long-term environmental, economic and societal health of the forest, but they generate money quickly and easily.

An alternative is sorely needed, one that provides a consistent, long-term return on investment for timber harvesters and good jobs for loggers, does not ruin the forest's natural beauty and allows the forest to continue to be . . . well, a forest on into the indefinite future. Numerous studies funded by individual governments, the United Nations and universities around the world have been conducted in an effort to create just such an alternative. But relatively few foresters have attempted to put such research into practice and to start businesses devoted to harvesting timber in a sustainable fashion. And those that have given this more responsible business model a try have encountered numerous pitfalls. As yet, there are not many success stories.

Beginning in 1997, a group of foresters and businessmen, including John Gordon, dean emeritus of F&ES, Miguel Romero '96, Joseph DeNicola '94, Mike Ferrucci '82, Tom Walicki '82, and Ralph Schmidt '78, formed the Candlewood Forest Group in an effort to put together a timber harvesting and processing venture that would use the lessons learned at Yale and elsewhere regarding sustainable forestry. Toward this end, Candlewood bought 250,000 acres of forestland in Argentina and developed a business plan, and they are now in the midst of raising the capital necessary to begin harvesting.

Schmidt, Candlewood's CEO, is hopeful that his fledgling company can avoid the pitfalls encountered by other foresters determined to harvest their land sustainably. He points out that harvesting sustainably means more than simply not cutting down everything salable at once and growing as much as cutting. It also means setting up the company's timber mill and devising a timber delivery route—building roads and so forth—in such a way that does not hurt the environment and neighboring communities, and that provides safe, good-paying jobs for local residents. And it means cutting and growing in a way that doesn't harm the natural habitats of the

animals and unmarketable plant life that reside there.

Over the long-term, Schmidt argues, such responsible business practices will pay off. The trick is to overcome the desire for a quick and easy return on one's initial investment.

"You have to be committed to a long-term approach," he says. "There are a lot of different things to be done. It's not like brewing and bottling beer. These natural tropical forests are very complicated. If you walk around the forests in Connecticut, there are about 30 different tree species, maybe. But in the Amazon there are thousands of tree species. And the lumber markets are set up to deal with just a few very-well-known species. They're not set up for lots of different stuff. That makes managing and marketing much more difficult. I'd guess that less than one-tenth of 1 percent of forests in Latin America are being sustainably managed under schemes similar to ours."

With these concerns in mind, Candlewood's leaders made a point of purchasing land that does not have the extreme variation of tree species that exists in much of the South American tropics. Instead,



© Miguel Romero

The Spanish cedar is a very valuable wood and in the same family as mahogany. Candlewood's forests have more volume of this wood than any other species.



they chose forest lands in the Yungas forest in northwest Argentina that contain both a portion of upland, temperate forest, as well as lowland, somewhat more tropical, forest. In the upland areas, there are relatively few tree species—four to five, Schmidt estimates—and two are salable, Cedrela, a pink Spanish cedar, and Juglans, a southern walnut. In the lowland areas of the Candlewood property there are more like 20 species, and around 12, including Brazilian cherry, can be sold in established markets.

These sorts of pricey hardwoods are used for furniture, veneers, flooring and framing and they have become more and more scarce in international markets. Schmidt believes that there will always be a significant demand for such fine wood because it is attractive and sturdy and no one has yet devised a more desirable alternative.

“People have been enjoying these woods for hundreds of years,” says Schmidt. And, as he points out, because of their cost, aesthetic value and durability, the products made from them are less likely to be quickly discarded and replaced. Schmidt believes, therefore, that the harvesting of these types of wood leads to less waste than might be generated otherwise.

Only two things are now stopping Candlewood from fully executing its plan in Argentina. First, by chance, a consortium of international oil companies has found large gas reserves, as well as possible oil reserves, on one of Candlewood’s lowland forests, and the drilling, road and pipeline construction and other oil and gas activities threaten the environment and the certification of these Candlewood forests (The Argentinian government, which owns all subsurface mineral rights, has given the oil companies permission to explore and drill.). After negotiations with the

oil companies failed, Candlewood recently filed suit in the Chancery Court in Delaware against the operator, Pan American Energy, a BP affiliate, seeking damages and equitable relief. Second, to scale its operations up quickly will require additional capital. Thus far, the company has raised about \$10 million in private investments, and until recently, it was slated to receive a sizable loan from the World Bank. But since the collapse of the Argentinian economy, securing a loan for businesses based in South America’s second-most-populous country has become much more difficult. So, Candlewood is seeking more investors or an increased commitment from current investors.

Despite these setbacks, operations have begun and certification by the Forest Stewardship Council is expected this year. Romero, the general manager in Argentina, emphasizes: “This will be the first certified, native sustainable forestry operation in Argentina. It is very significant for our economy and environment.”

Schmidt maintains that his ultimate goal and the goal of many of his partners is to blaze a trail in the field of profitable and sustainable forestry. For him and his fellow Candlewood Yalies, that was an idea nurtured during their time at F&ES.

“There aren’t too many models for this,” he says of Candlewood. “I mean it’s nice to have all these government programs developing sustainable techniques, but unless you can harness market forces and make money, it doesn’t come to much. It seems to me that putting all these theories into practice is what the Yale School of Forestry & Environmental Studies is all about.” **EY**

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## ESI’s Accuracy Relies on a Diligent Columbia Team

CONTINUED from page 8

as the World Data Center for Human Interactions in the Environment. ... The core team that worked on the ESI was six full-time people and a crew of student helpers. We worked closely with Dan (Esty) and convened twice-yearly meetings with expert groups to go over data sets we had accumulated. We tried to craft an analytical framework that we thought made sense in terms of the objectives of the ESI: what the components of sustainability would be and what kinds of targets we would go after to try to quantify them.

Then our team went about looking at what’s available that could be measured or obtained that might correspond to the framework. We sought data from many different sources. A lot of it would just come down to personal networking. We knew a group in Germany that had a really great global water database and we cajoled a copy of it from them. Or we would work with people at a think tank or an international agency and then eventually put together a candidate list of data sets and trial evaluations that let us judge which ones were really going to work. We would then reconvene an expert group to look at the numbers that emerged when you examined the particular data sets. Then we would fine tune, collectively, which ones we’d really want to work with. It was back and forth, with some detective work, some personal networking and some conventional library work.

*Q: Three years ago the ESI was the first step in a long process, one that would be shaped by input from other countries, constructive criticism and feedback. Though it will take some time to find the optimum template, do you think that a nation’s ESI eventually will have equal footing with its GDP and all the other annual competitiveness rankings that are thrown about at conferences?*

*A: For me, the more powerful analogies are in the medical field, where if you’re trying to look for aggregate indexes of health, you can find a few, like the body-mass index, but none of them ever get complete universal consensus and the medical community as a whole will drop one and move on to another. But what’s important is that they are basing decision making on concrete measurable targets that are grounded in science. Because of that, medicine right now is a much more effective field than environmental policy making. So ‘GDP envy’ may be misplaced. I think the way doctors use benchmark targets and quantitative indicators to help guide diagnoses and give patients a rough idea of whether they are doing better or worse is a more appropriate analogy. Five years from now doctors might be using slightly different things or adding them up in different ways, but that matters less than the fact that they’re using the data to help us live better lives.* **EY**

# ClassNotes

## 1939

**Art Nelson** is preparing a history of the southern forestry fieldwork, particularly from 1930 to 1942, and would welcome information and photos from that time period be sent to him at: 3339 Timberlake Circle, Meridian, MS 39305-9615.

**Ed Wyman** is in a nursing home. Letters may be sent to Barbara Wyman, P.O. Box 6, No. Sandwich, NH 03259.

## 1941

**Henry S. Kernan** published an article entitled “The Gifts of the Forest” in the summer 2002 issue of *Northern Woodlands* magazine in which he describes how he has spent the better part of the past 50 years managing his 1,200-acre private forest in upstate New York. These woods became his escape after his boyhood playground of 50 acres of forestland in Rockland County, N.Y., was paved over for housing and roads after World War II. The parcel was pieced together from eight failing farms where land had already begun to revert to forest. Over the years Kernan’s forest became a classroom for his five children, all of whom grew up to be involved in environmental issues. He has remained active in forestry; his work has taken him to 45 countries.

**J. Willcox Brown** reviewed Kernan’s article for these notes: “In this memoir, my ’41 classmate has shown the intricate connections between a particular forest and a remarkable family. It chronicles the changes in the 1,200-acre Charlotte Forest and the children who grew up on and around it. Hank made the acquisition a half-century ago. A sketch map and photos of family activities amplify the text. Also, listed are 36 wild foods obtainable on the property.” Will continues: “Natale and I have had the treat of tours guided personally by Hank at several intervals over the years. Our first in 1948 was an overnight with three of our kids in a station wagon—we were en route from Ann Arbor, Mich., to Fitzwilliam, N.H., for a second summer in charge of the Rhododendron State Park. Another time the two of us came for a several-day sojourn. I was impressed with the labor-intensive care, especially of the younger stands. We had an outdoor picnic above the pond and inspected the damage to tree regeneration caused by a deer population that was out of control. Yet, the second growth stands contained pinxter (azaleas) bushes in glorious display. Throughout we were accompanied by Hank’s youngest son Kit, who had been studying tropical forestry in his Dad’s tradition. Kit was our fire builder, outdoor chef, etc. The next anticipated visit by classmates after the YFS 90th was literally washed out by a summer monsoon. **Ingy Arnold, Frank McCamey** and I assembled for an afternoon outing in light rain, which overnight turned into a deluge. Last year Natale and I took the bus from Boston to Oneonta where Hank met us. The occasion was his 85th birthday, with many relatives assembled. The

visit included a hike for the two of us with our intrepid leader to the log lean-to they had built at the top of the falls, another family venture. We can see Charlotte Forest as a managed property well into the future, a shining example of private initiative with its balanced output of gifts.”

## 1942

### CLASS SECRETARY:

**Hamlin L. Williston**  
williston@watervalley.net

At age 83, **Sid McKnight**, the youngest man in the class, continues to chair the Natural Resources Committee of his 450-family retirement complex near Helen, Ga. He says his health is good and he doesn’t take any pills!

**Mel Chalfen** recently exhibited nine of his watercolor paintings in the lobby of the Citizens Bank in Newton Corner, Mass.

**Dick Jorgensen** is the treasurer for the board of directors of a housing community for people 55 years old and older in Pittsburg, Calif.

**Cliff Pearson**, age 89, still lives in Winston, Ore., where he reports that the forest products business is in poor shape.

**John Gray**, former director of the University of Florida School of Forestry, will attend the annual John Gray Lecture Series held every year in Gainesville, Fla. He continues to live in Little Rock, Ark.

**Ben Eggeman** spent 30 years in the Navy, retiring as a captain, and then sold real estate and was a consultant on personal management problems. He now lives in Alexandria, Va.

**Bob Martin** retired three years ago from an insurance company in Pittsfield, Mass.

**Ham Williston** is the program chairman for a reunion of his 302nd Fighter Control Squadron in San Antonio, Texas. This squadron went in with the Marines on Iwo Jima to provide radar coverage and aircraft control.

## 1945

**Earl H. “Gus” Tryon** is living in St. Louis, Mo. In a recent phone conversation, he expressed strong support for the current state of forestry education at the school, recalling fondly his four years in New Haven, studying and working part time at a defense-related wood testing laboratory (a start-up enterprise at the time) for a company making wooden gliders. After Yale he went to West Virginia University (WVU) for a career in teaching and forestry research, during which time he remained in close contact with Yale friends **David M. Smith ’40, Ph.D. ’46**, and **Silas Little ’36, Ph.D. ’47**. While he was at WVU he also mentored **Ken Ware ’57, Ph.D. ’60**, through his decision to go to Yale. He retired from WVU in 1978, but continued to conduct research on “mostly the

things the graduate students didn’t want to publish”—for the United States Forest Service. In 1994 he and his wife relocated to St. Louis to be near daughter Elinor. Opal, his wife of 62 years, died last July. They also have a son, Earl H. Tryon, in Atlanta, Ga.

## 1946

### CLASS SECRETARY:

**Paul Y. Burns** pyburns@lycos.com

**Paul Burns** won medals in badminton, table tennis and tennis in the Louisiana Sr. Olympics in October. He and his wife, Kathleen, celebrated their 60th wedding anniversary on Dec. 4. He regularly exchanges Christmas cards and letters with classmates **Carl Hupman** and **Dave Smith**. He writes: “Yesterday I called Carl. He said he had received my New Year newsletter and would send me some sort of response. He was in fairly good spirits although, as usual, very calm and collected. I told him about the recent death of mutual friend **Dave Scott ’47**. We reminisced about the late **Gordon Marckworth ’17**, the first forester to head the Louisiana State University (LSU) Forestry Department (1927). He knew Gordon had left LSU in 1931 to become dean of the University of Georgia Forestry School, then left there a few years later to go to the University of Washington (UW) forestry program where Carl got his forestry degree. Marckworth became dean of the UW College of Forestry. I knew him as a fellow forestry school head in 1955. We also talked about how we first decided to become foresters. Both of us were in junior high—he in Ohio and I in Oklahoma. A widower for several years, Carl has lost three wives by death due to illness.”

## 1947

### CLASS SECRETARY:

**Evert W. Johnson**  
swede-doc@mindspring.com

An old back injury has forced **Art Pingree** to move to an assisted living facility near Brunswick, Maine, and his wife, Peg, to a nearby retirement home.

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## 1948

### CLASS SECRETARY:

**Francis H. Clifton**  
fhcpbyfor@webtv.net

**Francis Clifton** writes: “I’m in my 49th year in DeLand. I retired from my timber and real estate business in 1988. Presently, I am “gainfully employed” by the *DeLand Beacon*. I make a weekly Wordsearch Puzzle for the paper. The Beacon calls me a contributor. Also, I contribute stories to my World War II PBV squadron newsletter, *The Black Cat Log*. Ruth, my wife of 50 years, passed away Dec. 25, 2001.

# ClassNotes

**Calvin Dunwoody** (cbd717@mpdu.com) retired from the State of Rhode Island after 15 years, serving as chief of the Division of Planning and Development in the Department of Environmental Management. He has climbed all the high points in each of the states, including Alaska and Hawaii, and is seeing the world. This past year he went to the Amazon and swam in Piranhas waters, Brazil's prime wildlife area, the Pantanal region, and to the Iquacu falls. After that he took a bike trip to Portugal, a hiking trip to Mongolia, visited Beijing, climbed the Great Wall in three different places and went sea kayaking off Papua New Guinea's east coast and the Trobriand Islands, a far out-of-the-way place as one can get. (Secretary's note: Cal, send me a bottle of that potion you are taking. I need pepping up. FHC)

**Otis Hall** (othall@vt.edu) retired after 18 years on the faculty of the School of Forestry at Virginia Tech. He writes: "My wife, Helen, and I live here in Blacksburg, Va. My forestry activities are now largely limited to social contacts here with current and past faculty of the college, which include **Bob Adams '59** and **Harry Haney '69**, and to meetings of the Society of American Foresters. My family continues to grow, with three children, five grandchildren and five great-grandchildren scattered across the country from San Pedro, Calif., to Salt Lake City to Reston, Va. Traveling to visit them and to take one or two Elderhostel trips a year keeps us moving around the country and the world. My hobbies are genealogy and bicycling—Virginia has a good selection of bicycle trails."

**Hap Mason** writes: "I am still doing a little consulting but don't get out in the woods very far because I need a new knee. I may get the knee this spring. As a member of the executive committee of the Alumni Association I get to New Haven fairly often. **Dave Smith '40, Ph.D. '46, Howard Coe '46** and I are the old guard at meetings and learn that a student can still get good training in "dirt forestry." I am still a member of the Massachusetts State Forestry Committee and other forestry and local organizations. I heat my house with wood and manage my 500-acre tree farm for veneer logs. I see other forestry grads fairly often, but not many class members."

**Bill MacConnell** writes: "I became a member of the forestry faculty at the University of Massachusetts in 1948, retired in 1977 and since then have signed an annual contract for part-time work. I began as head coach for ski racing in 1961 and stepped down in 1992 to become assistant coach. I will fully retire from both faculty work and coaching at the end of this academic year. It's not easy to leave this fun stuff for the old rocking chair. I often think of the fun-filled days in New Haven with Francis Clifton, Cy Young and George Hindmarsh."

**Howard Kriebel** writes: "Dottie and I live in Medford Leas, a continuing care retirement community in southern New Jersey, not far from

Philadelphia. We are OK. It is a nice place with an arboretum and woodlands. I am involved with both, helping maintain five miles of trails, remove invasive plants, etc. We still travel quite a bit, were in Botswana on a safari and in Slovakia at a forestry research meeting last year. I am still doing some work with International Union of Forest Research Organizations (IUFRO), as web moderator of division two, and currently as an editor of the proceedings of the IUFRO conference we had in Oregon in 2002 on the genetics of five-needle pines. We had an enjoyable visit with **Marj Nienstaedt '50** and **Hans Nienstaedt '48, Ph.D. '51**, in Wisconsin last summer. I am really sorry I'll miss the 55th reunion of '48. I would like to be there, but we'll be in England."

**Steve Pryce** writes: "My Yale forestry education served me well. I spent the years from 1948 to 1984 happily involved in many wood products industries and associated societies. Retirement took Dorothy and me to Key West, Fla., which we enjoyed until 1997 when we moved to California. We currently live in Carlsbad, enjoying an ocean view. My current activities include daily swimming, golf, tinkering in my shop and the weekly tutoring of English as a Second Language. Sincere good wishes to all other members of the class."

**Darwin B. Palmer** and his wife, Nancy, reported in from their home in Wilmington, Del. Darwin retired from construction work as an estimator/engineer 20 years ago. Nancy continues her work as a personal secretary. "We raised two children: Darwin B. Jr. and Winifred H. Each married and has two children, boy and girl. Darwin B. Jr. and Patti live in Grantville, Ga., where they developed their home as a bed and breakfast. Winifred and Fred Dubin live on Walnut Ridge Road about 2,000 feet around the bend with their two children in high school. I continue to be active as a volunteer for the Delaware Nature Society."

## 1949

### CLASS SECRETARY:

**Frank H. Armstrong**  
farmst1037@aol.com

**Hurlon Ray**, retired EPA water specialist, is still fighting hard for the environment. He is involved in a battle to improve the water quality of the Middle Fork of the Saline River, the river in Arkansas where he swam as a boy. He has founded a group called "Concerned Citizens for the Upper Middle Fork," seeking to protect this designated Extraordinary Resource Stream from upstream pollution, which he believes is generated by Hot Springs Village, a resort community. Hurlon has had a prominent career in environmental protection, beginning with working on early drafts of the Clean Water Act. "Green Brook," the first extensive study of water pollution and human health, was conducted by scientists Hurlon recruited. He was at the White House for the formation of the EPA under the Nixon administration.

**Frank Harris Armstrong** taught forestry at the University of Vermont for 25 years, retired at age 70 and since then has been teaching forestry online (currently he has nine sections) for American Military University to soldiers, sailors, marines and coastguardsmen. His students include first sergeants and sergeant majors in many parts of the world. Check out his instruction at [www.bullrunofvermont.com](http://www.bullrunofvermont.com) and then click on continuing education.

## 1950

### CLASS SECRETARY:

**Kenneth L. Carvell** [kencarvell@aol.com](mailto:kencarvell@aol.com)

## 1951

### CLASS SECRETARY:

**Peter Arnold** [arnoldp@nccn.net](mailto:arnoldp@nccn.net)

**Peter Arnold** writes: "I shuffle along in pretty good physical shape, almost ready to hang up my consulting shingle after some 45 years. I no longer seem to have the fastest set of legs in the woods, a far cry from when I used to take it as a personal insult if anyone walked faster than me. My professional forester's license is good until 2004, at which time I think I'll probably quit. After all, 80 is such a good round number to do it on. Not only that, but practicing forestry in California now involves so much red tape that it is far less enjoyable than it was in the good old days. Sarah and I still live on 40 acres in the foothills east of Sacramento, lease some pasture, grow some pleasingly good syrah and cabernet franc vine grapes for the local winery and drink up our revenues from them. I went duck hunting in New Zealand three years ago and Sarah came with me the next year just to visit and do a bit of trout fishing. As for me, it could well be that my passport has rusted shut after all my years of chasing projects around the world. Time to settle back and relax a bit."

**Robert Curtis** writes: "I am still working part time as an emeritus scientist at the United States Forest Service Forestry Sciences Laboratory in Olympia, Wash., doing mostly data analysis and writing now rather than fieldwork. The hills have unaccountably gotten much steeper than they used to be!"

## 1952

### CLASS SECRETARY:

**Milton E. Hartley Jr.**  
[redheded@olympus.net](mailto:redheded@olympus.net)

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## 1953

### CLASS SECRETARY:

**Stanley L. Goodrich**  
[smygood@qwest.net](mailto:smygood@qwest.net)

# ClassNotes

1954

CLASS SECRETARY:

Richard A. Chase [RACHase@aol.com](mailto:RACHase@aol.com)

1955

CLASS SECRETARY:

Howard A. Spalt

Ken Knoerr has retired from the faculty of the Duke University School of the Environment but continues as its Director of Graduate Studies.

1956

CLASS SECRETARY:

Jack A. Rose [jackrose@iopener.net](mailto:jackrose@iopener.net)

Jack Rose writes: "I look forward to my third lumbar surgery in March. This time my surgeon will wear his glasses and perhaps I can resume downhill skiing next winter."

FORTY-FIFTH REUNION May 31—June 2, 2003

1958

CLASS SECRETARY:

Ernest A. Kurmes

[Ernest.Kurmes@nau.edu](mailto:Ernest.Kurmes@nau.edu)

Bill Makel reports that he and Mary have just purchased a new, larger home in Glendora, Calif. Their three daughters are teachers in the Glendora School District. The families, including nine grandchildren 11 months to 11 years old, all live within 10 minutes of each other. This spring they will take their oldest grandson to Washington, D.C., and Pennsylvania, and then in July celebrate their 40th wedding anniversary on a cruise with the whole family.

Herster Barres is retired after a career working for the United Nations in Costa Rica, developing a demonstration of offsetting carbon dioxide in tropical pasture reforestation projects and being in the real estate business in the United States. He manages a small nonprofit that audits U.S. CO<sub>2</sub> emissions and designs forests that balance each other ([reforestthetropics.org](http://reforestthetropics.org)). He and his Italian wife have three children and three grandchildren and live in Mystic, Conn.

Mitsiu Yoshimura is 81 years old and has been retired from Mie University for 18 years. He sincerely asks for peace on earth.

George Rosentreter and his wife, June, are retired in Oxford, Miss., but involved in a variety of civic organizations. For many years he worked in chemical sales and owned a janitorial supply company in Oxford. They have three college graduate children and 10 grandchildren.

Bob Barker and his wife, Joyce, live in Athens, Ga., where Bob chairs the Community Tree Council. He worked for many years for St. Regis in Florida and then as director of commercial applications for SPOT Image Corporation, the U.S. distributor of data from the French satellite SPOT. He also taught part time at the University of Georgia. They have four children and 13 grandchildren.

Carl Abarr writes from Heber Springs, Ark., that they heat their home with wood from their 10 acres although age and poor hearing keep him from chain saw work.

1959

CLASS SECRETARY:

Hans Bergey [hberg16@aol.com](mailto:hberg16@aol.com)

1960

CLASS SECRETARY:

John G. Hamner [jgham@bulloch.com](mailto:jgham@bulloch.com)

1961

CLASS SECRETARY:

Roger W. Graham

1962

CLASS SECRETARIES:

James H. Lowe Jr.

Larry O. Safford

[lsaffordnh@earthlink.net](mailto:lsaffordnh@earthlink.net)

Jeff Burley, Ph.D. '65, has been elected an honorary member of the Society of American Foresters. He recently gave the keynote address at the International Union of Forestry Research Organizations (IUFRO) conference in Korea on the role of genetics and physiology in forest restoration.

Robert Van Aken has been elected a fellow of the Society of American Foresters.

FORTIETH REUNION May 31—June 2, 2003

1963

CLASS SECRETARY:

James R. Boyle [jim.boyle@orst.edu](mailto:jim.boyle@orst.edu)

Bill Smith and his wife, Fox, run weekly forest "eco-snowshoe" tours out of the Nordic Center on White Mountain National Forest trails in New Hampshire (see photos on page 49). Bill also does environmental consulting from his place of retirement at Moultonborough, N.H.

Harry Wiant has come out of retirement from West Virginia University to become Ibberson Professor of Forest Resource Management at Penn State.

1964

CLASS SECRETARY:

G. Wade Staniar

George S. Nagle, Ph.D. '70, and his wife, Mary, wrote in last Dec. to say they have moved to the Okanagan Valley in British Columbia after 40 years living on the waterfront in Sooke, B.C. They wrote: "Grandchildren have increased to five, ages 2 to 10; sons David and Geoff both surviving well. Granny and Grampa are also in good shape, went to Whistler and North Vancouver to visit the kids over Christmas. We will do some snow-birding in Palm Springs this year as well."

1965

CLASS SECRETARY:

James E. Howard [jhoward@sfasu.edu](mailto:jhoward@sfasu.edu)

1966

CLASS SECRETARY:

Howard C. Dickinson Jr.

1967

CLASS SECRETARY:

Robert W. Hintze [bclues@aol.com](mailto:bclues@aol.com)

THIRTY-FIFTH REUNION May 31—June 2, 2003

1968

CLASS SECRETARY:

Gerald D. Gagne

[gerald.gagne@sympatico.ca](mailto:gerald.gagne@sympatico.ca)

1969

CLASS SECRETARY:

Davis Cherington

1970

CLASS SECRETARY:

Whitney A. Beals

[wbeals@neforestry.org](mailto:wbeals@neforestry.org)

1971

CLASS SECRETARY:

Harold T. Nygren [Tnygren@juno.Com](mailto:Tnygren@juno.Com)

1972

CLASS SECRETARY:

Ruth Hamilton Allen

[ruth.allen@aehinstitute.com](mailto:ruth.allen@aehinstitute.com)



# ClassNotes

THIRTIETH REUNION May 31—June 2, 2003

1973

**CLASS SECRETARY:**

**Lauren Brown** [leb481@aol.com](mailto:leb481@aol.com)

**John Aber** writes: "I am still professing at the University of New Hampshire, now in my 16th year. I'm chair of an inter-college Ph.D. program in Natural Resources and Earth System Science that includes students doing theses on topics ranging from biogeochemistry to ethics, which I like to think perpetuates the idea of interdisciplinary approaches learned at F&ES. I've been lucky enough to reconnect with the Hubbard Brook project and greatly enjoy working with several alums of F&ES and other Hubbard Brookers.

**Jerry Melillo '72, Ph.D. '77**, and I published the second edition of *Terrestrial Ecosystems* last year, with a dedication to Herb Bormann for getting us started in the field with the TerrEco course he and Tom Siccama taught, and for his long-term inspiration and counsel. It is a little spooky but also a little gratifying to hear my own students refer to the class I teach as TerrEco. Tom actually sent me, several years ago now, the original of a paper I wrote for that class in 1972 by way of a new graduate student, **Jen Jenkins '95**, who was coming from F&ES to do her Ph.D. here with me. It's been great to see Tom again at the Hubbard Brook meetings. I'm planning to attend the reunion this May/June and hope to see some familiar faces and to catch up on missed stories.

**Frederick Buttell** will be appointed William H. Sewell Professor of Rural Sociology (effective July 1) at the University of Wisconsin, Madison, where he is an affiliate professor of environmental studies.

**Bob Cashel** writes: "After nearly 30 years of work, I have reluctantly joined the ranks of the retired. My career has been in three industries: forest products, telecom and satellite services. Despite my current status, I am looking for a new and rewarding position while taking some continuing education courses in

plant biology. It's tough getting back into the academic mode. I would like to go back into forest products or some related field. On the family side, my daughter, a recent graduate from Boston College, is working for the Nevada Department of Conservation as an Americorps volunteer. She is discovering the joys of the chain saw, etc. Everybody else is at home and gainfully employed."

**Clyde Cremer** writes: "My wife and I are still in the log home manufacturing business. We go under the name of American Log Homes and have a plant in Pueblo West, Colo., and Bourbon, Mo. This is our 26th year in the business. The two children are in college. I go to Europe once a year to visit the battlefield because I am into military history, especially World War I. Last fall my wife Gail went with me, but with a minimum emphasis on battlefields on that trip! I may go over to see Steve Damnjanovich in Belgrade, Yugoslavia, on the next trip as we still keep in touch."

**Roy Deitchman** has been working at Amtrak in Washington, D.C., since 1999 as assistant vice-president-environmental. Through Amtrak's budget crises, he has been able to implement an environmental management system and help undertake some natural resource improvement projects along the railroad right-of-way. In 2001, his family relocated to Rockville, Md., from New York. His son Ben is a sophomore at Johns Hopkins and youngest, Rich, is an 11th grader. There have been a few Amtrak projects at the New Haven station and environs that have gotten him close to F&ES.

**Tom Dunn** writes: "I am wrapping up, no pun intended, my first 25 years in the flexible packaging industry. After that much time, I hope to justify an industry first—energy-cured, non(VOC)-polluting, manufacturing line for my employer this spring. I received the Technical Achievement Award from the TAPPI Polymers, Laminations, and Coatings Division last fall. My son Mark will start as a member of Yale College Class of 2007 this fall, so now I'll have reason to

visit Prospect Street more often, and I look forward to watching the new F&ES facilities take form."

**Joel D. Ferry** writes: "After graduating from Yale, I moved to the west coast of Mexico to head the first federally funded commercial timber plantation project in the country. After working at it for four years, I became greatly disillusioned by the rampant corruption throughout the government-controlled forestry sector of the economy. Consequently, I decided to make a career change and, by mere chance, I went into marketing research first with Procter & Gamble, based in Mexico City, and then in Cincinnati. I then worked for 17 years for R.J. Reynolds Tobacco International, based in Miami, Puerto Rico, Japan and Switzerland, while doing research in 86 countries. After becoming corporate vice president worldwide for RJR, I decided I had had enough of the tobacco industry and its associated heavy travel schedule. Five years ago I accepted a job with a Mexican multinational food company (Grupo Maseca, otherwise known as Mission Foods in the United States) to head its worldwide marketing research function. I now live with my wife of 34 years in Monterrey, Mexico."

**Lloyd Irland** is still active in consulting work with clients in Quebec, South Dakota and Maryland.

**Tom Kohlsaet** enjoys working on the Natural Heritage and Wildlife Diversity programs in his adopted state of South Carolina. Who would have guessed that he'd last this long after heading South for a one-year contract, fresh out of F&ES? It helps to have married a native. He writes: "Now we're enjoying following favorite son Dean Speth's progress. We also look forward to slowing down one of these years and renewing old F&ES acquaintances."

1974

**CLASS SECRETARY:**

**Leonard A. Lankford Jr.**  
[lenlankford@piopc.net](mailto:lenlankford@piopc.net)

1975

**CLASS SECRETARY:**

**Ann G. Corcoran**

**Patrick Lee** writes that he is working as the long range planning manager with the Clark County Community Development Department in Vancouver, Wash. His daughter Robyn is 19 years old and just graduated with honors from West Linn High School in West Linn, Ore., last June. His son Darren is 16 years old and a sophomore at West Linn High School.

**Les Corey** writes: "I am still located in Arizona, but moved from the Nature Conservancy to the National Audubon Society two years ago to assist with Audubon's decentralization and development of state programs. I have recently been appointed director of field operations for all Audubon state programs nationwide. I am on the road a great deal, including

FIRST BALLIE FAMILY CHAIR IN CONSERVATION BIOLOGY AT QUEEN'S UNIVERSITY



Raleigh Robertson

**Raleigh J. Robertson '69, Ph.D. '71**, has been named the first Baillie Family Chair in Conservation Biology at Queen's University in Ontario, Canada. The position was endowed by Mr. and Mrs. Charles Baillie and family and is linked to Queen's University Biological Station, where Raleigh has been the director since 1972. During his tenure, Robertson has worked to expand the station from its initial land area of 60 acres to the current 6,000 acres. The Q.U.B.S. properties now constitute an important conservation presence in the area and a diverse array of habitats for use in teaching and research. In 2000 a new year-round Biodiversity Center was opened, allowing expansion of programs into early spring, late fall and winter. Robertson credits people such as Rick Miller, Herb Bormann and Tom Siccama; the seminar series "Issues in the Environmental Crisis," which brought in guest speakers Garret Hardin, Paul Ehrlich and Stuart Udall; and fellow students such as **Andy Johnson '68, Ray Clarke '69, Ph.D. '73, Floyd Connor '70** (who still works with Raleigh at Q.U.B.S.), **Hamish Kimmins '68, Ph.D. '70, Larry Forcier '68, Ph.D. '73, Hank Art '69, Ph.D. '71, Peter Marks '68, Ph.D. '71**, and many

others with helping him develop the interest and the motivation to help build a program in conservation biology that should contribute to the education of students in this area for many years to come.

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# ClassNotes

several trips each year back East. I have recently become a grandfather for the second time and love this new lease on youth. Our grandsons are nearby in Tucson so we get to see them often, which is one of the reasons we decided not to move when I took on this new assignment with Audubon.”

**1976**

**CLASS SECRETARY:**

**Howard F. Corcoran**

**Louise Tritton** and Tom, her husband, enjoy life at Haverford College. Louise is an ecological consultant and recently finished a five-year project on urban park restoration in Philadelphia.

**1977**

**CLASS SECRETARY:**

**James M. Guldin**

**TWENTY-FIFTH REUNION May 31—June 2, 2003**

**1978**

**CLASS SECRETARIES:**

**Susan P. Curnan** [curnan@brandeis.edu](mailto:curnan@brandeis.edu)

**L. Marie Magleby**  
[LoMaMag@aol.com](mailto:LoMaMag@aol.com)

**Regina Rochefort**  
[regina\\_rochefort@nps.gov](mailto:regina_rochefort@nps.gov)

**Bruce Larson** has left the University of Washington to become FRBC Professor of Silviculture at the University of British Columbia.

**Jeff Cassis** writes: “I married Patti O’Brien, the woman I was dating when I was at Yale. We will celebrate our 25th wedding anniversary this year. We have been blessed with two children. Caitlin is a junior at Colby College and Connor is a junior in high school. Pattie and I have spent the last 18 years restoring our 1815 federal colonial, which is truly a labor of love. My education at Yale prepared me to work in the environmental engineering field at Camp Dresser & McKee for the first five years after graduation. I then moved into the semiconductor industry, working for various companies that design and market factory automation and control systems.”

**Luke Umeh** returned to his job as senior forestry officer with the Federal Nigerian Forestry Department after graduation. Later he worked as a co-manager of a large FAO Forestry Inventory and Management Capability Project. In 1980 he became program director with the donor-assisted Forestry Development Programme in Nigeria, responsible for both afforestation of arid lands of the Nigerian Sahel and management of tropical forests in the high forest region. Luke left Nigeria in 1992 to join the African Development Bank in Abidjan, Côte d’Ivoire, where he became chief of the Agriculture and Rural Development Division and tackled food security and

**DOTTAVIO ’75 NAMED PRESIDENT OF HEIDELBERG COLLEGE**



F. Dominic Dottavio

F. Dominic Dottavio ’75, dean and director of the Ohio State University-Marion, has been selected as the 13th president of Heidelberg College, a liberal arts college in Tiffin, Ohio. His tenure begins July 1.

During the past nine years at Ohio State University-Marion, Dottavio has increased enrollment and student financial aid, and has added to the campus an outreach center, a new library, a childcare center and a maintenance building. In addition, the curriculum expanded to include new degree programs in business, education, English, nursing, psychology and social work.

Before joining Ohio State, he was the chief scientist for the southeast region of the National Park Service for seven years. Prior to that he was the director of the Clemson University Cooperative Study Unit, where he managed research, training and outreach programs for the U.S. Department of Interior. In the late 1970s and early ’80s, he was head of surveying and forecasting for Heritage Conservation and Recreation Service in Washington, D.C., and director of the Center for Natural Areas, formerly the ecology program of the Smithsonian Institution.

In addition to his master’s degree in forest science from F&ES, Dottavio holds a bachelor’s degree from Ohio State University and a doctoral degree from Purdue. He and his wife, Lisette, an accountant, are the parents of two children, Aaron and Adrea.

environmental problems of the continent. He retired at the end of February at 60. He writes that his four children are well and living in the United States: Nonye, first daughter born in New Haven in 1977, has an M.P.H. from George Washington Medical School and currently is a research associate with George Washington Medical Center; Ifeanyi, first son, has an M.D. from George Washington Medical School; other son Chidulue will graduate this May from the University of Baltimore with a master’s in finance; and other daughter Ogechi is in her third year at Hood College, majoring in both economics and management. Luke will be back and forth between Virginia and Abuja, Nigeria, and available for advisory services in case anyone is interested in hiring him. In 1998 Luke visited F&ES after 20 years and “was treated to a great tour by our indomitable Dave Smith.”

**Ken Rosenbaum** writes: “I am still based in Washington, D.C., consulting on policy and law issues. I migrate to Oregon every summer to teach an environmental law and policy course. Highlights of work in 2002 included returning to Yale to speak on illegal logging at the International Society of Tropical Foresters conference and having my draft forestry law introduced to the newly elected assembly in Kosovo.”

**John Hoffnagle** writes: “I am turning 50 this year—big hurdle for me—plus it’s also my 20th wedding anniversary. I have a daughter, Elena, 13, and a son, Nicholas, 9. I have been at the Land Trust of Napa County since 1989 and have protected over 33,000 acres here. I am keeping up with a few Yalies: **Peter Lewis ’80**, who runs the California Conservation Corps Backcountry program, **Kent Olson ’80** of Friends of Acadia and **Ed Becker** of Essex Greenbelt. I am looking forward to seeing everyone at the 25th reunion in New Haven at the end of May, and I apologize to anyone whom I have not kept up with over these 25 years, but I pledge to make it up to you.”

After graduating from F&ES, **Nickie Irving** enrolled

in a Ph.D. program at Stanford to study ecological anthropology, where she enjoyed spending time with **Tim Wood ’72, Ph.D. ’80** (before he moved to Utah), and **Steve Hamburg ’77, Ph.D. ’84**, when he did a postdoc in biology. Nickie’s fieldwork included two-and-a-half years in the Ecuadorian Amazon, where she lived in a small, isolated community of Runa Indians on the Payamino River, studying their management of forest and riverine resources. “It was a fascinating moment in time to be in the upper Amazon forest because of the major landscape transformations (deforestation, etc.) from oil development and because of the massive changes under way in both local indigenous communities and regional organizations that ensued.” After finishing her thesis, Nickie returned again to Ecuador with a Smithsonian Tropical Research Institute (STRI) postdoc, spending two more years in Napo Province working with local communities in collaboration with two Amazonian indigenous federations. She then continued to work in and visit Ecuador several times a year for seven or eight years, first as program director for Indigenous Forest Management with Cultural Survival (CS) and later as field program director. As a result of her involvement with community forestry projects at CS, Nickie got involved with forest certification discussions, and she was one of the people involved in developing the idea of the Forest Stewardship Council. She was subsequently elected a member of the first (interim) board and then the first board of directors. Her involvement with FSC has spanned about 12 years, and she is still involved as the coordinator of the Social Working Group. Along the way she has enjoyed working with more recent Yale alumni, including **Chris Elliott ’86** and **Bruce Cabarle ’83**. Nickie has been teaching anthropology part time at Stanford since the early ’90s, and she is now teaching courses such as Indigenous Forest Management, Social Policy for Sustainable Resource Use and Human Ecology of

# ClassNotes

the Amazon. Nickie writes regarding all her travel to forested areas of the world: “John Dorfman and I have managed to maintain our long-enduring relationship despite his lack of enthusiasm for bug-infested, remote locations without access to the *New York Times*. After more than 30 years together, we are happily ensconced in an old home in San Mateo, Calif., with enough land for a respectable vegetable garden and a still growing collection of cookbooks.”

**Cathie Hopper** married David Perlman right after leaving F&ES. They moved to New Hampshire and while David attended Dartmouth Business School, Cathie taught high school science, was a researcher at Dartmouth Medical School and had terrific opportunities to ski. Cathie and David then moved to Washington, D.C., where Cathie attended Georgetown Law School. She practiced pension and tax law first in New York City with two law firms, including Winthrop Stimpson, and then at Cummins and Lockwood in Stamford, Conn. Cathie and David have two daughters, Elisabeth (Bitsy), 18, at Carleton College in Northfield, Minn., and Mark, 12, at Eagle Hill School in Greenwich, Conn. Cathie retired from law in 1995 to spend more time with her family. She now concentrates on teaching at the Greenwich Audubon Society and Sunday School. She is president, with David, of a local ballroom dancing club. Cathie looks forward to connecting with many of her classmates again.

**Edward O. Becker** writes: “I’ve just completed my 16th year as the executive director of the Essex County Greenbelt Association, a land trust on Boston’s North Shore. As part of my work on statewide land conservation policy, I collaborate regularly with classmate Loring Schwarz from The Nature Conservancy. I’m looking forward to seeing old friends at the 25th reunion!”

**Edward A. Hogan** writes: “It seems hard to believe it has been 25 years since we graduated from the forestry school. I have been practicing environmental law for the past 22 years. After a brief two-year stint in Ohio, I have spent the last 20 years in New Jersey. I spend a great deal of time with the environmental committees of several business trade associations in New Jersey, as well as serving on the Board of the New Jersey Audubon Society.”

**Gordon Smith** writes that he will be attending the reunion in May.

Still mixing science with speculation and flitting across disciplinary boundaries to address issues of environmental and social justice, **Susan Curnan** is associate professor of social policy and management and co-founder/director of the Institute for Sustainable Development at Brandeis University’s Heller School. Susan joined the Brandeis faculty in 1983 following her work with a private foundation dedicated to the environment, education and civil rights. She continues to blur the lines between work and play and is happily ensconced with her life partner, two kids and a dog in an old farmhouse near the Sudbury River in Massachusetts.

**Dana Tomlin, Ph.D. ’83**, just can’t get away. Since 1989 he’s been returning to F&ES weekly to teach a course every semester on geographic information systems. With a home in central Massachusetts and another life as professor of landscape architecture and regional planning at the University of Pennsylvania, Dana makes Sage Hall a regular stop along the way.

**Tom Rumpf** writes that he is the associate state director/director of protection for The Nature Conservancy (TNC) in Maine, working on land transactions and administration. He played a role with Director **Kent Wommack ’82** in some of TNC’s most significant deals in Maine, most recently the 240,000-acre Katahdin Forest Project, south and west of Baxter Park, and the 200,000-acre St. John Project in 1998. He writes: “My career to date could be described as either well-rounded or indecisive. After nine years in the public sector with the Maine Department of Conservation/Forest Service, I spent seven successful and memorable years working in the for-profit organics recycling business and now have been eight years here in the nonprofit sector. Over the last 15 years I have been active on a number of town committees in my local community of Freeport, home of L.L.Bean. In an effort to ensure that the council is focused on working together with town employees, I plan to run as a candidate for Town Council in my local South Freeport District—my first attempt at elective office since I ran unsuccessfully for an officer’s position in the Yale Forestry Club. I am supported in my endeavor by my wife of 14 years, Annee, who is wondering if I have lost all sense of sanity. I have the reunion weekend on my calendar and am hoping that my schedule will allow me to make the trip.”

**Ralph Schmidt** has been working on tropical forestry since 1978. “In Puerto Rico I helped with many field trips with Smith, Siccama and others. I helped John Gordon start the Tropical Resources Institute (TRI) at the school. I worked on forest projects and policy for the United Nations for 16 years until last year, with six of those years under Gus Speth at the United Nations Development Programme. I’m now CEO of a sustainable forestry company with land in Argentina and John Gordon is our chairman (see story on page 26). My wife is **Susan Babcock ’82**.”

**Bill von Segen** is working with the U.S. Forest Service in Portland, Ore., managing the Economic Action/Community Assistance Programs for the Pacific Northwest Region. Since the inception of the National Fire Plan in 2001, this has included efforts to provide planning, education and fire prevention grants for rural communities in Oregon and Washington.

**Regina Rochefort** has been working for the National Park Service since 1979. “In 1990, I went back to school for a Ph.D. at University of Washington while working at Mt. Rainier National Park as the botanist. I finished that in 1995 and in 1998 transferred from Mt. Rainier National Park to North Cascades National Park where I am a science advisor. My husband, Steve

Gibbons, also works for the National Park Service and we have two teenage boys, Shane and Taylor. Shane is in eleventh grade and on the varsity basketball and tennis teams and starting to look into colleges. Taylor is in ninth grade and is on the varsity tennis team and freshman basketball team. As you can probably guess, Steve and I spend most of our free time attending high school sporting events.”

1979

**CLASS SECRETARY:**

**A. Carey**

[john\\_carey@businessweek.com](mailto:john_carey@businessweek.com)

1980

**CLASS SECRETARY:**

**Sara B. Schreiner-Kendall**

[sara.kendall@weyerhaeuser.com](mailto:sara.kendall@weyerhaeuser.com)

**Christopher LaFarge** writes: “I’m in the midst of a healthcare startup. We are creating software for the operating room and intensive care unit. Vicki (Van Steenberg) is now chair of her department at Bentley College, which means she gets to put in long hours working schedules, course enrollment and other thankless tasks, instead of teaching.”

**Laura Snook, D.F.E.S. ’93**, continues at the Center for International Forestry Research in Bogor, Indonesia, although most of her research is still focused on Latin America. She writes: “After seven years I have recently completed a series of experiments and ecological studies in Mexico and Belize, following up on my dissertation research on mahogany regeneration and sustainable management. I am also working on sustainable forestry in Brazil, Bolivia, Peru and Indonesia. I enjoyed stopping in on **Dave Kittredge** and **Matt Kelty ’81** at UMass last October, giving a talk there, and at F&ES last November where I briefly visited with Tom Siccama and said hello to Bill Burch and Graeme Berlyn during a glorious New England fall day.”

**Jane Sokolow** writes: “I am running two inner-city greening programs for an organization I was previously a board member of, Environmental Action Coalition (EAC). The first program is street tree planting in underserved neighborhoods. Street trees in New York City are planted upon the request of the homeowner, landlord or building owner. This program sends members of community groups door to door to get the approval of the appropriate person. In Green Point (Brooklyn) and Sunnyside (Queens) we have collected hundreds of signatures and the Parks Department is planting the trees. The second program involves acquiring much-needed pockets of open space, again in underserved neighborhoods. I have an organizational seat on the New York State Open Space Advisory Committee, the agency through which open space can be acquired. Spaces include vacant lots and pieces of property that may have back



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taxes owed or have been forgotten. I went to Alaska with the Wilderness Society in June and spent some time in Denali. I continue to work on open space, watershed and preservation issues in the southwestern Catskills as well as in New York City.”

**Jim Thorne** writes: “I am very happy to be working at Natural Lands Trust as the new director of science and education. My job involves establishing new conservation initiatives and helping to raise the funds to support them. My focus is on landscape-scale conservation in southeastern Pennsylvania and southern New Jersey.”

**Peter Lewis** is administrator of the Klamath Service District of California Conservation Corps in the northern coast range. He puts crews of young adults out in the woods fixing wilderness trails for six months at a time. “They learn the value of hard work, community and the importance of preserving some of our nation’s most precious lands. They live in little tents and move big rocks. Once each week a string of mules brings them groceries and mail. No TV, drugs or booze. No internet, cars or phones. They go to sleep under the stars, then wake before the sun to begin another day.” He and his young son get out of the office each summer to cheer them on.

**Ellie Lathrop** writes: “I am embarking on a new project as part of a team designing new exhibits for the World Forestry Center, soon to be renamed the Forestry Discovery Center, in Portland, Ore. I am doing this as part of my regular job managing forest land use for Weyerhaeuser. At home I am blessed to be the mother of two wonderful teenagers and am still happily married.”

**Charlie Nilon** writes: “I’m still in Missouri and, unlike what it said in the class notes from a couple of years ago, I’m at the University of Missouri-Columbia (not in St. Louis), in the Department of Fisheries and Wildlife Sciences, working on urban wildlife (not urban forestry).”

**Ruben Rangel**, Beatriz, Daniella and Dante still live in Santa Fe, N.M., enjoying the great outdoors and local diverse culture. Ruben is a health physicist and team leader at Los Alamos National Laboratory, is involved in several organizations and leads many outreach projects to the minority community. He works three extra jobs: teaching Introductory Computing in English and Spanish, teaching elementary school teachers how to use PCs and serving as computer specialist for a public school. He spends his time with his family and remodeling the old house and hopes to “find” money to fix up two classic cars. “We invite friends to stop by and visit. The area is beautiful and there’s much to see.”

**Al Sample** writes: “It is very fulfilling to continue carrying forward the ideals of F&ES (and a few of its recent graduates) at the Pinchot Institute. I am privileged to serve as the president of the F&ES Alumni/ae Association, helping the faculty, students and staff build on a century of accomplishment toward a truly global school of the environment.”

**Tom McHenry** continues to practice environmental law in Los Angeles. He recently stepped down as chair of the board of Wildlife Trust and now serves on the board of the California State Parks Foundation and the Santa Lucia Conservancy. When not in the office or coaching soccer, he can be seen inching his way up the San Gabriel Mountains on a bike, the only solace being that **John Echeverria ’81** is several thousand yards behind him. (John is in training for the 2003 Tour de Provence.)

**Bob Comer** has been appointed associate solicitor at the U.S. Department of Interior. Rumors that he can obtain snowmobile passes to national parks at reduced prices are incorrect.

**Kinny Connell** is an active member of the Vermont legislature.

**Susan (Suey) Braatz** now lives in New York, where she works for the United Nations.

**Curtis Rand** recently returned from fly fishing in the former Soviet Union. Apparently, the salmon are almost as big as the helicopters.

**David Kittredge** continues his part-time career as an ice fisherman in Ontario.

## 1981

### CLASS SECRETARY:

**Carol E. Youell** [envstew@snet.net](mailto:envstew@snet.net)

**Femi Olaleye** writes: “I am now working at the Agricultural and Rural Management Training Institute (ARMTI) in Ilorin, Nigeria. I teach courses in agroforestry, remote sensing of the environment and environmental management. Sometimes I do consulting assignments outside Nigeria. I was in Ethiopia and Côte d’Ivoire in the first quarter of this year. Two of my children, Olatokunbo and James, live in Milford, Conn., where they are students.”

**Ann (Hooker) Clarke, D.F.E.S. ’92**, took the position of president of the Washington, D.C. Chapter of the Federal Bar Association (FBA) on Oct. 1. She is also active on the steering committee of the Environment, Energy and Natural Resources Law Section of the FBA.

## 1982

### CLASS SECRETARIES:

**Barbara Jean Hansen**

**Kenneth D. Osborn**  
[forstman@fidalgo.net](mailto:forstman@fidalgo.net)

**Judy Perkins** writes: “Since Yale, I’ve re-invented myself three times professionally. After graduation I returned for a few years to research the pop ecology of right and humpback whales. By chance, I fell into the difficult role of leading natural history trips for Harvard and got to see much of our splendid Earth and its treasures without joining the military. But it meant being away from home too much, and a desire to build a community at home led me to Earthwatch

Institute, where I have been working for the last two years. I stay in touch with and occasionally see F&ES friends in New England: **Jennie Myers, Peter Cardellichio, Katy and Tom Walker, Marie Zack, Ann and Ben Niles, Gro Flatebo and Kent Wommack**. Being at home more means I can also indulge my interests more—singing in two groups, taking art classes, being active as a corporator of Emerson Hospital, taking time off in Maine and in the garden, or taking longer walks and cross-country skiing weekends.”

TWENTIETH REUNION May 31—June 2, 2003

## 1983

### CLASS SECRETARY:

**Stephen P. Broker** [lkbroker@snet.net](mailto:lkbroker@snet.net)

**Dave Loeks** ([loeks@yknet.yk.ca](mailto:loeks@yknet.yk.ca)) writes: “Greetings from the Yukon! I moved here after graduating (F&ES/SOM) and have been operating a management consulting company (sustainable development for natural resources and tourism) and a wilderness guiding company. In the last 19 years I’ve led expeditions throughout Arctic North America and Siberia. I have developed a two-week, wilderness canoe-based executive development course I would like to offer to F&ES and SOM alumni. The course provides the skills to transform participants from wilderness “tourists” to wilderness “travelers” competent to launch their own expeditions. In addition to wilderness skills, the course specifically addresses group leadership and team member-ship, meeting personal challenges and commitment to goals. My pilot expeditions testing these concepts were very successful.”

## 1984

### CLASS SECRETARIES:

**Dr. Therese Feng**  
[therese\\_feng@yahoo.com](mailto:therese_feng@yahoo.com)

**Roberta Tabell Jordan**  
[rjordan@clinic.net](mailto:rjordan@clinic.net)

**Shere Abbott** writes: “We’re back in D.C. with **Leah Haygood** and a few other ’84 holdouts. Had a 10-month stint in New York City when my husband left the Clinton administration and I left the National Academy of Sciences after 16 years, but we couldn’t work for nonprofits, live in 750 square feet and fish off the patio! Reconstructing our house here drove me away from home consulting and I’ve just signed on with the American Association for the Advancement of Science to run its international office and a new center on science.”

**Therese Feng** writes: “I’m working on Wall Street as an economist in emerging markets. Quite an interesting job although traveling gets old really quickly. Otherwise it is fair to say that I am taking an indefinite break from the thinking life as I cater to the demands (though mostly delightful) of a 2-year-old.



# ClassNotes

Frankly, Ivy League applications have nothing on applying to preschools in Manhattan—except one has greater behavioral leeway in ‘interviews’ (for instance, no debits for drooling).”

**Eva Mueller** writes: “After working in Costa Rica for almost 11 years, I moved to Japan almost two years ago to work for the International Tropical Timber Organization (ITTO) as assistant director for reforestation and forest management. My work implies a lot of travel, frequently takes me to Latin America, Africa and Southeast Asia, as well as to international conferences, where I occasionally meet some of our ex-classmates: **J.J. Earhart ’85**, **Bruce Cabarle ’83**, **Rick Weyerhaeuser ’83**, etc. I also see **Haydi Danielson ’85**, who did a joint degree with SOM, on a regular basis whenever my travels take me through the San Francisco area. And I meet with **Asmeen Khan ’86** from time to time when she comes through Tokyo. In November, Dean Speth visited the Yale Club of Tokyo when he was receiving the Blue Planet Award. He gave a nice talk on his view of the successes/failures of the World Summit on Sustainable Development in Johannesburg, which I had also attended.”

**Susan (Huke) Stein** and husband Bruce have two beautiful boys—Noah, 18 months, and Ben, 4 years. While they are the focus of her life these days, she still works part time for the Forest Service, Cooperative Forestry Staff, coordinating research on nonindustrial private forest landowners in Washington, D.C.

**Dusty Becker** writes: “I am still thinking about and working on biodiversity conservation in tropical nations. Mark Hollingsworth (Ph.D. ’85, Chemistry) and I are still together and are teaching at Kansas State University, a dual career solution. We don’t have any kids, but have three fabulous cats and six godchildren in Ecuador. I work with an indigenous group developing ecotourism and protecting a large cloud forest in western Ecuador at a place called Loma Alta. You can help out with that place and hang out with me if you join one of my Earthwatch Expeditions ([www.earthwatch.org](http://www.earthwatch.org) ‘Ecuador Forest Birds’). Mark and I also bought 120 acres near Mindo Ecuador as a buffer property to the Nambillo Protective Forest. We plan to start up a little eco-lodge there, study bird population dynamics and be at peace with the world. At home, I am really into playing Irish music, growing food, cooking, eating and hanging out with friends with similar habits. I have had the good fortune to cross trails with profs and students we knew at Yale here and there. I hope everyone is doing great!”

## 1985

### CLASS SECRETARIES:

**Alexander R. Brash**

**Margaret Rasmussen King**  
[theskings@attbi.com](mailto:theskings@attbi.com)

**Alex Brash**, chief of the Urban Parks Service for the New York City Parks Department, reported to the press that three eaglets established on cliffs at the

north tip of Manhattan departed on schedule after a successful summer of fishing in the Hudson. A fourth one had not learned about the perils of city life and was run over by a train below the cliff.

**Jim Coleman, Ph.D. ’87**, will become the vice provost for research at the University of Missouri-Columbia in May.

## 1986

### CLASS SECRETARY:

**Caroline Norden**

[cnorden@maine.rr.com](mailto:cnorden@maine.rr.com)

**Michael Bellmores** has moved back to Hamden, Conn., after leaving his position as a research meteorologist for a small defense contractor, Aeromet, due to health problems. For nearly 11 years after graduating from F&ES he did airborne (mostly Learjet 36A) and ground-based atmospheric research for the Department of Defense (DoD) and NASA. He writes: “The DoD work was in support of our country’s strategic, theater and tactical missile programs. The NASA work was in support of expanding ‘launch opportunities.’ During the first five years I mostly split my time between Tulsa, Okla., and Kwajalein Island, Republic of the Marshall Islands. From 1992 through 1996 my family and I lived on Kwajalein full time. (Kwajalein Atoll is an American missile test range rented from the Marshallese. At the time it was named the Kwajalein Missile Range, but is now called the Reagan Test Range.) I published two papers relating to two very different aspects of my work in 1994 in the *Journal of Atmospheric and Oceanic Technology*. Much of my other work was not for release. Those were wonderful and very fulfilling years that I would not trade for anything. We had the best equipment atmospheric researchers could ever want to play with, traveled to very different parts of the world and studied widely varied subjects. Cloud electrification and tropical cloud microphysics were two among them. I was like a kid in a candy store for all those years. My dear wife, Debby, and our three children, Michael, 16, Caroline, 14, and Jenna, 12, and I now live back where we started in Hamden. After my operations failed and my health grew worse, we were forced to leave our Island paradise home and move back here. Debby works at the Yale School of Music for the Oral History of American Music program.”

**Jim Chamberlain** reports that he finally finished his dissertation and received his Ph.D. from the College of Natural Resources of Virginia Tech “before the turn of the century.” He is now developing a research program with the U.S. Forest Service, focused on southeastern United States, examining the social and economic role of nontimber forest products including ginseng, black cohosh, ramps (wild onions) and galax (a ground cover used in the floral industry). He also coordinates the Research Group on Non-Timber Products of the International Union of Forestry Research Organizations (IUFRO). His spouse Cindy teaches

American Sign Language at the high school and university levels. He says: “Our children, Luke, 10, and Alexandra, 7 going on 17, are involved in all of the kid stuff (sports, scouts, music). When I’m not working, I’m trying to keep up with them.”

**Maggie Coon** reports: “My husband, Mark Wolf-Armstrong, and I are celebrating the one-year anniversary of our return to the Northwest from Arlington, Va. We’re still thrilled to wake up every morning to Olympic Mountain vistas and the broad reach of Puget Sound outside our living room. Mark heads up Restore America’s Estuaries, a coalition of habitat restoration groups. I’m director of external affairs for The Nature Conservancy of Washington, and delighted to reconnect with a vibrant Northwest community. Life is good. We love visitors.”

From a recent Christmas card, I gleaned that **Mark Dillenbeck** and his wife, Anne, have been living in Shelburne, Vt., with their two daughters, Claire and Ellen. Mark works for OCM, a quality assurance firm in Shelburne. Anne works as developmental educator and resource coordinator for the Family, Infant and Toddler Program. They enjoy the forests, lakes and mountains surrounding them and are committed to remaining in Vermont.

After two years of teaching biology and physics at Lexington (Mass.) High School, **Eliot Gimble** is on leave taking care of his 1-year-old son, Jonathan, and his big sister Rachel, who is now 6. He writes: “I help lead nature walks for Rachel’s kindergarten class as part of the Big Backyard Program at her school. When I am teaching, I try to help my 10th grade students appreciate global climate change and their place in the ecological mix.

From the D.C. area, **Dan Hellerstein** reports that he is still working as a gum mint researcher for the USDA Economic Research Service, analyzing how agriculture affects the environment. His latest project focuses on why people are interested in protecting farmland. His twin boys are now 10. “They’re smart, but they spend too much time yugio’ing or digimo’ing or whatever on their electronic entertainment. Susan is still working in public health statistics and has done her PTA president stint, but is busy with public school support and the occasional Shakespeare theater.”

**Kathryn Hunter** is in charge of Peace Corps conservation volunteers in Paraguay for the next two years and is based in the capital, Ascuncion. Her phone is 595-21-22-1782.

**Nels Johnson** writes: “After 13 years with the World Resources Institute, I finally escaped the Beltway last year. I’m working with The Nature Conservancy (TNC) as director of conservation programs for Pennsylvania. It’s been a great change in a lot of ways, not the least of which is that I actually get in the field almost every week for a day or two. Meanwhile Eileen works as a speech pathologist for a local school system and our kids, Stefan, 9, and Marget, 6, run us ragged between soccer, gymnastics, skiing, Scouts, Brownies and internecine warfare. We had the great

# ClassNotes

fortune to meet the **Chamberlains (Jim)** and the **Andraskos (Ken)** for two wild weekends in the Shenandoah Valley this past year. **Dan Hellerstein** dropped by to harass us one weekend and I was able to catch up with **Tom Duffus** at a TNC forest meeting in Oregon. We hope to catch up with more F&ESers this year”.

Also with TNC, **Betsy McGean** has a 3-year-old named Caitlin and a 9-month-old named William. She is working at TNC's Asia Pacific program based in Arlington, Va., building the capacities of partner institutions overseas to undertake conservation. Her family has decided to make a lifestyle change—away from the urban madhouse—and will be moving back to her roots (Norwich, VT./Hanover, N.H. area) by late summer.

**Steve Miller** left a job at a marine education center last year after 10 years of developing, implementing and teaching marine education programs for more than 100,000 K-through-adult students. He became more involved in local and community environmental issues as a volunteer during that period and jumped at the opportunity to run the coastal training program at the Great Bay National Estuarine Research Reserve. Steve works with all the communities in coastal New Hampshire, providing environmental training for decision makers. He says: “Life in Portsmouth is great. We have a spare bedroom for visitors—hint! We don't have any children but lots of animals and extensive gardens. There are only four Volvos in the shop, vintage 1958 to 1968.”

**Caroline Norden** writes: “Most of my time is focused on caring for our exuberant 3-and-a-half-year-old, Sarah, who now attends a local Waldorf School. My father passed away this Thanksgiving so I am somewhat preoccupied with his estate. I keep a small consulting business going, assisting Maine Coast Heritage Trust and local land trusts with various land protection projects. My partner, Curtis Bohlen, is a wetland ecologist and teaches environmental studies at Bates College. Thanks to all of you who responded to my e-mails. To those of you who didn't, please know that I may make up something about you next round unless I hear back from you!”

**Craig Ramsey** (cramsey@ufl.edu) is finishing up his postdoctoral work with the University of Florida (UF), Milton campus, near Pensacola. He received his Ph.D. from Auburn University in 2000; his doctoral project was in weed science and forest regeneration. Current projects include field research with agroforestry, cogongrass control, restoration of longleaf stands and weed control with southern pines. He is hoping to stay on at UF in a lab-tech position.

**Rob Ramey** and **Laura Brown** are with the Denver Museum of Nature and Science—Rob as chair of the Department of Zoology and Laura as a research associate. Rob is involved in research on Rocky Mountain Bighorn sheep as well as argali sheep in Mongolia (with Rich Reading of the Denver Zoo). Laura is writing a book about her experiences

studying elephants in Zimbabwe. Eva, 8, and Anika, 6, are looking forward to their first trip to Mongolia in September.

Also in the Denver area, **Rich Reading** reports: “I am still at the zoo and going to Mongolia a lot. I dragged Rob Ramey along with me last time and he seems to like the place. I have a couple new books out, so that's fun. I got married last year and my wife, Lauren McCain, will finish her Ph.D. in political science (on the Human Genome Project) any day now.”

Last year, **Mohammed Nuruz Zaman** retired from his position as chief conservator of forests in the Bangladesh Forest Department. He was elected as vice chair of the science and technology committee of the United Nations Convention to Combat Desertification (UNCCD) in the COP-4 meeting held in December 2000 in Bonn, Germany. He and his wife, Sultana Zebun Nesa, have two children, Md. Ferdous Bin Zaman and Farahnaz Sharmin Zaman.

**Sarah Clark** writes: “I'm working part time for the Conservation Law Foundation on a marine protected areas project. The project involves developing a science-based approach to finding areas that are important for the biodiversity of the Gulf of Maine and Georges Bank and conducting outreach to fishermen, managers and others to get a constructive dialogue on using marine protected areas more effectively to sustain fisheries, protect habitats and restore biodiversity. Luckily for me, I'm able to work on this exciting project via phone, DSL and plane trips to Portland and Boston, and still live in Philadelphia where I've been since 1995. Besides all that, I'm busy with my two girls and their active social lives—Marina, 8, and Amelia, 4—my husband Rob, school volunteer activities, ice hockey, church, walking the dog and trying to keep up with friends and relations as best I can.”

**Susan Pillings** writes: “I am still living in a great little house in the Oregon coastal rainforest just four miles from the beach. Two big dogs—Tornak, the white Wolf, and Atartak, the rotunde Boxer/Lab stray—have found their way into my life. Almost 6 years old now, Quitze Rose keeps me busy, happy and full of love. She has been my healer through some extreme reality shifts. I can't imagine life without this little one. I'm still absorbing the depressing news of my permanent disability from Lyme Disease as determined by a social security neurologist. I was infected in 1989 in California, didn't receive treatment soon enough, relapsed and gradually slid into brain damage and numerous other physical ailments. Finally a neighbor and nurse met me out walking the dogs and, knowing I was a Yale graduate, sensed something was wrong. It may have saved my life, but not my livelihood. We are hopeful and trying to keep up with the research. Presently I'm honored to be a mom for a wonderful child and, of course, would love to hear from friends. Just give me a few minutes to make the connections!”

**Brenda Lind** writes: “I've remained in New Hampshire for 15 years, which I never would

have imagined, and have also remained in land conservation work. I work part time for the New Hampshire Center for Land Conservation Assistance, where I provide support and training to land trusts and municipalities for their land conservation work. I also continue to work on publications for the Land Trust Alliance on conservation easement topics. But most important: Abby, 9, and Maggie, 7, and my husband, Gene, and I try to get outside often (for those of you who remember shaggy white Brooke, now 15, she's still hiking with us too!).”

## 1987

### CLASS SECRETARIES:

**Christie Coon** [cacoony@aol.com](mailto:cacoony@aol.com)

**Melissa Paly** [mpaly@aol.com](mailto:mpaly@aol.com)

**Melissa Paly** reports that *Livable Landscapes: By Chance or By Choice?* is finally airing on the small screen. The program is a one-hour documentary for PBS about communities in northern New England grappling with growth, sprawl and landscape change. To learn more, visit [www.crosscurrentproductions.com](http://www.crosscurrentproductions.com). Melissa visited F&ES to air the film in late February.

## FIFTEENTH REUNION May 31—June 2, 2003

## 1988

### CLASS SECRETARIES:

**Diane Stark (formerly Pierce)**

[dstark@bart.gov](mailto:dstark@bart.gov)

**Phillip H. Voorhees III**

[pvoorhees@npca.org](mailto:pvoorhees@npca.org)

**Michael Jenkins** is president and CEO of Forest Trends. In 1998 Michael was in a joint appointment as a senior forestry advisor to the World Bank. From 1989-1999 he was the associate director for the Global Security and Sustainability Program of the MacArthur Foundation. Michael's responsibilities with the program included all grant making in Latin America and the Caribbean, as well as overarching program management. He has contributed to a number of books and articles, and with Island Press published *The Business of Sustainable Forestry, Strategies for an Industry in Transition*.

**Diane (Pierce) Stark** writes: “I'm enjoying life in the San Francisco Bay Area—salsa dancing, going to the ocean whenever I can, playing piano and having fun with my two lovely red-headed daughters, Allyson, 12, and Phoebe, 8. As for my day job, I'm planning new rail extensions and transit-oriented development for BART, San Francisco Bay Area's train system. If any of you come to the Bay Area, please contact me.”

**Jeff Campbell** is at the New York office of the Ford Foundation working to support the growing community forestry movement in the United States. He and his family live in Ossining, up the Hudson



# ClassNotes

River, with two kids in college, a 13-year-old daughter, two dogs and 34 species of trees on their one-acre lot. "They all love to talk, especially the trees. I've been in touch with Jenny and Manuel; both are thriving."

**Cristin (Gallup) Rich** writes: "For the last nine years I have been privileged to be a stay-at-home mom for my twin daughters born in 1993. Five of those were spent living in New Delhi, India, where David was running an NGO focused on marketing agricultural technologies (mostly treadle pumps for irrigation). After five hard years, we moved back home and are thrilled to be living in Salisbury, Conn., my hometown, and breathing relatively clean air again. Smidgen, the TerrEco cat, made a round trip to India five times—she is still with us (we also have a lovable mutt, a bird and many fish). I am involved with a few local boards, volunteer for committees at the public school where my daughters are in third grade and co-lead a Brownie-Girl Scout troop. I just started a part-time contract with Hotchkiss, one of the local prep schools, developing new and supporting existing programs to reduce their environmental impact. I will be at the reunion as it is also David's 15th from Yale College."

**Jennifer Allen** writes: "After graduating from F&ES, I spent 10 years consulting at the World Bank on a variety of natural resource management and environmental projects (and getting a Ph.D. in environmental science and public policy, which was mainly an excuse NOT to commute to work for a few of those years!). I moved to Portland, Ore., in 1997, a quality of life move which my husband Wayne and I have never regretted for a moment. I worked at Ecotrust with Ted Wolf (spouse of **Karen McKay**) as a colleague, did some consulting for a variety of local groups and joined the Oregon Economic and Community Development Department in 2000 as the sustainable business liaison. My work with the state involves working on market development for sustainable forestry and sustainable agriculture products, developing strategies for electronic product stewardship and supporting zero waste strategies for businesses and communities. Wayne is now retired (poor man) and is enjoying his hobbies. We spend lots of time walking in Forest Park with our two dogs and enjoying our cat as well. We welcome visitors! One of the greatest things about living in Portland is having the opportunity to meet, work with and become friends with F&ES grads from other years, including **Maia Enzer '93**, **Karen Steer '99**, **Jill Ory '97**, **Rosemary Furfey '84**, **Tom Nygren '71** and others."

**Malcolm** and **Debbie North** are now in Davis, Calif. Debbie is working on land conservation efforts in the land trust world and Malcolm is a research scientist with U.S.F.S. Sierra Nevada Research Center and is part of the U.C. Davis Graduate Group in Ecology. They have a lively 5-year-old daughter, Aviva.

**Mike Gregonis** writes: "I'm currently working as a wildlife biologist for the Connecticut Department of Environmental Protection (DEP). Job duties include management of Connecticut's deer and wild turkey populations and research on cottontail rabbits. In

1998 my wife, Laura, and I moved into a new house in Ellington, Conn. Laura has also been working for the DEP as a conservation law enforcement officer. Our work schedules keep us very busy, but we do find time to enjoy many outdoor activities. It is hard to believe that we left F&ES 15 years ago to venture forth into the 'real world.' I hope all are well."

**Peter Connorton** writes: "After working for Connwood Foresters, Inc. for a year as a consultant, I took a job with the Town of Manchester Water & Sewer Department as watershed manager/forester, managing 4,000 acres of municipally owned working forest. Now after 14 years I am field maintenance supervisor. So, in addition to watershed management and forest management, my responsibilities include, but are not limited to, transmission, distribution, construction and sewer line maintenance. I live in Woodbridge, Conn., in a 109-year-old farmhouse with Sue M. My son, Connery, is a senior at Amity Regional High School where he is co-captain of his ski team. He is also a ski instructor at Okemo in Ludlow, Vt."

**Karen LeAnn McKay**, Ted Wolf, Laurel, 11, and Lydia, 7, just returned from a year spent in a small town in France. Ted and Karen took a sabbatical—Ted from a job as communications director of Ecotrust in Portland, Ore., and Karen from life in the United States, which always wears her out. Karen and Ted write: "We put the girls to work in a French public school and spent our days tramping the hills, arranging car insurance, drinking wine, discussing food and politics with new French friends, drinking more wine, traveling a bit and sampling new cheeses (did I mention the wine?). Our girls are now completely fluent in French. As for us, well ... we're

back and we wonder why?"

**Bill Green** has retired from his wetlands engineering and marina businesses in Guilford, Conn., and has moved with his wife, Tammy, to Portland, Maine. There they have opened a custom picture framing business. They are lucky that both their daughters, Cally and Laurie (with her husband), live nearby.

## 1989

### CLASS SECRETARIES:

**Susan M. Campbell**  
susan.campbell@attbi.com

**Jane Hoyt Freeman**

**Claudia Martinez Zuleta** writes from Colombia: "Time flies and children grow wonderfully ... Antonio will be 2 years old in a few months, while Pedro will celebrate his 4th birthday in May and will this September start his scholarly career at the Italian School of Bogota. I limit my travels as an international consultant to spend time with the family, the same as Marco, who has started projects that take him from the Choco (Pacific coast) to the Amazon region. All of us do the impossible to find time and excuses to take refuge together at the farmhouse in Barichara (in the north of Colombia about five hours by car from Bogota), where we find real happiness, the kids grow and develop at an accelerated pace, a small vineyard takes shape and little by little more dreams become reality. We are now back in Bogota and take on the new year with great hope for peace in Colombia, with greater security and more justice, more jobs and well-being for all and, above all, much enthusiasm."

## VICKI NICHOLS '90 RECEIVES CONSERVATION AWARD



Vicki Nichols and Bruce Goldstein with daughter, Melina Rae, and son, Ari.

works to determine the risk posed by vessel traffic and oil transport and how to respond to oil spills on the West Coast. In 1997 she was invited to join the Monterey Bay National Marine Sanctuary Vessel Management Work Group, which was formed by the National Oceanic and Atmospheric Administration and the U.S. Coast Guard to provide a management system for vessel traffic that maximizes the protection of sanctuary resources while allowing for the continuation of safe, efficient and environmentally sound transportation. Three years ago, the International Maritime Organization adopted the group's recommendations for vessels 300 gross tons and above. Nichols lives in Santa Cruz, Calif., with her husband, **Bruce Goldstein '90**, and their two children Ari, 3, and Melina, 9 months.

**Vicki Nichols '90**, director of research and policy for the nonprofit Save Our Shores, received the 2002 Conservation Award from the Monterey Bay National Marine Sanctuary, which is the largest marine protected area in the United States covering 5,322 square miles and 276 miles of central California coastline. The sanctuary was designated a marine protected area in 1992. The award recognizes individuals who are dedicated to sanctuary protection. Nichols was named executive director of Save Our Shores, which promotes sanctuary preservation, in 1993 and served in that position for seven years until attaining her current position. "The award is rewarding because I have been focusing on marine protected areas since I was at Yale and have devoted my career to not only establishing the sanctuary (while working at the National Oceanic and Atmospheric Administration), but also serving as the nonprofit watchdog the past 10 years."

In 1999, she was appointed to serve as the conservation representative for the United States for the British Columbia/States Oil Spill Task Force, a consortium of senior decision makers from Alaska, Washington, Oregon, California and the province of British Columbia. The task force works to determine the risk posed by vessel traffic and oil transport and how to respond to oil spills on the West Coast. In 1997 she was invited to join the Monterey Bay National Marine Sanctuary Vessel Management Work Group, which was formed by the National Oceanic and Atmospheric Administration and the U.S. Coast Guard to provide a management system for vessel traffic that maximizes the protection of sanctuary resources while allowing for the continuation of safe, efficient and environmentally sound transportation. Three years ago, the International Maritime Organization adopted the group's recommendations for vessels 300 gross tons and above.

# ClassNotes

1990

**CLASS SECRETARY:**

**Carolyn Anne Pilling**

**Tom Kelsch** is the director of conservation education at the National Fish and Wildlife Foundation where, among other things, he administers the Budweiser Conservation Scholarship Program.

1991

**CLASS SECRETARIES:**

**Dorothy Beardsley**

**Kristin Ramstad**

[kramstad@odf.state.or.us](mailto:kramstad@odf.state.or.us)

**Anne Harper** has been named executive director of Soundwaters, beginning March 1. Since graduating from F&ES she has held positions as president of Connecticut Audubon from 2000-2002 and executive director of the New Canaan Nature Center from 1992-2000.

1992

**CLASS SECRETARY:**

**Katherine Kearse (Farhadian)**

[farhadian@aya.yale.edu](mailto:farhadian@aya.yale.edu)

**Krystyna Stave, Ph.D. '98**, is now in her sixth year teaching in the environmental studies department at the University of Nevada, Las Vegas. She writes: "I moved here with some trepidation, but now I am quite fond of the area. There are incredible outdoor opportunities and very interesting environmental studies issues here."

**TENTH REUNION May 31—June 2, 2003**

1993

**CLASS SECRETARIES:**

**Dean Gibson** [deang@acpub.duke.edu](mailto:deang@acpub.duke.edu)

**Molly G. Goodyear**

[mandm4@mindspring.com](mailto:mandm4@mindspring.com)

**Heather L. Merbs** [hmerbs@aol.com](mailto:hmerbs@aol.com)

**Susan Helms Daley** is the new manager of resources and administration at the Massachusetts Audubon Society's Drumlin Farm Wildlife Sanctuary.

**Dean Gibson** is still enjoying the lemur life as the assistant director of the Duke University Primate Center. She has been at the Primate Center and living in Durham, N.C., with her longtime beau, Patrick, since her return from Madagascar in 1997.

**Bhishma Subedi** writes: "I have been working for the Asia Network for Small Scale Agricultural Bioresources (ANSAB). Established in 1992, ANSAB is committed to biodiversity conservation through natural products-based enterprises, community forestry capacity, growth of key stakeholders and

creation of an enabling policy environment by working directly with local community and collaborating with major stakeholders."

**Jon Cook** ([jon.cook@pf.ucsb.edu](mailto:jon.cook@pf.ucsb.edu)) is married and has been living in Santa Barbara, Calif., since 1995. He and his wife both enjoy the great climate and oceanside recreation. Elizabeth teaches English at the University of California-Santa Barbara and is an associate dean. Jon is the assistant director of physical facilities on the campus, handling landscape and environmental services. They have two boys, 4 and 9, who keep them plenty busy!

**Bernard A. Weintraub**

([bweintaub@shearman.com](mailto:bweintaub@shearman.com)) is married to **Ingrid Hopkins '91** and they have three daughters Elsa, Manya and Eva. Bernard is working as an environmental attorney at the law firm of Shearman & Sterling in New York City.

1994

**CLASS SECRETARIES:**

**Jane L. Calvin** [Calvin3621@aol.com](mailto:Calvin3621@aol.com)

**Jane M. Whitehill**

[janewhitehill@hotmail.com](mailto:janewhitehill@hotmail.com)

**Cynthia S. Wood**

**Nick Shufro** continues his work in Asia, including promoting improved industrial environmental performance and urban environmental management activities in India, the Philippines, Thailand and Vietnam. Recent activities include launching a voluntary public-private partnership to promote industrial energy efficiency in India and helping develop management plans for industrial estates with the Ministry of Industry in Vietnam. "I join a select group of Southwest commuters on the Monday morning 6:30 a.m. shuttle from Hartford to D.C., since my wife Jennifer and children, Zachary, 7, and Julia, 3, enjoy skiing in the great hills around Avon, Conn.

**Richard Haley** recently became the new director for centers and education for the National Audubon Society in New York. "I will be overseeing all of Audubon's nature centers and education programs for the entire state, and working to get new centers started. My wife (Eileen Fielding) and I have moved to the Berkshire Mountains of western Massachusetts.

**Steve Harrington** is still enjoying life in Santa Fe with his wife, Shiril, daughter Sionann, 2, son Oisín, 5 months, and working for Forest Trust and the Forest Stewards Guild.

**Anne Downey** is enjoying her first year since leaving Yale without a major life event (new job, babies, move, renovation) and is loving a regular life!

**Cynthia Caron** defended her doctoral dissertation last December and is a lecturer in the Department of Rural Sociology, Cornell University, teaching environment and society. She received \$70,000 from the John D. and Catherine T. MacArthur Foundation's Program on Global Security and Sustainability. She will

return to Sri Lanka in June to start a new project on internal displacement, repatriation and refugee policy.

**Marlene Cole** ([marlene@aya.yale.edu](mailto:marlene@aya.yale.edu)) finished her Ph.D. and is thrilled to have moved back to Boston, where she's involved in natural resource, ecological restoration and risk assessment work for ICF Consulting. She would love to hear from everybody.

**David Nemerson** and his wife, Cindy Freeman, have had an eventful year. After David completed his Ph.D. at Rutgers in spring 2001, they moved to Baltimore that December for David's new job at the National Aquarium, where he works as a conservation biologist in the Aquarium's Chesapeake Bay restoration program. Last June, they bought a house in Baltimore. On Feb. 4, 8-pound, 9-ounce and 20-inch Arlo Maxwell Nemerson was born; mom and baby are doing great.

**Lars Kulleseid** writes: "I am still New York State program director at the Trust for Public Land, and loving it. My partner, Mark Eisenhardt, and I are happy to announce that Liv Alyn Kulleseid Eisenhardt was born on April 12, 2002, in Yarmouth, Maine."

**Jessica Bennett Wilkinson**, husband Eric, and their 2-year-old Josh welcomed Ethan Lawrence Wilkinson to the family on Jan. 9. Jessica continues to work for the Environmental Law Institute from their home in Pennington, N.J., focusing on biodiversity conservation, invasive species management and wetlands policy.

**Jennifer (O'Hara) and Peter Palmiotto '92, D.F.E.S. '98**, bought their first house in Walpole, N.H., last June. In January, they visited Meg and **Kenny Fergusson '93, D.F.E.S. '99**, who hosted a Robert Burns Supper in honor of the Scottish poet, replete with haggis, "nips and tatties," Burns poetry and, of course, scotch. Yalies present included **John Gunn '96, Dan Hudnut '93** and wife Lynn, **Tom O'Shea '95, Brent Sohngen '96, Mark Ducey '92, Kate O'Brien '95** and **Jeremy Wilson '93**.

**Evie Witten and Randy Hagenstein '84** have moved back to Anchorage, Alaska. Evie has accepted a position with the World Wildlife Fund, working with **Margaret Williams '93** on Bering Sea Conservation. Randy is still doing great things with The Nature Conservancy.

**Rajesh Thadani** is working as executive director for Central Himalayan Rural Action Group (CHIRAG), a grassroots organization working on integrated development issues in 150 mountain villages of the Kumaun Himalaya (west of Nepal). He and his wife, Ritika, had their first child on Dec. 16. They named him Rishnav, which in Sanskrit means "eternal law."

**Tad Galion** and his wife, Kristen, now live in Bethesda, Md., with their 6-year-old daughter Emma. Tad has worked in the White House Office of Management and Budget in the Natural Resources Division for a bit more than three years. He writes: "I enjoy my job and the D.C. area, but not as much as my time as a stay-at-home Dad on the Navajo reservation a few years ago."



# ClassNotes

**Nicole Wilson Alsarraf** is living in Boston with her husband, Ramsey, and their 4-year-old son Maximilian. Ramsey and Nicole work together in his plastic surgery practice on Newbury Street and also have co-authored several articles on outcomes research in health economics. “So at least I am using my economics degree,” she writes. Nicole is also involved with the Massachusetts Horticultural Society. “We spend a lot of time on the hockey rink with our son and are excited to celebrate our 10th wedding anniversary this summer.”

**David Moffat** (mmoffat@mha2002.hbs.edu) writes: “We went cross-country skiing with **Lindsey Brace Martinez ’95**. Carol and I are living in southern New Hampshire on 500 acres of mixed hardwoods. After completing my M.B.A. at Harvard last spring (great experience, but not F&ES), I joined DEKA R&D Corp., which designed the Segway Human Transporter, to identify opportunities in developing countries for our new generator and water purification technologies.”

## 1995

### CLASS SECRETARIES:

**Marie J. Gunning**  
mjgunning@aol.com

**Ciara M. O’Connell**  
ciaramoconnell@aol.com

**Robert. J. Goldstein** is a visiting professor of law for the 2002-03 academic year at the United States Military Academy, West Point.

**Marie Gunning**, president of SOLANA Inc. of Portland, Maine, writes that she is working in Mexico on two “unusual” consulting projects—one on intensive Christmas tree cultivation in the Valle de Bravo area and the other on intensive plantations of cashew trees in Campeche.

**Will Scott** and Sandy did a lot of traveling last year, including tenting their way down Baja, Calif. Will recently completed an environmental assessment for one of the national forests in the Los Angeles area.

## 1996

### CLASS SECRETARIES:

**Kathryn A. Pipkin**  
**Julie A. Rothrock**  
julie.rothrock@amec.com

**Chris Hanson** (ellestadhanson@msn.com) and Anne Ellestad, ’96 Div., moved to Seattle just for fun after graduation and were married there in 1997. While in Seattle he worked on a number of issues, including nuclear weapons cleanup, watershed protection and endangered species, and they rehabbed a very old house (ask them about the sawed-off shotgun in the basement!). They returned to the East Coast in 2001 with their son Samuel, 3, to be closer to family and friends. Currently living in Damascus, Md., Chris is working for Booz Allen

Hamilton on the Department of Energy’s Yucca Mountain Project and Anne is a chaplain at a retirement community.

**Julie Rothrock** is living in Boston with her partner, Nancy, and their two dogs. She’s working as a consultant for AMEC, an environmental engineering firm, specializing in ecological risk assessment. She and Nancy enjoy owning their first home, turning the front yard into a vegetable garden and becoming experts in wallpaper removal and painting. They enjoyed a visit from **Alison Ormsby** last summer and had a fun weekend last fall in Vermont with **David Newman** and his wife, Angela, and **Jen (Beck) Plourde**, her husband, Brenon, and their son, Owen.

**Anne Reynolds** is living in Albany, N.Y., with her husband, Ed McCorry, and their big, dangerous cat, Sandal. Anne and Ed were married on Sept. 21, and were happy to be joined by a healthy batch of ’96 F&ESers: **Rhonda Williams**, Thomas Borchert and their multilingual son, Jasper; **Bob Fitzgerald** and **Kris Phelps** (minus their two very cute girls for the weekend); **Andrea (Kivi) Hood** with her husband, Steve, and kids, Liam and Mallory, all the way from Washington State; **Dan Utech** escaped from the Senate; and **Ted Wickwire** in from the wilds of Maine. Representatives from other classes were: **Lindsay Brace Martinez ’95** with her crazy dancing husband, Peter, and **Susan Helms Daley ’93** and husband, Sean, in from Boston. It was so great to see everybody, however briefly. **Namrita Kapur** was bridesmaid extraordinaire—although she forgot her dress, she looked smashing as always! Anne moved from Boston to Albany after some adventures in Cuba and hiking the Appalachian Trail. She was recently promoted to programs director at Environmental Advocates of New York, a nonprofit advocacy group, where she spends her time advocating for state clean air and energy policies, pushing for a global warming action plan for the state and generally telling everyone who will listen that New York needs renewable energy! Life for her in upstate New York is going well, and she is enjoying married life and living near her big goofy extended family.

**Alison Ormsby** defended her dissertation in December, is heading back to Madagascar this spring for environmental education consulting at the park where she did her Ph.D. research and will be an assistant professor of environmental studies at Eckerd College in St. Petersburg, Fla., starting this fall.

**Nathan Frohling** continues to enjoy being able to live and work in Connecticut, residing in Guilford with his wife, Debra, 3-year-old daughter Emma, and the wooden sailboat he was building during school which he now moors off his coastal home. After working as executive director of Soundwaters (Stamford, Conn.), he now enjoys working for The Nature Conservancy, with an office based in Essex, Conn. “This was my dream job when I was at F&ES. I am directing the Tidelands of the Connecticut River Program.” Saving the Roger Tory Peterson property in

Old Lyme and winning Congressional authorization of a Wild and Scenic River Study for the Eightmile River are two recent highlights.

**Ali Jalili** is a Foreign Service Officer (FSO) with the State Department. After a two-year tour in Bogota, a seven-month tour in Nairobi and a year in Washington, Ali and his wife, Courtney Chubb, an FSO with USAID, moved to Mexico City last May where they both work at the U.S. Embassy. They welcome anyone to come visit them and their beautiful 2-year-old boy, Brady. Ali had a fabulous time in October at **Jared Hardner**’s wedding, where he saw **Richard Osbaldiston**, **Nina Luttinger ’95**, **Greg Dicum ’95** and others.

**Kath Schomaker** and her partner Peter Haller live in Hamden, Conn., where they enjoy gardening, bicycling and parenting challenges. Kath’s daughter Claire is in her second year at Smith College; Peter’s boys are 11 and 15. When not at F&ES, where she is director of alumni/ae affairs, Kath is an active volunteer with Whitneyville Civic Association and the Green Sanctuary Program of the Unitarian Universalist Association. Kath’s favorite part of her job at F&ES is the opportunities she has to hear from, meet and get to know F&ES alumni/ae—from all class years, all sectors and all around the world! “I am in continuing education every day!”

**Jared Hardner**, living in Mountain View, Calif., with his wife, Shaye, is in the fourth year with his consulting firm, Hardner & Gullison Associates, LLC., which takes on creation, management and financing of protected areas, as well as economic and ecological analyses of environmental and conservation issues. He writes: “A summary of some of our work was published in *Scientific American* last May. Our wedding last October brought together the old housemates: **Ali Jalili** (diplomat with the U.S. Embassy in Mexico City) and **Richard Osbaldiston** (sans mohawk at my wife’s special request and currently finishing his Ph.D. in Missouri). Other West Coast foresters, **Greg Dicum ’95**, **Nina Luttinger ’95** and **Lydia Ollander ’95** also joined the party. To my pleasant surprise, no material damage occurred to the premises and everyone remained clothed throughout the ceremony and reception.”

**Ronnie Cherry** writes: “I married Pam Madamba on Nov. 28, in Singapore. **Heinrich Jessen ’95** was there to share in the joy. We live in Singapore, where we both work for Levi Strauss & Co; Pam is in marketing and I am in supply chain management. I am regional director for product assurance, responsible for factory code of conduct compliance (no sweatshops), product safety and product quality management. This keeps me on the road quite a bit (ran into **Franky Mo** on the ferry in Hong Kong). Since being in Singapore I have had visits from **Dave Newman**, **Diana Wheeler ’94** and **Ramsay Ravenal ’02** and look forward to more visits by F&ESers.”

After finishing his Ph.D. at MIT last year, **Saleem Ali** (saleem@alum.mit.edu) is now a tenure-track

# ClassNotes

assistant professor at the University of Vermont and also retains an adjunct faculty affiliation with Brown University. He has authored a book, entitled *Ore Conflicts: Mining, the Environment and Indigenous American Development*, to be published in July by the University of Arizona Press. Saleem and his wife, Maria, are the proud parents of two little boys, Shahmir, 4, and Shahroze, 14 months, and are enjoying their new home in Essex, Vt.

**Ben Becker** finished his Ph.D. in environmental science (marine ecology) at U.C. Berkeley in 2001 and is director of the Pacific Coast Science and Research Center at Point Reyes National Seashore in northern California. He works with researchers and graduate students to develop and implement research projects to improve conservation and understanding of marine ecosystems.

**David Casagrande** enjoys teaching anthropology at Appalachian State University in the surprisingly snowy mountains of North Carolina. He received his Ph.D. in ecological anthropology from the University of Georgia last December after spending 18 months in Chiapas, Mexico, conducting research. David, Donna and all of their critters hope to make a permanent move back to the Northeast soon.

**Karen Beard** recently moved with new husband, **Andrew Kulmatiski '99**, to Logan, Utah, where she is an assistant professor at Utah State University and Andrew is finishing his dissertation. They got married last summer in Los Angeles with many F&ESers in attendance: **Sanjay Baliga '01, Andrew Beckerman '94, Carlos Gonzalez '97, Derek Halberg, Christy Johnson, Indah Kusuma '98, Bonnie Mallory '99 and Elizabeth Saxton '98.**

**Andi Eicher** (andi@aya.yale.edu) has now been married for three years to Sheba and they are blessed with a beautiful daughter, Asha (Hindi for 'hope'), with a second child expected this past March. After working in a community health and development program in the Eastern Indian state of Jharkhand, Andi and Sheba have been helping set up HIV/AIDS care programs using community volunteers in the urban area of Mumbai. They currently live in Thane, a metropolitan area just outside Mumbai, and welcome any itinerant F&ES folks for a cup of sweet milky chai!

**David Newman** (newmand@alum.dartmouth.org) was married to Angela Merrill just over a year ago and they live outside of Boston in the rural town of Carlisle. David manages the Northeast regional office for EORM, an environmental, health and safety management consulting firm. He is a firefighter/EMT in his spare time and also enjoys telemark skiing and hiking with his wife and dog, Cody.

**Liza Esser** is living in Washington, D.C., working as a middle school science teacher. This summer she will be traveling to Australia and New Zealand as a student ambassador trip leader. Last December she enjoyed a tea party with fellow D.C. F&ESers: **Adena Messinger, Sharon Katz Cooper, Alison Ormsby, Liz Grinspoon and Michele Dash.**

**Sharon Katz Cooper** is living in Fairfax, Va., and working at the National Wildlife Federation as its curriculum specialist, writing and overseeing the creation of curriculum projects on all kinds of topics. She lives with husband, Jason, and son, Reuven, who was born last May and now occupies a lot of their time! They bought a house last February, and in November became the proud owners of a new Honda Civic hybrid car. They live near **Alison Ormsby** and also often see **Adena Messinger** and **Liza Esser.**

**Joanne Sculli** is still living in and loving New Haven. The organization she founded, Solar Youth (SY) Inc., is in its third year. SY is an environmental education and youth development organization that builds confidence and leadership in city kids as they address urban environmental issues. Thanks go out to fellow classmates who became Friends of Solar Youth (FOSY). Check out recent accomplishments at [www.solaryouth.com](http://www.solaryouth.com).

**Chris Cianfrani** is living in Burlington, Vt., working on a Ph.D. in environmental engineering at the University of Vermont. Her research focuses on stream restoration and the development of a watershed classification system. She still spends a great deal of time playing ultimate Frisbee, traveling to Boston to play with a women's club team during the fall.

**Jennifer Thorne** is in Washington, D.C., enjoying her sixth year with the American Council for an Energy-Efficient Economy, where she focuses on residential and commercial buildings. Jen lives with fiance, Rob, and their two cats, Mojo and Django. On semiannual trips to the West Coast, she gets to visit with Marcia Tobin and her partner, Bailey. In D.C., she enjoys spending time with **Anne St. John '98** and regularly running into other classmates.

**Derek Halberg** (Derek.Halberg@aya.yale.edu) and his wife, **Christy Johnson** (exchange scholar '96), celebrated their third anniversary last September. They live in Arlington, Va., where Derek works at the National Guard Bureau supporting natural resources programs at National Guard bases across the country. Christy works at USAID with **Danielle (McCourt) Typinski** and runs into many F&ES grads during her travels to Latin America. They had a great time last summer with other Yalies at the wedding of **Karen Beard** and **Andrew Kulmatiski '99**. Derek spent a fun day last fall exploring Great Falls Park with **Robin Sears** and **Alison Ormsby**. Also, Derek recently hosted **Chad Oliver '70, Ph.d. '75**, Pinchot Professor of Forest Policy, at a meeting of Army foresters to discuss applications of L.M.S. to military land management.

## 1997

### CLASS SECRETARY:

**Paul A. Calzada** [pcalz@metro2000.net](mailto:pcalz@metro2000.net)

**Jose J. Terrasa-Soler** has been awarded certification as a Qualified Environmental Professional (QEP) by the Institute of Professional Environmental Practice.

This is considered to be the highest accomplishment, signifying strong professional and ethical standards in the arena of environmental management. Jose is manager of the environmental unit for CSA Group Inc., in San Juan, Puerto Rico.

**Jon Kohl** writes that he is living in Stevens Point, Wisc., with his girlfriend, who is getting her master's degree in environmental education/interpretation. His writings on environmental interpretation can be found at [www.johnkohl.com](http://www.johnkohl.com).

## FIFTH REUNION May 31—June 2, 2003

## 1998

### CLASS SECRETARIES:

**Nadine Block**

[nadineblock@alumni.williams.edu](mailto:nadineblock@alumni.williams.edu)

**Claire Corcoran**

[corcoran\\_claire@hotmail.com](mailto:corcoran_claire@hotmail.com)

**John Kuriawa** writes that he and his wife, Kim, have a son, Alex John, who is nearly 2, and another child due this summer. John writes: "Thankfully, Alex's favorite pastimes include investigating plants and watching bats and butterflies. We are all enjoying life in suburban Washington, D.C., although I would certainly prefer more trees and fewer people!" John has left the EPA to become coordinator of the Coastal Non-Point Program at NOAA's Office of Ocean and Coastal Resource Management.

**Andrei Podolsky** is close to completing his Ph.D. at North Carolina State University. He wrote that as of last November, he was preparing to defend his dissertation. "**Doug Elliott '97** visited me twice, having visited **Indi Kusuma** and **Paul Gagnon** in Baton Rouge. Indi is a newlywed."

**Tobgay Namgyal** has been in Bhutan since 1999 directing the world's first environmental fund and gets to run around the national parks and stress over the stock markets. He and Anne have an energetic 2-year-old daughter, Jessie Choden, who keeps her parents on their toes. The Yale Bhutan Mafia is strong, and an important highlight was hosting Dean and Mrs. Cameron Speth to a quick visit in February 2002. (see story on page 12)

**Mila Plavsic** (milaplavsic@aya.yale.edu) has taken a leave of absence from the U.S. Fish and Wildlife Service to become a Ph.D. student in zoology at the University of Cambridge, U.K., where she is studying fire ecology in the Okavango Delta in Botswana. She has just left for a year in the field with husband, Todd Rogow. She would love to hear from classmates!

**Brian Rod** has been working in the land conservation field, first with the Taos Land Trust in New Mexico, and later with a group in the San Francisco Bay area. Last year he started Land Conservation Consulting Services ([www.conservationconsulting.net](http://www.conservationconsulting.net)), providing a variety of services to land trusts and public agencies—baseline documentation, monitoring and capacity building.

# ClassNotes

**Dirk Ludwig** (ludwig@aya.yale.edu) reports that he is self-employed as a financial planner for AWD, the largest independent financial advisor and leading player in Europe. He realizes that this does not have much to do with forestry and environmental studies, but he enjoys being self-employed. His wife Irene gave birth to their second son, Niklas, on July 5, 2002. He also reports that he lives close to Munich and that everyone is invited!

**Laurie Koteen** is in her third year of a Ph.D. program in global change ecology at U.C. Berkeley. Late last year she married Ned Bade. She reported on some fellow Bay area F&ESers, including **Rebecca Young** in Menlo Park, Calif., who has just completed several years working for the Stanford Center for Biodiversity, and **Ben Gardner**, who is also at U.C. Berkeley doing a Ph.D. in geography and spends a fair amount of time in East Africa.

**Todd Forrest** is the curator of woody plants at the New York Botanical Garden, where he is responsible for developing the tree collections, managing its 50-acre forest and working with their arboretum crew to keep the trees happy and healthy. He and his wife, Alison, now have two children, Jack, 3, and Will, 18 months. They live in Ridgefield, Conn., “the birthplace of disco.” He occasionally hears from **Joe Taggart**, apparently thriving in his position as “customer service specialist” in the wood products division at the Home Depot in Concord, N.H.

**Manrique Rojas** is senior advisor, conservation finance and policy, at The Nature Conservancy. He is based at the conservancy’s headquarters in Virginia, but his work will be focused on Latin America. He and his wife moved here from Costa Rica this past January and will be posted here indefinitely.

**Kevin Drury** is finishing his Ph.D. in ecology and evolution at the University of Chicago, and his wife is finishing her M.S. in early childhood education at Indiana University. Their three daughters are 2, 10 and 11 and doing well.

**Chris Williams** is in his second year of law school at the University of Alabama. He and his wife, Amy, are expecting their first child, a boy, to arrive sometime in early May.

**Sarah Whitney** is working for the Great Lakes Commission in Ann Arbor, Mich. She says Ann Arbor is great but the lack of mountains around there “stinks.” A highlight of the past year was a month-long trip to New Zealand and the Cook Islands. Photos and travelogue are available online at [www.whitneyepeters.org](http://www.whitneyepeters.org). She encourages everyone to drop a line if you are in her area!

**Paula Lebowitz** reports that after graduating from F&ES, she attended Pace Law School (graduated summa cum laude last year), where she was a research and writing editor on the Pace Environmental Law Review. She received the White Plains Bar Association Environmental Legal Scholar Award, and had an article published in the *Pace Environmental Law Journal*. She is a law clerk to the Honorable Nina

Gershon, judge in the Eastern District of New York. She still lives in Purchase, N.Y., with her two sons, Andrew, 14, and Eric, 15.

**Vanessa Johnson** is working at The Land Trust of Napa County, where **John Hoffnagle ’78** is the executive director (yes, he also worked with Bill Burch & Tom Siccama!). She reports that her job is typical of nonprofits, doing a little bit of everything including managing preserves, grant-writing, meeting with land-owners, negotiating and drafting conservation easements, GIS work, coordinating the field trip program, helping with the strategic plan and, yes, even wine-tasting! She hangs out quite a bit with other F&ES grads in the area: **Brian Rod**, **Jessica Hamburger**, **Becky Young**, **Laurie Koteen** (who recently married) and **Anne Brower ’99**. “We even get to hang out with **Jeannie McLain ’97** every other year or so when conferences bring her to the Bay area. She finished her dissertation at Duke last spring and is now working as a soil scientist for the USDA in Tucson.”

Your faithful class co-secretary, **Nadine Block**, really enjoyed hearing from so many of you in reply to her plea for class notes. She recently left her job of more than four years at the Pinchot Institute for Conservation, where she conducted research and analysis on forestry issues. She is now with the American Forest and Paper Association, working on public forestland issues on behalf of the forest products industry. Living and working in the D.C. area, she runs into fellow F&ESers on a fairly regular basis. While at the Pinchot Institute, she worked with **Will Price** who is quickly becoming an expert on forest certification.

## 1999

### CLASS SECRETARIES:

**Jocelyn Forbush** [jforbush@ttor.org](mailto:jforbush@ttor.org)

**Jennifer Garrison**  
[jennifermgarrison@yahoo.com](mailto:jennifermgarrison@yahoo.com)

**Christiana Soares**  
[christiana@aya.yale.edu](mailto:christiana@aya.yale.edu)

**Dan Shepherd** and wife, **Deb (Weiner) ’97**, had a baby daughter, Haley Lauren, on Jan. 8. Haley is now ambulatory and making her parents chase after her. Dan is still with the Multilateral Investment Fund (MIF) of the Inter-American Development Bank, which focuses on private sector environmental initiatives. Deb is at the E.P.A. in the Energy Star Program.

**Nam J. Zeon** is an economic counselor at the embassy of the Republic of Korea in New Delhi, India.

**Miguel Romero** writes: “At the present I am a manager of Forestal Santa Barbara, a forestry company in Salta, Argentina. The company is trying to get certified by the Forest Stewardship Council this spring, which is not a very simple task. My family got bigger since I left New Haven; in Salta we welcomed Victoria, 2, and Fransisco, 11 months. Let my fellow “clear-cutters” know that I continue playing soccer in Salta.”

## 2000

### CLASS SECRETARIES:

**Erika Schaub** [eschaub@geog.umd.edu](mailto:eschaub@geog.umd.edu)  
**Zikun Yu** [yuzikun2001@yahoo.com](mailto:yuzikun2001@yahoo.com)

**Sylvia Stone** has decided to move back to California, leaving her job as a program officer at the Wildlife Conservation Society.

**April Reese** has also been working for *High Country News* on the radio program and her voice can be heard on the public radio airwaves throughout the West.

**Janet Sturgeon** is a Freeman East Asia postdoc at the Watson Institute for International Studies at Brown University, where she is based in two programs, one in global environment and one in politics, culture and identity. She is also co-coordinator for a collaborative research network with James Scott (Yale). She writes: “We work with colleagues in Thailand (Chiang Mai University) and China (Center for Biodiversity and Indigenous Knowledge, Kunming) on Official and Vernacular Identifications in the Making of Modern Southeast Asia. Many network members are looking at the relationship between ethnic identities and land use. James Scott and I attended a network workshop in Kunming last July. Network members are writing up their research now, and we plan to have a concluding conference at Yale next October. I love teaching at Brown. In the fall I taught a senior seminar on the environmental state. My students were enthusiastic about learning the social theory related to the environment, something I studied intensively at F&ES. This spring I’m teaching a course on China’s environment.”

**Lara Katherine Bill**, the first “third-generation F&ES graduate,” is interim executive director of the Methow Conservancy in Winthrop, Wash. Her father, **Harthon H. Bill ’67**, and her late grandfather, **Harthon L. Bill ’35**, preceded her at F&ES.

**Becky Turner** writes: “I moved to Colorado in October with the Keystone Center to work with the more senior folks out here on projects more aligned with my background. I will probably be here for a year or two. The mountains are fabulous but there aren’t many full-time residents out here. It’s also hard to leave such a great group of F&ESers in D.C.”

## 2001

### CLASS SECRETARIES:

**Leigh Cash** [leighcash@aya.yale.edu](mailto:leighcash@aya.yale.edu)  
**Adam Chambers**  
[sebastianchambers@hotmail.com](mailto:sebastianchambers@hotmail.com)

**Jennifer Grimm**  
[jwgrimm@earthlink.net](mailto:jwgrimm@earthlink.net)

**Rick Fox** has been pursuing a Ph.D. at SUNY-ESF and is now a forest plan analyst in Allegheny National Forest. He writes: “I still hope to earn a Ph.D. before long, but I’m now putting it on hold until my Forest Service employment circumstances permit.”



# ClassNotes

**Catherine Hardy** is an energy program specialist with the Oregon Office of Energy. She writes: "I've been here about six months. I work on green design and energy efficiency projects with Oregon schools and state-owned buildings. I also do ad hoc statistical research on energy markets and power regulation for one of the economists here. I just bought a house in northeast Portland, and I spend my free time doing a lot of off-road and on-road biking and running, training for duathlon/triathlon season which starts in March."

**Georgia Silvera** is planning to marry Robert Seamans this August. She is in her second year with the Boston Parks Department as an urban forester, and in October became a Massachusetts Certified Arborist. She writes: "I am enjoying all the snow, especially after a dry summer last year. This is a good thing for trees and for my latest challenge—skiing."

**Anna Tikina** has moved from the Russian Northwest to Vancouver, B.C., to pursue a Ph.D. at the University of British Columbia. Her dissertation is on the impact of forest certification under supervisor **Bruce Larson '78**. **Hamish Kimmins '69, Ph.D. '70**, is on her steering committee, and she consults a lot with **Gordon Weetman '58, Ph.D. '62**.

**Adam Chambers** has joined the National Renewable Energy Laboratory (NREL) in Washington, D.C., where he will help developing countries reduce air pollution and greenhouse gas emissions. His new position will involve working with NREL, the Department of Energy, the EPA and USAID on developing country missions in Asia and South America.

**Mark Wishnie** organized a conference in November, called "The Second Annual Native Species Reforestation Meeting," at the Smithsonian Institute's facilities in Panama City. The conference, co-sponsored by F&ES, the Smithsonian, Ecoforest (Panama) S.A. and the Celerity Foundation at the Peninsula Community Foundation, was attended by 216 people from Panama, Costa Rica, the U.S. and Brazil. Attendees included F&ES alums (**Gerardo Budowski '56, Ph.D. '62**, **Adriana Casas, Kirt Barke '83**), faculty (**Mark Ashton '85, Ph.D. '90**, and Brad Gentry, lecturer in sustainable investments) and five current F&ES students.

## 2002

### CLASS SECRETARY:

**Roberto Frau** roberto.frau@yale.edu

**Citlali Cortes** is a natural resource advisor for the USAID Mexico Mission. She is based in Mexico City and gets to travel to beautiful pristine areas.

**James Coleman** is interim president for the Society for the Conservation of Nature of Liberia (SCNL). SCNL, established in 1986, is the oldest nonprofit, nongovernmental and nonpolitical conservation organization in Liberia. Its mission is to promote nature conservation and environmental protection in

Liberia. The goal is to involve the public in the process of establishing a system of protected areas, in partnership with local and international organizations such as Conservation International, World Wildlife Fund, Fauna and Flora International and the Zoological Society of Philadelphia.

**Ian Stewart** writes: "I've found a dream job as the conservation lands manager for the Coastal Mountains Land Trust ([www.coastalmountains.org](http://www.coastalmountains.org)) in Camden, Maine. My job is to head the stewardship department for the organization and to monitor all preserves and easement-encumbered properties."

**Nikki Aronhalt** writes that she is back working with her former law firm in Sacramento and has just purchased a condo in Tahoe.

**Josh Zaffos** writes that he is living in a town of about 1,500 people in western Colorado with a few friends and two dogs, Jenny and Coolio, two cats, Mary and Sam, a horse, Maddy, and a mule, Chavez. He has just finished an internship for *High Country News* and is now doing some freelance writing for the paper and some other nonprofit, conservation publications.

**Zhanna Beisembayeva** writes from Kazakhstan: "I got married to one of my classmates at F&ES, **Michael Funaro**, after we both graduated from our beloved school. We had the ceremony in New Haven on July 20 with Michael's relatives and, of course, our school and life friends. Soon after our honeymoon, as a new family, we traveled around exploring more about the United States, and then I had to leave for Kazakhstan at the end of August. Michael joined me in Kazakhstan on New Year's Eve. I got a job as ecology specialist in the HES/Environmental Department at TengizChevrOil (joint venture between ChevronTexaco and Kazakhstan) in the city of Atyrau on the Caspian Sea. Michael adopted my daughter,

Funaro Danna Gloria! Now we are on our way to Atyrau to work. This new year has started as a very happy and lucky one for my family. According to the East Calendar it is a Year of Sheep, which brings harmony, happiness, luck, wealth, stability and peace to all families in our big and diverse world. May it bring all that to all of you!"

**Alejandro Flores** writes from Monterrey, Mexico, that he is teaching a policy analysis course for graduate students in a public administration program at the Monterrey Institute of Technology (TEC). He is also working on a project to design a distance-learning course.

**Iona Hawken** is doing research for **Chuck Peters '79, Ph.D. '89** and Michael Balick in the Institute of Economic Botany at the New York Botanical Garden (NYBG). She writes: "I spent this past summer in the Brazilian Amazon as F&ES student Ilmi Granoff's research assistant, helping him with his master's project on boat building in the Arapiuns Watershed. During the summer, I spent a week helping Chuck with a forest inventory for a community forestry project in the Tapajos-Arapiuns Extractive Reserve. The job at NYBG followed from that amazing experience. I now live in New Haven with Ilmi and I commute to the Bronx every day. My work at NYBG is wonderful because I am involved in interesting and interdisciplinary applied research projects around the world, and I am fortunate to get to travel to other countries. I just returned from Oahu and am involved in an urban biodiversity project measuring vegetation in New York and a regeneration project in the NYBG forest. I hope to return to the Amazon soon and will probably do research in Oaxaca this summer."

**Beth Alves** gave birth to her first child, Victoria Lynn, on Feb. 1. Mother and baby are doing great!

## Announcing F&ES Alumni/ae Weekend 2004

### The Legacy of Aldo Leopold

A joint event with the Aldo Leopold Foundation.

**Celebrating reunion classes:  
1999, 1994, 1989, 1984, 1979, 1974,  
1969, 1964, 1959, 1954, 1949, 1944, 1939**





# Doris Duke Fellows Discover That Working With Opponents to Achieve Worthy Goals is Part of the Landscape



Pete Land holds a King salmon, weighing about 50 pounds, that he caught for dinner. Standing next to him is Hanna Bassich, the daughter of Andy Bassich, a dog musher whom Pete stayed with in Alaska. Calico Bluff and the Yukon River are in the background.

By Dave DeFusco  
Editor

Pete Land, M.E.M. '03, was reared in Shelburne, Vt., where it's hard not to have an interest in things natural. As a boy, influenced by his mother, who rehabilitated wildlife, and his physician father, Land wanted to become a veterinarian. As he matured, however, he became less intrigued by the diseases and injuries that afflict animals than by how animals and people interact. "In Vermont and most other rural places, wilderness is typically seen as separate from the human landscape," he said. "We're becoming increasingly detached from the resources we use and the other species with which we evolved."

Kathleen Hall, M.E.M. '03, who grew up in East Meadow, N.Y., 15 minutes from the ocean, has always been drawn to the water. In particular, coastal systems, which she says are ecological hotspots, are her personal and scholarly passion. "Coastal systems are important to the world's populations but are threatened by a lot of conflicting interests, including development and population pressures, and pollution."

Both Land and Hall are nature enthusiasts and devoted to the cause of environmental preservation, as you would expect, but their idealism has been infused with a practicality as a result of internship experiences last summer. As Doris Duke Conservation Fellows they learned that promoting what they regard as sacrosanct—the environment—requires working with people and organizations that have interests contrary to their own.

"What motivates me is mediating conflicts where people focus on their differences rather than a shared interest in the environment," said Land, whose academic concentration is social ecology.

"My passion is to devise solutions that help both people and the environment, because they come as a package deal," said Hall.

The School of Forestry & Environmental Studies recently received \$550,000 from the Doris Duke Charitable Foundation to renew its participation in the Doris Duke Conservation Fellowship Program until 2006. The grant provides tuition support, internship stipends and loan forgiveness to eight students matriculating in the master's degree program this academic year. The loan forgiveness program, which is new, is for fellows who are employed full time at a nongovernmental organization or in the public sector for at least one year. The recent grant is in addition to two earlier foundation grants that have, in all, supported 41 F&ES students over the past five years.

As part of his internship, Land served as the pilot participant in a three-week wilderness immersion experience last August in Alaska on the Yukon River, which is the second longest (2,300 miles) in North America. His job was to evaluate the program, which is sponsored by the Wild Gift, a fledgling nonprofit that identifies future environmental leaders. While there, he cut down spruce trees and built a cabin from scratch, ate only what he could catch and grow (he hunted for the first time and ate duck) and caught salmon for 24 sled dogs that he cared for. It was subsistence living, and Land reveled in it. "If you live out in the wild, you might as well really rough it," he said. He is going back to Alaska when he graduates in May.

Prior to going to Alaska, he was an intern at the Vermont Natural Resources Council. He conducted research on three wetland areas that the council targeted for a more stringent classification by the state that would result in greater protection from development. He gathered whatever scientific data was available for each wetland and visited the sites to become familiar with each area. He also met with local landowners to discuss how their property would be affected by the

“What motivates me is mediating conflicts where people focus on their differences rather than a shared interest in the environment.”

*Pete Land*



Kathleen Hall canoeing on the Situk River in Yakutat, Alaska.

increased protection that comes with reclassification. In addition, he represented the council during a campaign seeking the designation of additional wilderness areas in Vermont.

“This gave me a unique perspective of the range of values people place on wilderness and the degree to which environmental organizations can cooperate when they represent different interests and regions,” he said. “I also learned that the supposedly ‘antienvironmental’ rural working class often has the most credibility for—and interest in—sustainably managing their resources.” Land has received funding to organize a symposium on this subject at F&ES this fall.

Hall interned at the Quebec Labrador Foundation, working as a conservation associate for the Nature Trust of New Brunswick. Her activities focused on coastal land conservation issues in Charlotte County.

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*Kathleen Hall*

Her principal project was to develop a conservation plan for the L’Etang Islands Nature Preserve, a recently donated archipelago.

This involved working with a team of consultants in assessing the islands’ marine and terrestrial flora and fauna, and geology and archaeology, and proposing future models of outdoor education. Unlike other parts of the mainland, the islands are completely undeveloped and inaccessible.

“We proposed a spectrum of options, ranging from a more intensive model that would include building interpretive signs and trails, to leaving the islands in their pristine state to preserve the red spruce, balsam fir and yellow and white birch trees that blanket them,” she said. The Nature Trust has yet to make a decision on what direction it will take with the archipelago.

While the esprit de corps among the staff and mission of the land trust galvanized her, she gained an appreciation for the many logistical issues facing a small nonprofit agency. “The fact that we were so limited by funding, staff size, lack of resources and time had a huge impact on what we were and were not able to accomplish. I’ve seen firsthand the many hurdles that must be overcome when dealing with different interests to realize a worthy goal.”

Like Land, Hall will return after graduation to Alaska, where she spent part of the summer of 2000 working aboard a fishing vessel. She was a deckhand on a power trawler that harvested King and Coho salmon, working 19-hour days that often began at 3 a.m. This experience provided her with valuable exposure to alternative perspectives on conservation. She says Alaska is unlike any other place in the Lower 48, where human population is scarce and the environment is still truly wild.

An extraction-based economy and the push for development, however, place much pressure on natural resources. Hall is collaborating with a city planner and writing a paper analyzing loopholes in the Juneau Coastal Management Program, which is undergoing administrative changes that may ultimately favor increased coastal development. “There is no doubt that industries such as timber, fishing and mining are essential to the state’s economy, but it is important that these activities are done in a sustainable, environmentally-friendly way. My passion lies in trying to make this crucial balance happen.” **EY**



# Obituaries

**George M. Jemison '36** (1908-2002) had a distinguished career in forestry research that started upon his 1931 graduation from the University of Idaho with fire weather studies at the Priest River Experimental Forest in that state. After his study at Yale he went to the Southeastern Forest Experiment Station. He earned a Ph.D. in plant physiology at Duke in 1942 and became head of the Forest Management Division of the station. In 1950 he became director of the Northern Rocky Mountain Forest Experiment Station and in 1954, director of the Pacific Southwest Station. In 1954 he moved to Washington, where he became deputy chief for research of the United States Forest Service in 1957 after having been associate deputy chief. In 1969 he was elected the first American president of the International Union of Forestry Research Organizations (IUFRO) and arranged its XV Congress in Florida. He retired from the USFS in 1969 after 38 years of service and became a professor at Oregon State University. Before he retired there in 1975 he had organized a research program in forest engineering. His contributions brought him many honors, including the United States Department of Agriculture's Distinguished Service Award, an honorary D.Sc. from the University of Idaho, honorary membership in IUFRO and the Italian Academy of Forest Science. He was a Society of American Foresters fellow and received the SAF Barrington Moore Forest Biology Award. He retired to Medford, Ore., where he died on Dec. 8.

**Paul E. Bruns '40** (1915-2002) grew up in New York City. He majored in German at New York University, where he graduated in 1937. Then he studied forestry at the University of Munich for a year before coming to Yale. After that he worked in forestry jobs in New Hampshire, Maine and South Carolina. In 1942 he became an instructor in the Army Air Force, initially as a civilian, at training fields in the South. From 1945 to 1947 he was woods manager for the Blair Veneer Co. in Troy, Vt. From 1947 to 1958 he was on the forestry faculty of the University of Montana, earning a Ph.D. in 1956 from the University of Washington. In 1958 he went to the University of New Hampshire to chair the Forestry Department, remaining there until he retired in 1980 to Titusville, Fla. He died on Sept. 29 and his wife, Patricia, is among his survivors.

**Clifford D. Beebe '42** (1919-2002) came from New Haven and was in the 3-2 forestry program as well as the Navy ROTC at Yale College. Before he could start the final year of his master's in forestry program, he went into the Navy and ultimately became a lieutenant commander with service in the Atlantic and Pacific. Abilities honed on the Yale swim team would prove lifesaving. He was the only officer to survive the sinking of the destroyer Duncan in the Battle of Cape Esperance in 1942. He served in the landings in Sicily and Normandy. In 1945 he became a chemist for the Lee Paper Co. in Vicksburg, Mont. In 1960 he moved to Gardner, Mass., as technical coordinator and a director of special projects for

Litton Industries. For many years he was quality control manager for Fitchburg Paper Co. After retirement he was active in a solid waste recycling program and Habitat for Humanity. He died on June 26, 2002. Mildred, his wife of 60 years, is among his survivors.

**Wayne H. Byrne '47** (1917-2002) was a 1940 graduate of Amherst College. He left Yale for military service in 1941, serving as an engineer corps major in the Mediterranean area before returning in 1946. For a year he was a forester for St. Regis Paper Co. in New York. Then he became a manager of M.P. Myers & Co., a wholesale hardware firm in Plattsburgh, N.Y., and in 1960 its president. In the ensuing decades he was also an active leader in many conservation and civic affairs in the Adirondack area, including the Adirondack Mountain Club, Adirondack Nature Conservancy, State Citizens Committee for Public Schools and Council of Churches. He was president of the National Commercial Bank & Trust Co. He was also a trustee of the State University of New York-Plattsburgh and of Paul Smith's College. He died in Plattsburgh on June 7, 2002 and his wife of 57 years, Margaret, is among his survivors.

**David R. M. Scott '47, Ph.D. '50** (1921-2002), came from Toronto and grew up in Virginia. After graduating from the University of Virginia in 1942, he served as an officer in the Royal Canadian Artillery. He was an assistant instructor in silviculture and silvics at Yale from 1947-50. Then he went to Alberta to do research for Forestry Canada. In 1951 he switched to silviculture research for the Province of Ontario. In 1955 he commenced a 33-year career as an outstanding teacher of silviculture and forest ecology at the University of Washington. He was an associate dean for some years and directed the work of nearly 100 graduate students on campus and at the Pack Forest. In 1986 he made an astonishing recovery from a severe cerebral aneurysm. When he retired in 1988 his fellow alumni started a scholarship endowment fund named for him. He had lifelong interests in animals that included fly-fishing, bird hunting, dog training and, for a time, raising domestic animals on his farm near Toronto. He died Dec. 18 and is survived by Carolyn, his wife of 58 years, three children, 12 grandchildren, and two great-grandchildren. A daughter, Margaret, was killed in an accident in 2001.

**Benjamin T. Cardinal '48** (1918-2002) came from Reno and graduated from the University of Nevada in 1942. During World War II he was an Army captain in the Southwest Pacific. Until 1959 he was engaged in sales and promotion for the Douglas Fir Plywood Association and the Edward Hines Lumber Co., mainly in Tacoma, Wash. In 1960 he became an insurance agent in Tacoma. He went back to Reno in 1974 to partner in a film production enterprise, but after several years he went to Oregon and became an appraiser of forestlands. He spent his retirement years after 1980 in the Portland area and died at Clackamas on Aug. 6. His wife, Ardys, and several children survive him.

# Obituaries

**Marshall R. Turner '49** (1921-2002) came from Colorado and was a 1946 forestry graduate of Oregon State. Before and after his time at Yale he worked in Venezuela, and he joined the faculty of Escuela Forestal of the University of the Andes in Merida in 1949. In 1970 he became president of Western Wood Structures in Portland, Ore., and spent the rest of his career there. He died on July 8.

**Stephen E. Puckette '50, Ph.D. '57** (1927-2002), spent most of his life in Sewanee, Tenn., and was a 1949 graduate of the University of the South. He came to Yale to do doctoral work in mathematics, but spent a year in forestry first. He returned to Sewanee in 1968 to teach mathematics and became dean of the College of Arts and Sciences in 1969.

**J. Harry G. Smith '50, Ph.D. '55** (1925-2002), came from a lumber industry family near Kamloops, B.C. During World War II he served as a pilot officer in the Royal Canadian Air Force in Iceland. He received a 1949 forestry degree from the University of British Columbia (UBC) and joined its faculty after his M.F. work at Yale. Later he returned to Yale for doctoral studies. During the early part of his 40-year career at UBC he taught a wide variety of subjects, but then concentrated on forest management. In 1983 he became the first head of the UBC Department of Forest Resources Management. His stimulating teaching and innovative studies of forest growth and yield brought him the Distinguished Forester Award of the Association of British Columbia Professional Foresters. In 1980 he was president of the Canadian Institute of Forestry and for six years was also editor of its *Forestry Chronicle*. For 12 years he was an associate editor of the *Canadian Journal of Forest Research*. He died on June 3.

**Charles T. Stealey Jr. '50** (1922-2002) was from Clarksburg, W. Va. During World War II he was an officer in the Eighth Air Force, served in a squadron commanded by actor Jimmy Stewart, and his bomber was shot down over Germany. He became interested in forestry upon reading a textbook that the Red Cross had sent to his prison camp, a copy of Hawley's silviculture text. That led him to obtain a forestry degree from West Virginia University, whereupon he entered Yale. After Yale he was a forester for the Texas Forest Service for several years before becoming one of the first consulting foresters in the state. He operated his firm, Forest Management Services, in Conroe until he retired in 1998. He was active in civic affairs in Conroe. He died on Dec. 25 and is survived by a daughter, Sheryl.

**Henry W. Smith Jr. '51, D.F. '63** (1923-2002), died on Sept. 29 after returning from his summer home in the Berkshires of Massachusetts. He graduated from Dartmouth in 1949, where his studies had been interrupted by military service. His forestry career was devoted entirely to decades of teaching at the University of the South at

Sewanee, Tenn. His first wife, Charlotte, had predeceased him. He is survived by his second wife, Betty, and three children.

**Ben A. Jayne '53, D.F. '55** (1929-2002), had a distinguished career in forestry education. He died of a heart attack on Sept. 8 at Gig Harbor, Wash., at the age of 73 while on a salmon fishing trip. He came from Oklahoma and was a 1952 forestry graduate of the University of Idaho. His initial academic specialization was in wood science, which he taught as a member of the Yale faculty from 1955-58. From 1958-61 he was at Washington State and at the University of California San Diego for one year before going to North Carolina State. In 1966 he went to the University of Washington as professor and associate dean. In 1971 he was appointed director of the Center for Quantitative Science in Forestry, Fisheries and Wildlife. From 1976 to 1985 he was dean of the School of Forestry & Environmental Studies at Duke and remained on the Duke faculty until 1988. Then he had a five-year term as Maurice Goddard Professor of Forestry and Environmental Resources at Penn State. In 1988 he and his wife, Betty, retired to Gig Harbor. In 1998 he received the Honor Alumnus Award of the University of Idaho.

**Jerome P. Tessier '54** (1928-2002) came from Sudbury, Ontario, and graduated from the University of New Brunswick in 1952. After a couple of years with Anglo Canadian Pulp & Paper in Quebec, he went with MacMillan Bloedel in British Columbia. In 1958 he joined the forestry faculty of the University of British Columbia and taught logging engineering. In the spring of 1965 he ran the logging and saw-milling instruction at the Yale Forestry Camp at Crossett, Ark. In 1966 he became woods manager for Kamloops Pulp & Paper Ltd. In 1978 he went with the Weyerhaeuser Company and spent the rest of his career with them in Washington and Oregon, ultimately becoming vice president for Timberlands. He died on April 16, 2002.

**John Kalafus '58** (1926-2002) was born in Czechoslovakia and grew up in Pennsylvania. He was a 1952 forestry graduate of Penn State and worked for a few years as a forester in Utah and Pennsylvania. During World War II he served in the Army and saw action in Okinawa. In 1959 he started a 27-year career as a teacher of various sciences at the Washington and Shepaug Valley Regional High Schools in Connecticut. He also coached soccer, traveled widely and taught at schools in both France and Iceland for one year each. He continued to live in Washington, Conn., after he retired. He died on Dec. 10. An obituary in the Waterbury Republican-American made special mention of him as "a person who made a mark on his community."

**Scott Peter Hall '83** (1957-2002) spent his early years in Mountain View, Calif., and in 1965 moved (with parents and siblings Stefan, Garth and Elaine) to their Los Altos Hills, Calif., home, where he enjoyed goat-tending, gardening, cooking and pruning eucalyptus. "Scoot" was a

# Obituaries

forestry major at the University of California Berkeley, graduating in 1981. After completing his M.F. at F&ES, he worked as a forester for Southern Pacific Land Co. in Nevada City, Calif., for several years. He eventually moved to Washington, where he worked with the Colville Confederated Tribes; Timberland Consultants in Nelson, B.C.; the Northwest Indian Fisheries Commission in Olympia; and finally, the Kalispel Tribe of Indians. "He brought his sense of humor and his talent to every workplace and loved his co-workers everywhere," according to **Keitlyn Watson '83**, whom Scott married in Olympia, Wash., in 1990. That same year he was diagnosed with multiple sclerosis. In 1994 the couple relocated to a quieter life north of Chewelah, Wash., where Scott and Keitlyn became the parents of Eleanor Evelyn in 1994 and Samuel Johan in 1996. Scott received an experimental stem cell transplant, using his own stem cells to try to halt the progression of the MS. The family is extremely grateful to the many people who donated the needed funds, which were managed by the National Foundation for Transplants. After battling MS, Guillain-Barré syndrome, several pneumonias and other severe ailments for the past two years, Scott died at his home in Blue Creek on Oct. 30. A scholarship fund for Scott's children has been established at the Spokane Teacher's Credit Union in Spokane, Wash.

## FACULTY

**Garth K. Voigt** (1923-2003) Margaret K. Musser Professor Emeritus of Forest Soils, died on Sept. 28, in Bozeman, Mont., where he had lived since he retired in 1988. He came from Merrill, Wisc., and served in the Army in Europe in World War II. Then he returned to the University of Wisconsin, where he received a B.S. in 1948 and a Ph.D. in forest soils in 1953. He served on the Wisconsin faculty until his appointment at Yale in 1955. His most important contributions lay in the study of acid rain effects, nutrient cycling and the activity of the living components of the soil portion of ecosystems. He played a key role in the establishment of environmental studies at the Yale School of Forestry in the 1970s. While at Yale, he served as director of graduate studies from 1971-75 and as acting dean in 1970, 1975-76 and again in 1987. Many alumni recall him as a wise, pleasant mentor, as well as a student of nature. He so loved fishing and the Northern Rockies that he retired there to concentrate on these pursuits. His survivors include Jane, his wife of 57 years, and three children, Timothy, Valerie and Jeffrey, as well as five grandchildren. There was a memorial service in Bozeman on Jan. 16, which would have been his 80th birthday. **EY**

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## BUILDING AT 285 PROSPECT MOVING TO A NEW NEIGHBORHOOD



An office building used by the School of Forestry & Environmental Studies is moving to a new neighborhood. Having sat atop 285 Prospect Street for nearly 100 years, the Colonial Revival-style building will move 300 feet from its current location to between 301 and 360 Edwards Street to make way for the construction of a new Yale science building. To prepare 285, openings were created in the foundation and steel beams, some weighing as much as 7 tons and as long as 65 feet, were inserted underneath the 950-ton building for support when it is rolled on hydraulic dollies to its new destination, according to Randy Poxson of New Haven-based Paragon Construction, the general contractor. The building, which has three floors and approximately 10,000 square feet, will be jacked up 7 feet into the air and rotated 90 degrees so that it eventually will face Edwards Street. The move will take five days. Nicholas Brothers of Tarrytown, N.Y., is managing the move, which is under the supervision of Chuck Ebner of Yale Facilities, with assistance from Thomas Tuscano, director of finance and administration, and Dominic Scalia, supervisor of facilities, both of F&ES.





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