



In memory of Laurie Cuoco, 1974-2005

On May 10th, 2005, Laurie Cuoco left us far too soon. The F&ES community extends our deepest sympathies to her family. In celebration of her life and in grief at her passing, we dedicate this year's Bulletin to Laurie.

Laurie's fascination with coastal environments took her to Ecuador to explore the effects of organic aquaculture on mangrove forests and local peoples. Some of her findings appear on page 59 of this Bulletin.

Illustration on previous page from *Margaret Mee in Search of Flowers of the Amazon Forests*. 1988. Tony Morrison, ed. Nonesuch Expeditions Ltd., Suffolk, England.

TROPICAL RESOURCES

The Bulletin of the Yale Tropical Resources Institute

2005 Volume 24

In This Issue

About TRI

- 4 Mission Statement and Vision
- 5 From the Editors: Andrea Johnson and Laura Kiernan
- 6 Letter from the Director: Dr. Lisa M. Curran

Articles

- 9 Methodology in a Time of Crackdown
Alder Keleman, MEM 2005
- 15 Contesting Copper: Documentary Film, Research, and Mining in Ecuador's Intag Region
David Kneas, MESC 2005
- 20 Payment for Environmental Services in Costa Rica: Carbon Sequestration Estimates of Native Tree Plantations
Alvaro Redondo-Brenes, MFS 2005
- 30 Water-Use Efficiency in Hawaiian Trees: An Eco-physiological Approach and Methodology
Sharifa Gulamhussein, MFS 2005
- 34 International Barriers to Information Access for Development in South Africa and Beyond: A Practical Guide to Dysfunctional Relationships
Brett Galimidi, MEM 2005
- 42 Whale Shark "Ecotourism" in the Philippines and Belize: Evaluating Conservation and Community Benefits
Angela Quiros, MEM 2005
- 49 Modeling from Below: The Social Dynamics of Land Use Change in the Buffer Zone of Cordillera Azul National Park, Peru
Rafael Eduardo Bernardi de León, MEM 2005
- 59 Organic Aquaculture in Ecuador: A More Sustainable Solution?
Laura Cuoco, MESC 2005
- 66 Evaluating Capacity Building and Participatory Development in Community Timber Operations of the Petén, Gualentala
Lisa H. Patel, MESC 2005
- 73 Perspectives from the Field: Local People, International Organizations, and the Politics of Mangrove Conservation in Kenya
Amina Soud, MESC 2005
- 78 Oil and *Chicha*: Indigenous Movements and Survival in the Ecuadoran Amazon
Rebecca Reider, MESC 2005
- 86 Integrating Forest Biodiversity Conservation and Poverty Alleviation in Local Forest-Based Enterprises: A Case Study of the Woodcarving Industry, Ghana
Dora Nsuwa Cudjoe, MEM 2005
- 93 Innovated Tradition: Transformation of *Palakaw* Fishing among the Amis of Faatan, Taiwan
Po-Yi Hung, MESC 2005
- 100 Personal Reflections on the IUCN and the World Conservation Congress
Lauren Baker, MEM 2005
- 104 Announcing the TRI 2005-2006 Fellows

Yale Tropical Resources Institute: Envisioning Synthesis and Synergy

Mission

The Mission of the Tropical Resources Institute is the application of interdisciplinary, problem-oriented, applied research to the creation of practical solutions to the most complex challenges confronting the management of tropical resources worldwide. Lasting solutions will be achieved through the integration of social and economic needs with ecological realities, the strengthening of local institutions in collaborative relationships with international networks, the transfer of knowledge and skills between local, national, and international actors, and the training and education of a cadre of future environmental leaders.

Vision

The problems surrounding the management of tropical resources are rapidly increasing in complexity, while demands on those resources are expanding exponentially. Emerging structures of global environmental governance and local conflicts over land use and environmental conservation require new strategies and leaders who are able to function across a diversity of disciplines and sectors and at local and global scales. The Tropical Resources Institute aims to build linkages across the natural and social sciences and among government agencies, academia and practitioners, enabling the formation of successful partnerships and collaborations among researchers, activists and governments. The Tropical Resources Institute seeks to train students to be leaders in this new era, leveraging resources, knowledge, and expertise among governments, scientists, NGOs, and communities to provide the information and tools this new generation will require to equitably address the challenges ahead.

Dear Readers,

It is with pride in our fellow students that we present the 2004-2005 TRI Bulletin. This year's Bulletin reflects several emergent topics in conservation – topics which, in turn, speak to the moment we are in as a professional community. Running through these pieces we see an impulse to assess the current state of conservation practice – with an eye, always, to doing it better.

Several writers focus on the role of international organizations, articulating complexities and tensions within global environmental governance. Lauren Baker provides a personal reflection on IUCN activities, including its recent World Conservation Conference in Bangkok, while Amina Soud comments on WWF's heavy influence on Kenyan environmental policies and Laura Cuoco lays out the controversy over a German NGO's certification of "organic" shrimp farming.

Other articles explore institutional relationships between these types of organizations and local people. Both Brett Galimidi's diagnosis of dysfunctions in information communications technology projects and Lisa Patel's analysis of building "social capital" demonstrate why conservation organizations often fall short in implementation with communities. Rebecca Reider gives a nuanced argument that successful social movements are those which attend to local livelihood needs. These insightful pieces challenge us to create more successful projects and strategies by paying real attention to the social dynamics of context. Our two pieces on ecotourism embody these challenges, as Po-Yi Hung teases out complex dynamics of power and representation among Taiwan's indigenous Amis people, while Angela Quiros's case studies provide recommendations for more beneficial whale shark tourism.

Another thread running through this year's articles is the linkage between large-scale environmental or economic phenomena and local practices. Rafael Bernardi presents a unique iterative modeling effort, showing how colonists' activities at the community level in Peru's Huallaga Valley relate to broad patterns of land use change and frontier development. Alvaro Redondo's analysis of the efficacy of various species for carbon sequestration is embedded within a Costa Rica-wide initiative to make reforestation operational on a local farm scale. Sharifa Gulamhussein explores the utility of using eco-physiology as an approach to native species restoration in Hawaii's highly degraded landscapes. We may also see Dora Cudjoe's discipline-crossing research, which links the needs of Ghanaian artesian carvers to industrial wood processing efficiency initiatives and export markets, in this light.

An important outcome of the master's research process is learning to create and critique appropriate methodology, and two strong pieces in this volume show how seriously F&ES students take this task. Both Alder Keleman's reflection on the questions she did and didn't ask and David Kneas's meditation on using a video camera in the field ask key questions about the role of the researcher and the nature of field findings.

The quality of this volume stands as a reminder of the long hours, both in tropical field sites and New Haven computer labs, that many people have invested – not only student researchers, but also, and especially, Nicole Rousmaniere, layout genius; Amity Doolittle, our tireless TRI doyenne; and Lisa Curran, indomitable Institute director. As editors, we would like to thank all our writers for their hard work and patience with this long process. We hope you enjoy the read.

Andrea Johnson, MEd 2005 & Laura Kiernan, MEM 2006

Dear TRI Community,

TRI has had yet another productive and diverse year. Just a few examples include: expanding our collaborations with international non-government and academic institutions, receiving additional funding from a diversity of sources, as well as expanding our international environmental justice program. Important areas of excellence and research that have been made available by the generous support of our funding partners include a Video Center (donated by the Class of 1980), Compton Foundation research grants, and World Agroforestry Center (ICRAF) support for student research in Africa.

In this regard, special thanks must go to Program Director, Dr. Amity Doolittle, whose leadership in program development, student professional training, and fund-raising has been exceptional. TRI also owes a particular debt of thanks to F&ES Graduate, Diane Russell. She has been an active promoter and sponsor of TRI within ICRAF. We are particularly excited that ICRAF supported our publication of five working papers under the Agroforestry in Landscape Mosaics (ALAM) partnership. These working papers are based on previous research by F&ES and University of Georgia students in collaboration with ICRAF.

Another exciting development from this year is that TRI became an active voting member of the World Conservation Union (IUCN). Program Director Amity Doolittle and Associate Dean Gordon Geballe led a delegation of two faculty members and twenty-one master's and doctoral students from TRI to IUCN's World Conservation Congress in Bangkok in November 2004. We greatly appreciate the efforts of Aban Kabraji for promoting and making this connection possible. In addition, for the past two years IUCN has sponsored two summer internships for F&ES students.

Students were equally active this year. A highlight was the holding of a dynamic student conference "Conservation in the Matrix" by the International Society for Tropical Forestry (ISTF). With over twenty speakers and one hundred attendees (from academia, institutions, NGOs, and governmental agencies), this interdisciplinary event stimulated tremendous discussion and debate. The student organizers, especially Alder Keleman and Ines Angulo, are to be commended for their professional skills in organizing this highly successful event.

The Class of 1980 Video Center is another student-led initiative. David Kneas not only raised the funds from the Class of 1980, but also established a professional and state-of the art video editing center at TRI, produced videos from his summer research, and assisted several others in video production and processing. This facility was used by several TRI students and others in the F&ES community who wish to incorporate video and documentary research into their projects.

The TRI Bulletin has been greatly improved, not only by the excellent range and quality of student submissions, but by the hours of careful reviewing by our editors, Laura Kiernan and

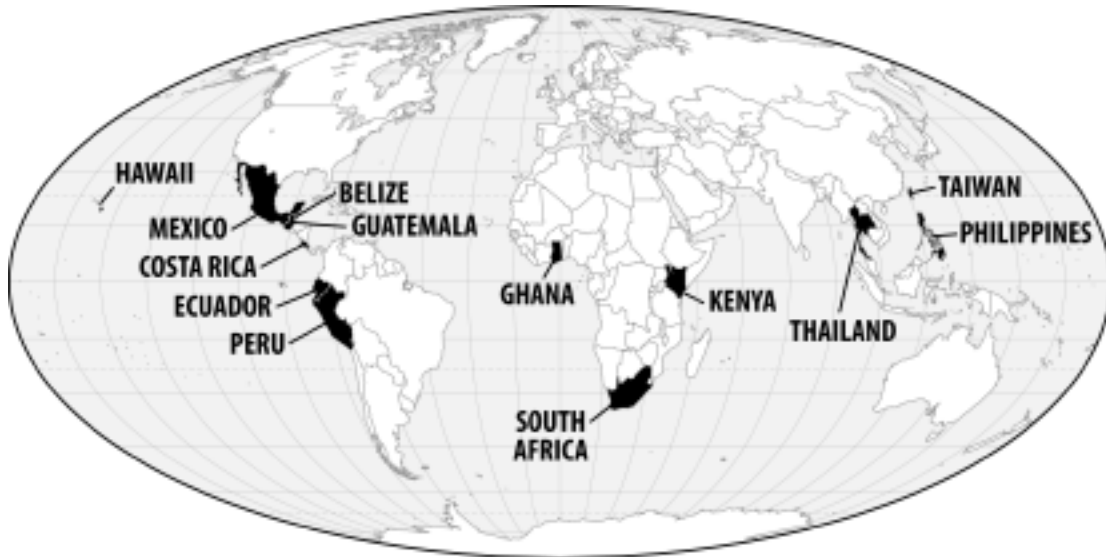
Andrea Johnson, and by the care and attention to layout and design provided by Nicole Rousmaniere. In closing, I trust you will enjoy this TRI Bulletin. We would appreciate hearing from you and appreciate any suggestions, potential collaborations, or additional opportunities for students and expanding our programmatic reach.

Best wishes,

A handwritten signature in black ink, appearing to read 'L. Curran', with a long horizontal flourish extending to the right.

Lisa M. Curran
Associate Professor
Director Tropical Resources Institute
Yale School of Forestry and Environmental Studies

2004 TRI Fellows



Belize:	Angela Quiros
Costa Rica:	Alvaro Redondo-Brenes
Ecuador:	David Kneas Laura Cuoco Rebecca Reider
Ghana:	Dora Nsuwa Cudjoe
Guatemala:	Lisa Patel
Hawaii:	Sharifa Gulamhussein
Kenya:	Amina Soud
Mexico:	Alder Keleman
Peru:	Rafael Bernardi de León
Philippines:	Angela Quiros
South Africa:	Brett Galimidi
Taiwan:	Po-Yi Hung
Thailand:	Lauren Baker