

VIEW FROM THE CANOPY

IN THIS ISSUE ■ Introducing Dr. Sandy Andelman
 ■ Meet Rebecca Cole incoming director of Las Cruces

INTRODUCING DR. SANDY ANDELMAN

In February, OTS welcomed Dr. Sandy Andelman as the new president and CEO. Dr. Andelman comes to OTS from Conservation International where she served as the chief scientist and senior vice president. Previously she was the deputy director of the U.S. National Center for Ecological Analysis and Synthesis (NCEAS), one of the world's top ecological research institutes.

OTS discussed with Dr. Andelman her vision for the future with a series of questions.

OTS: What issues do you see as significant in tropical science?

SA: The big, overarching challenge I see is how do we sustain resilient tropical systems – both ecosystems and human systems – in the face of the myriad stressors and shocks assailing them. And given the significance of tropical systems to the even bigger challenge of how we save the planet – e.g., maintaining biodiversity, both regulating climate and adapting to climate change, providing food security.

A couple of years ago while I was at CI, I co-led a graduate research course on dimensions of biodiversity, funded by the National Science Foundation, that involved graduate students from ecology, fisheries science, economics, engineering and



computer science from 14 universities in the US, Africa, China and Latin America. Most of the students' Ph.D. projects related to basic, rather than to applied science, but virtually every student would ask me about what they could to ensure their work contributes to saving Earth in some way.

Personally, I don't think the boundaries between basic and applied science, or among disciplines are relevant any more in the world we live in, so I am interested in promoting a systems approach to tropical science. We need to look beyond the canopy and the footprint of the OTS stations to understand and sustain tropical systems.

continued on page 2



DR. SANDY ANDELMAN

continued from page 1

OTS: What attracted you to OTS?

SA: I have been engaged in tropical ecology, conservation science, and conservation since I was an undergraduate, so I have a deep appreciation for all that OTS has done. But I also see OTS as an organization that is ripe for change. It was the prospect of leading that change that attracted me. I know that change is difficult for many people, but I thrive on change. In fact I once took a leadership course on change management where I had an extensive set of personality tests, and I learned that I'm in the 95th percentile with respect to loving change. I think this is one of the key reasons the search committee offered me the position and the entire board endorsed it. I also have to say that while these are the things that initially attracted me to the position, ultimately,

it was the commitment, the level of engagement, and the kindness of the Board members and staff that convinced me to join OTS.

OTS: What priorities do you see for yourself in your first year as President and CEO?

SA: OTS has a wonderful legacy, but the world, the tropics, tropical science, and learning approaches have all changed dramatically during OTS's lifespan. If OTS is going to increase its impact and have a robust future, it needs to evolve, both its programs and its business model. So during my first year, my biggest priority is to work with the staff, the Board, the member institutions, and the broader OTS community, as well as with some consultants, to refresh the organizational approach and strategy. I'm a firm believer in *form follows function*, so I think that the refresh needs to happen first and then the business model and funding approach can be examined in the light of the overall refresh. All of this needs to happen as quickly as possible and certainly within the first year. I see so many opportunities for OTS, and I look forward to working with the entire community to take the organization to the next level.

OTS: What excites you about our courses and research stations?

SA: The graduate fundamentals course has inspired and shaped the careers of several generations of ecologists, mostly in the US and Latin America. I would love to see an expanded set of interdisciplinary graduate courses, particularly those that take a systems approach that could engage graduate students worldwide; not only ecology students, but computer and data scientists, climate scientists, conservation biologists, earth scientists, geographers, and social scientists.

During my time at CI I have met many government, donor, and civil society leaders from the US and Latin America whose understanding of tropical ecosystems and how to sustain them has been enhanced through participation in OTS courses.

The long-term data at all four stations is a treasure. Research at OTS stations has advanced understanding of tropical systems and has further, untapped potential to help understand how the tropics is changing and what to do about it, especially if we integrate it with other data from throughout the tropics. To accomplish this we need to engage in more synthesis and analysis of the long-term data. Kruger National Park has already done this to a substantial extent and can be a model for the other stations.

OTS: Have you been to Costa Rica and South Africa previously?

SA: Yes, several times, and CI has offices in both countries.

When I was deputy director of NCEAS, Dr. Harry Biggs, former head of Kruger Scientific Services, and I had a grant from the Mellon Foundation to synthesize, archive, and make available to the scientific community the long-term data from Kruger National Park, which dates to the 1950's. For that project I traveled to Kruger numerous times and, in addition to making the datasets available online, I also worked with Kruger scientists to publish a paper on the effects of fire on savanna ecosystems, using data from the long-term controlled burn experiment.

I also have collaborated with Dr. Guy Midgley, now at Stellenbosch University, and others, on a project to derive new insights in protected area network design and systematic conservation planning in the face of climate change, using data from the Cape Floristic Region, a biodiversity

hotspot. We published several papers on this work, and I had the pleasure of traveling throughout the Cape Floristic region.

I also have been to Costa Rica several times. In particular, Volcan Barva, which spans La Selva and Braulio Carrillo National Park, was one of the first TEAM sites, established in 2003. And for the last 5 years, TEAM/CI through OTS has offered a summer course for high school teachers, taught by Peggy Luchenco, an expert in secondary school science education. The course has touched more than 8,000 high school students through these teachers, and has been transformational for many of the participants.

OTS: Your past positions have been very interesting, is there one job in particular that you feel will serve you well in leading OTS?

SA: My aggregate experience will serve me well in leading OTS. I've been engaged in research and education in the tropics since I was 19 years old when I went to Malaysia to study gibbons (my parents thought I was truly insane!). When I was deputy director of NCEAS, I learned a tremendous amount about the power of collaboration and networks of scientists and

policy makers to scale up environmental science, and I also learned that I love data, and collaborating with computer and data scientists. At CI I learned what it takes to build a science network that is pantropical (TEAM), which now spans 18 sites in 15 countries in Africa, Asia and Latin America, with 83 partner organizations. At CI I had the extraordinary opportunity to conduct research and engage in conservation on a global scale. I also learned a tremendous amount at CI, especially from CI's Chairman and CEO, Peter Seligmann, about communication and outreach, fundraising, private sector engagement, and working effectively with a board.

OTS: What are you reading – and what should we be reading – to best understand the state of science, the tropics, and life on this planet?

SA: At the moment I am reading *Whiplash* by Jeff Howe and Joi Ito. Joi is director of the MIT Media Lab. The book is about how to thrive in the complex world of change we live in. Joi said "Education is what people do to you. Learning is what you do for yourself." This has given me so much food for thought, especially in the context of OTS.

I also have a copy of Nancy Baron's book, *Escape From the Ivory Tower*, on my desk, and I use it as a reference. Nancy has trained hundreds of environmental scientists on how to communicate more effectively to the media and policy makers. I have first-hand experience seeing her workshops transform the careers of scientists from the US, UK, and several African and Latin American countries (e.g., Chile, Peru, South Africa, Tanzania, and Uganda) and also enabled them to engage more effectively in evidence-driven policy. Given the current political climate and the speed at which the world is changing, it is more important than ever that tropical scientists engage more and more effectively in outreach.

OTS: Final Comments?

SA: I look forward to working with the entire OTS community, from students and faculty within the OTS consortium, to the international scientific community and policy makers who seek to understand and sustainably manage tropical systems. With OTS, I hope to catalyze a culture of synthesis and interdisciplinary collaboration that is relevant to our connected world.



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OTS is a non-profit consortium of over 50 research institutions, colleges, and universities from the United States, Costa Rica, Mexico, Peru, South Africa, and Australia. OTS' mission is to provide leadership in education, research, and the responsible use of natural resources in the tropics.



The View from the Canopy is produced by the OTS Development Office. To submit comments or news items, please contact Casey Therrien at 919-668-1687 or via e-mail at casey.therrien@tropicalstudies.org.

Awareness makes you a stronger advocate for the tropics!

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MEET REBECCA COLE

“Las Cruces is ideally situated to play a leading role in key areas of tropical research including global climate change, natural human systems dynamics, and ecological restoration”, explains Dr. Rebecca Cole, the incoming station director, who would like to see new projects addressing these areas on a long-term basis. “In addition to the ongoing land acquisition campaign, I would like to support development of biological corridors by finding ways to engage more directly with landowners in the region. And, naturally, I would like to see substantial upgrades in our research facilities that will facilitate cutting edge science.”

Dr. Cole's research to date has focused on testing how tropical ecosystems respond under global change. Her current position “provides an exceptional opportunity to further some of my key professional goals.

Among others, these include having a true, on-the-ground, impact on conservation, a significant capability for environmental education and outreach, and the tools to further novel directions in tropical research,” she noted.

Dr. Cole's family settled in Coto Brus around the time that the Italian colony founded what would become the town of San Vito in 1954. Over the past 10 years, she has done research in diverse tropical locations including Hawaii, Peru, and Costa Rica, although returning to her home community has been a long-term goal. “It is hard to overstate how special it is to return to this community and have the opportunity to make a meaningful contribution.”

We are honored to have Dr. Cole as a part of the OTS team.