

Tropinet

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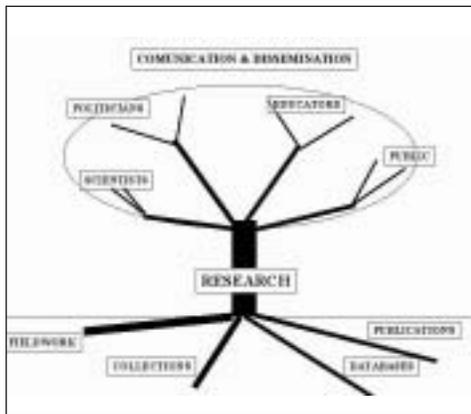


Organization for Tropical Studies
Organización para Estudios Tropicales

ATB PRESIDENTIAL ADDRESS BRANCHING OUT: OUTREACH AND ATB'S NEW MISSION OF CONSERVATION

Nalini M. Nadkarni, *The Evergreen State College, Olympia, Washington*

One topic of discussion at the 2002 ATB annual meeting in Panama was whether we should explicitly include conservation in our mission statement and our name. ATB is rooted in the tradition of natural history



and ecological field research. This is basic to our understanding of conservation issues such as the maintenance of biodiversity. Thus, ATB's members have been participating indirectly in conservation since its inception.

However, because many tropical regions are subject to increasing human pressures,

many of us feel a growing responsibility to take more direct action than publishing articles in the scientific literature or adding to research collections. One direct pathway for conservation is the communication and dissemination of our research results to scientists and to non-scientists.

We can think of the process of tropical biology research and conservation in the form of a tree. The research "trunk" is rooted in research activities to which ATB members are long-time contributors - carrying out fieldwork, publishing papers, curating collections, and building up databases. The branches of communication can disseminate information to a variety of audiences: scientists, politicians, educators, or to the general public (Fig. 1).

I focus on public outreach as a mechanism for conservation of tropical ecosystems. Many ATB members do outreach to the general public by giving talks or writing popular articles to transmit their messages to non-scientists. In most cases, however, their audiences are the "environmentally aware" — those that have an internally-driven stake in knowing about research. However, an increasingly critical role of

ASSOCIATION FOR TROPICAL BIOLOGY ANNUAL MEETING 2003 TO BE HELD IN ABERDEEN, SCOTLAND

The 2003 meeting of ATB will be held at the University of Aberdeen in northeast Scotland from July 7-10, 2003. This first European meeting of ATB will be held in parallel with a Special Symposium of the British Ecological Society. The aim is to foster interaction among historically disparate communities of tropical ecologists. The opening mixer on Sunday July 6 will initiate the gathering. The theme for the meeting is "Biotic Interactions in the Tropics," and contributed papers on this theme will be presented in plenary sessions on the mornings of three meeting days. The program will also include contributed papers, posters, and 20 additional organized symposia, with topics ranging from Resource Partitioning in Animals to Canopy Processes in Tropical Forests. In addition, the final of three ATB-sponsored workshops on Research Priorities in Tropical Biology and Conservation will be convened at the meeting.

A variety of events will allow delegates to meet informally and to sample the culture and local produce of northern Scotland. We look forward, in particular, to our ATB Executive Director and President fulfilling their promises to don their kilts for the highland dancing at the post-dinner ceillidh on July 8. The highlands and islands of Scotland provide numerous sites of great interest to biologists, as well as some of the finest scenery, castles and whisky in the UK. A program of field-trips will run both before and after the conference, and includes trips of one day (Coastal heritage; Endangered Plants; Insect foray), two days (Caledonian forest and Loch Ness; Marine Mammals) and four days (Northern Landscapes) — for further details and a booking form see the ATB website.

Registration and submission of abstracts will open on 1 January 2003. You can register on the BES webpage at <http://www.britishecologicalsociety.org/meetings> or on the ATB site at <http://www.atbio.org>. The deadline for submission of abstracts is 31 March 2003. The British Ecological Society will provide partial in-country financial support to students who attend the meeting (by application at the time of registration), and we hope that additional sources of funding will be available to support the attendance of some delegates from tropical developing countries. We hope to see you all in Aberdeen this July! —David Burslem, Michelle Pinard, Mike Swaine and Martin Barker, organizers

OTS TO CELEBRATE ITS 40th BIRTHDAY IN 2003

The Organization for Tropical Studies presents "Science for the 21st Century" from 29 March - 5 April 2003, in Costa Rica. This weeklong program in tropical education, research and conservation will mark OTS' 40th Anniversary. The mix of hands-on learning, presentations by leading tropical researchers, social interactions and educational functions will expand your view of tropical science. The events are open to all. Join us for the week or chose the activities that fit your schedule:

Tropical Biology (Rubber) Boot Camps, OTS Biological Stations, 29 March - 2 April. Get your rubber boots dirty as you experience the biodiversity of the tropics and discover (or rediscover) how to conduct science in one of the most complex environments on earth. Veteran OTS coordinators and resource people will be your guides.

Celebration Banquet, San José, 2 April

Scientific Symposium, University of Costa Rica, 3 April. Edward O. Wilson will be joined by other notable scientists to speak on the future of tropical science. Posters addressing current research, educational program, outreach project or practical application of tropical science will be displayed during the Symposium. Funding for travel and registration expenses may be available to poster presenters. For information go to: <http://www.ots.duke.edu>.

researchers is to directly communicate with the “environmentally unaware,” segments of the public who are not active in conserving the environment.

Drawing upon my own background and experience in forest canopy research, I will discuss examples of outreach to non-traditional audiences. These ideas, however, can be applied to any field of science.

Canopy studies have grown beyond enumerating arboreal plants and animals. New tools of access, analysis, and visualization have provided new insights about the complex structure of forests. We can now view and understand not just the trees and associated biota, but also the “airspace” of the forest. This recent research has given us greater understanding of how arboreal gliding mammals evolved, how airborne pollutants can travel, and how propagules might be dispersed in a forest.

These developments are exciting to scientists, but are they of interest someone who grew up in an urban environment where trees are scarcer than taxicabs? The first imperative to the scientist who wishes to do successful outreach is to relate her results to something members of the target audience think are important. Sports is one such arena. In today’s urban centers, skateboarding is a passion of many urban youth. Skateboard decks are made of wood, and wood comes from trees, so there is a direct connection between forests and street surfing. By making that clear — e.g., creating a deck logo that illustrates a tree canopy — awareness may make a youth on skateboard more open to the idea that trees should be conserved. The same idea can be extended to baseball (wooden bats), pool (wooden cue sticks), cricket (wooden bats), and bowling (wooden floors).

Another connection that scientists can exploit to link research to the public is the arts. I explored the aesthetic values of canopy organisms by bringing artists and musicians into the canopy to small platforms. One result was a canopy rap song created by George “Duke” Brady, an undergraduate student who grew up in San Francisco. His free-style lyrics simultaneously highlight the wonder he felt in the canopy with his new sense of conservation:

**Wet and green moss, I’m at a loss,
to describe the beauty, falling on my booty
but held up by strings, came up here to do
some things...**
**I’m coughing up air into the
atmosphere
but it seems now my hair is part of
everything around here.**
**I dare say that I love being here and
I could spend a minute of every
day here,
maybe I’ll live in a tree top, never stop,
like a hermit I would never burn it or chop
it down...**

Religious and spiritual arenas are another very powerful part of our society. Many people regularly attend church and abide by their holy

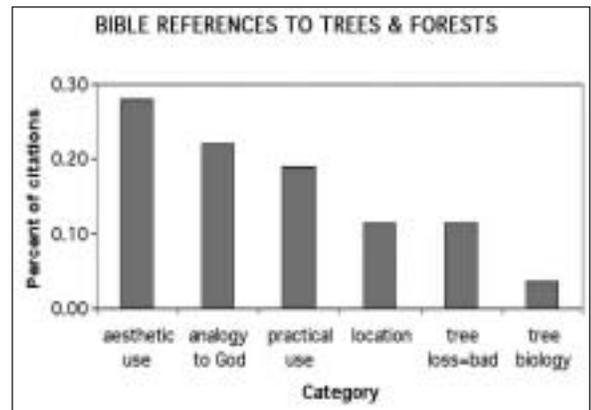
scriptures. If we can link trees to spiritual values, we may get new converts to tree conservation. Trees do feature prominently as sacred and spiritual objects in many religions. In the Christian faith, trees are mentioned in the 2nd chapter of Genesis. The Tree of Life is a major Christian symbol. In Judaism, the Torah exhorts us to plant trees. In Eastern religions, forests are viewed as places of meditation, peace, and renewal. In Native American spirituality, certain tree species are held as particularly sacred, such as the western red cedar, *Thuja plicata*.

Thus, churches provide a good venue to link trees with spirituality. This fall, I spent my Sunday mornings visiting churches near my home. I found preachers and rabbis remarkably receptive, and was invited to give over a dozen sermons at places of worship of different faiths. For example, as background to my guest sermons in Christian churches, I downloaded the Bible from the web, did a search for all the references to “tree” and “forest” (n = 328), and then assigned them to one of six categories (Fig. 2). I passed this histogram out to the congregation, who could then see for themselves the breadth of uses that people made of trees.

These are a few examples of arenas that provide connections between forest canopies and humans. Other scientific fields have analogous connections. For example, those who study nutrient cycling might go to a professional bankers association and discuss the ways they document the storage and flows of nitrogen. Their audience, who deals with the storage and flow of money, will no doubt appreciate and augment those insights. Researchers who study tropical butterfly diversity could speak about the challenges and benefits of biological diversity to the American Association of University Administrators, who must frequently consider how to maintain human diversity in the academic workplace. Entomologists who study army ants might approach the Army. Descriptions of how *Eciton burchellii* deals with fragmentation of habitat might prove of great interest to the human military.

Questions that scientists have not considered before may arise from encounters with these outsiders to academe. During these exchanges, information flows in both directions. One member of the congregation gave me an essay by Herman Hesse, which I have since used as a powerful inspirational passage for conservation:

**For me, trees have always been the most
penetrating preachers. I revere them when
they live in tribes and families, in forests
and groves. And even more I revere them
when they stand alone. Trees are sanctuaries.
Whoever knows how to speak to them,
whoever knows how to listen to them, can
learn the truth. They do not preach learning
and precepts, they preach, undeterred by
particulars, the ancient law of life.**



After raising awareness, we will still need mechanisms to provide our audiences with ways to learn more and to take appropriate actions. Directing our audiences to the many existing conservation groups such as The Nature Conservancy, Rainforest Action Network, and local natural history groups is one way to do that.

As President of the ATB, I ask you to consider where your own professional efforts take you to raise the awareness and inspire people to protect tropical ecosystems. Perhaps it will be by publishing in *Biotropica*, writing proposals to the National Science Foundation, and training your students to follow in those traditional academic footsteps. It could also be by figuring out how to link your own research passion to something outside academia and making a direct connection to that area, whether it is a church or a local natural history club or a skateboard park. In doing so, you may learn as much as you teach.

MEETINGS AND SYMPOSIA 2003

SIXTH LATIN AMERICAN CONGRESS OF HERPETOLOGY (VICLAH), 19 - 23 January 2003, Lima, Perú. The congress is organized by the Museo de Historia Natural, Universidad Nacional Mayor de San Marcos and will be held at the Universidad Nacional Agraria La Molina. Information is available on the VICLAH homepage at <http://barrioperu.terra.com.pe/VICLAH> or fro Lily Rodríguez <lilyrodriguez2@terra.com.pe>.

Monocots III, 31 March - 4 April 2003. Third International Conference on the Comparative Biology of the Monocotyledons, and Fourth International Symposium on Grass Systematics and Evolution. Rancho Santa Ana Botanic Garden, Claremont, CA, USA. More information at <http://www.monocots3.org>.

OTS SCIENTIFIC SYMPOSIUM, 3 April 2003, San José, Costa Rica. See information at www.ots.duke.edu.

Population Association of America (PAA), 1-2 May, Minneapolis, MN, USA. There will be three paper sessions related to human-environment interactions, and many other sessions might also be of interest to ecologists and conservation biologists. Most members of PAA

are demographers, sociologists, and economists, but members share many interests with ecologists and conservation biologists. More information about PAA is available at <http://www.popassoc.org/>.

FIRST International Conference of Neotropical Orchidology and third meeting of the Regional Mesoamerican Orchid Specialist Group, UICN/SSC, 21-24 May 2003, Jardín Botánico Lankester of Universidad de Costa Rica, San José, Costa Rica. The Conference will include Global Perspectives in Conservation, Advances in Orchid Phylogeny, Population Genetics, Data and Information Management and Pollination Biology. For more information, write to <jb1@cariari.ucr.ac.cr> or call the Organizing Committee at (506) 552-3247, Fax (506) 552-3151.

Rural Livelihoods, Forests and Biodiversity, 26 - 30 May, Bonn, Germany. This conference is sponsored by The Center for International Forestry Research (CIFOR), and cosponsored by Germany's BMZ, DSE, and GTZ. Information is at <http://www.cifor.cgiar.org/livelihoodconference.asp>.

SOCIETY FOR CONSERVATION BIOLOGY 17th ANNUAL MEETING, 28 June - 2 July 2003, Duluth, MN, USA. The theme of the meeting, "Conservation of Land and Water Interactions," will focus attention on water, forests, wetlands, the Great Lakes and other large lakes and rivers of the world, marine and coastal systems, and associated biodiversity issues. Abstracts for oral and poster presentations are due by 10 January 2003. Abstracts should be submitted via the meeting Web site <http://www.conservationbiology.org/2003>.

Annual Meeting of the Association for Tropical Biology, 5 - 7 July 2003, Aberdeen, Scotland. For more information and to register, visit the ATB web page at www.atbio.org.

ANIMAL BEHAVIOR SOCIETY 40th ANNUAL MEETING, 19-23 July 2003, Boise State University, Boise, ID USA. For more information and a list of speakers and symposia, see <http://www.animalbehavior.org/ABS/Program>, or contact the local hosts. Jim Belthoff <jbelttho@boisestate.edu> & Al Duffy <aduffy@boisestate.edu>.

ECOLOGICAL SOCIETY OF AMERICA ANNUAL MEETING, 3 - 8 August 2003, Savannah International trade and Convention Center, Savannah, Georgia USA. The theme is "Uplands to Lowlands: Coastal Processes in a Time of Global Change." For more information, go to www.esa.org.

VI Brazilian Congress of Ecology, 9 - 14 November 2003, Fortaleza, Ceara, Brazil. "Brazilian ecosystems: management and conservation." Sponsored by the Society of Ecology of Brazil and organized by the Ceara Federal University. For more information, contact: Dra. Vanda Claudino Sales at <geograf@ufc.br> or <vcsc@ufc.br>.

Symposium On Urbanization and Stream Ecology, 8 - 9 December 2003,

Melbourne, Australia. Sponsored by the Cooperative Research Centres for Freshwater Ecology and Catchment Hydrology and the Melbourne Water Corporation. To submit a paper or to attend the symposium, please send a message to <chri.walsh@sci.monash.edu.au>.

2004

7th INTECOL International Wetlands Conference, 25 - 30 July 2004. Utrecht, the Netherlands. Conference website: www.bio.uu.nl/INTECOL. To receive conference mailings, please send an e-mail to <INTECOL@fbu.uu.nl>.

Fellowships and Research Opportunities

The International Center for Tropical Ecology (ICTE) at the University of Missouri-St. Louis offers up to four fully-funded fellowships annually to students from tropical America, Africa, Madagascar, Asia, Malesia and the Pacific Islands with strong leadership and research potential in applied plant conservation. To learn more about the **Christensen Fund Graduate Fellowship Program** visit <http://icte.umsl.edu/PlantConservation/> or write to: The Director, International Center for Tropical Ecology, University of Missouri-St. Louis, 8001 Natural Bridge Road, St. Louis, MO 63121-4499, USA. E-mail: <icte@umsl.edu>. Complete applications received before 15 January will be considered. Applicants, however, are encouraged to send all materials for review as close to 1 December as possible. Application forms can be obtained from ICTE's web page at <http://icte.umsl.edu/Application.html>.

Neotropical Working Forests Doctoral Fellowship Program at the University of Florida. The program, supported by the IGERT program of the National Science Foundation, offers a tiered interdisciplinary curriculum to train doctoral students to conduct applied research on forest management and conservation in neotropical regions. Information is available at <<www.tropicalforests.ufl.edu/wft>>. Fellowships will be awarded for up to three years of doctoral study in the program. Applicants must be U.S. citizens or permanent residents. Application Guidelines are Online at: www.tropicalforests.ufl.edu/wft/fellowships.htm.

UNIQUE CANOPY ACCESS OPPORTUNITY IN LOWLAND FOREST IN COSTA RICA: The CARBONO research group (www.Carbono.org), a multidisciplinary team studying the stocks and flows of carbon in tropical rainforest, announces a unique opportunity for collaboration in canopy research. Funding from the National Science Foundation will support a field campaign of approximately 35 vertical canopy transects in old growth forest at the La Selva Biological Station in Costa Rica (www.ots.ac.cr/en/laselva/) beginning in June 2003. A walk-up scaffolding tower will be installed at each site for approximately 2 weeks. The goal of the project will be to conduct vertical measurements of forest structure and physiology (www.fiu.edu/~carbono/tower.htm) We will welcome collaborators with their own funding to conduct research off of the tower that does not interfere with our research. The field campaign is scheduled to last about 20 months. The vertical transect sites will be randomly located in old-growth forest stratified for canopy height. Interested parties should e-mail Steve Oberbauer

at Florida International University, <oberbaue@fiu.edu>. Research and collecting permits are required to conduct research at La Selva and can be obtained with help from OTS (www.ots.ac.cr). For samples to be taken out of county, export permits are also required.

TROPICAL BIOLOGIST-IN-RESIDENCE PROGRAM, Librarius Stuy Center, Jatun Sacha Biological Reserve, Amazonian Ecuador. The Librarius Study Center (LSC) is a new field-course and research facility at the Jatun Sacha Biological Reserve in the lowland rainforest of eastern Ecuador. This volunteer program offers long-term residence and use of facilities at low cost to graduate students wishing to undertake field research at Jatun Sacha. In exchange, students undertake light work and guardianship of the facility. Students must commit to a minimum of 30 days in residence (maximum 90 days continuously), submit a research proposal, and perform 10-15 hours of work per week; the remainder of their time should be devoted to a research project. The rate of \$500 per month includes comfortable accommodations, 3 hearty meals per day, use of lab and library facilities, and access to the 2300 hectare Jatun Sacha Reserve. For more information, contact the LSC Director at: <vigle@imap2.asu.edu>.

Center for Tropical Forest Science Research Grants Program. This program provides opportunities for senior researchers and graduate, predoctoral, and postdoctoral students to utilize CTFS' network of 17 Forest Dynamics Plots in their research, or to collaborate with CTFS scientists. The program is open to all applicants, but preference will be given to graduate students and postdoctoral researchers and to applicants from one of the 13 countries where Forest Dynamics Plots are located. Application deadlines are 28 February 2003, 29 August 2003, and 27 February 2004. For more information, proposal format, and other questions, see the website at <http://www.ctfs.si.edu>.

PROTECT KEOPUKA O'HANA, a Hawaiian non-profit conservation organization, will provide housing for graduate and undergraduate students interested in working on projects to further ecological conservation in Hawai'i. Protect Keopuka O'hana has access to large tracts of land that contain many species of native birds and plants. The group is eager to support research contributing to species conservation. Located on Honaunau Bay of the Big Island, the area is particularly good for marine research. Contact <conservehawaii@hotmail.com> for the appropriate format for proposals. There is no fixed proposal deadline; space is available on a first come first serve basis.

Courses and Workshops

The Natural Areas Association's 6th international workshop will be in Honduras from 20 February to 2 March 2003. We will visit 7 protected areas in northern Honduras (including coastal reserves, the Bay Islands and the Ruins of Copan), and meet with government and non-governmental organization staff, community members and local businesses to discuss conservation issues and solutions and to share experiences. The land cost for the 11-day trip is \$1,695. Please contact Abigail Rome at <abirome@earthlink.net> or Reid Schuller at <naa@natareas.org>.

Organization for Tropical Studies "Science for the 21st Century" meeting and workshop, 29 March - 5 April 2003, Costa Rica. A week-long program in tropical education, research and conservation will mark OTS' 40th Anniversary. For

information: www.ots.duke.edu.

The **USDA Forest Service International Programs** plans three international seminars for 2003. Participants are selected to represent a wide geographic distribution and diversity of experience. Programs are intensive, interactive seminars for English-speaking senior natural resource management professionals. More information is at www.fs.fed.us/global. The seminars are:

International Seminar on Forestry and Natural Resources Administration, cohosted by USDA Forest Service International Programs and Colorado State University, will be held in late May 2003.

International Seminar on Protected Area Management, sponsored by the USDA Forest Service International Programs and the Universities of Montana, Idaho and Colorado State will occur in August, 2003.

International Seminar on Watershed Management, the University of Wisconsin - Stevens Point and the USDA Forest Service International Programs in August 2003.

Tropical Field Biology Course in Ecuador, 3-27 June 2003, offered by the Department of Biology, Arizona State University. A three-week intensive field course held at the Jatun Sacha Biological Reserve in Amazonian Ecuador, this course is intended for undergraduate students. It consists of a broad general introduction to tropical biology and field techniques, including independent research projects. The course carries seven 400-level BIO credits from ASU, and is open to college students from all institutions. See the website at lifesciences.asu.edu/bio494/fouquette. For further information contact Program Director M.J. Fouquette, at jack.fouquette@asu.edu, or by phone at (480) 965-5070.

TROPICAL DENDROLOGY COURSES IN COSTA RICA, GIVEN SINCE 1993. June 23 - 5 July 2003 (in English). Courses given in four different environments (Lifes Zones). Costs: US\$ 1,800.00 which covers all expenses while you are in Costa Rica. Partial fellowships are available. Contact: Dr. Humberto Jiménez Saa, Apdo. 8-5857-1000, San José, Costa Rica. Fax: (506) 253 4963, Tel.: (506) 291-0862 and 231-1236, E-mail hjimenez@racsa.co.cr, Web page at <http://www.hjimenez.org/>.

PUBLICATIONS AND WEB RESOURCES

Najt J. & Grancolas P. (eds) 2002. - **Zoologia Neocaledonica 5: Systématique et endémisme en Nouvelle-Calédonie. Mémoires du Muséum national d'Histoire naturelle**, 187: 1-283. Paris ISBN : 2-85653-536-4. With a CDROM. 58.77 Euros

This fifth volume with contributions in English and in French concerning animal terrestrial biodiversity in New Caledonia appears in an ongoing series entitled "Zoologia Neocaledonica." The series is published in the *Mémoires du Muséum national d'Histoire naturelle*, Paris, which can be browsed at the website of Publications scientifiques du Muséum: <http://www.mnhn.fr/publication/memoire/m187.html>.

World Atlas of Biodiversity

<http://stort.unep-wcmc.org/imaps/gb2002/book/viewer.htm>.

This site, from the United Nations Environment Programmes World Conservation Monitoring Center (UNEP-WCMC), provides an interactive map interface to view various layers showing geographic, landuse, and biodiversity data. Maps can be global or on a more regional scale.

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ATB is an international society that promotes tropical biology in its broadest sense. ATB publishes the quarterly journal *BIOTROPICA* and sponsors frequent symposia. Information: W. John Kress, ATB Executive Director, Smithsonian Institution, US National Herbarium, Department of Botany, NBH 166, Washington, DC 20560.

OTS is a non-profit consortium of 65 academic and research institutions in the United States, Australia and Latin America. Its mission is to provide leadership in education, research and the responsible use of natural resources in the tropics. Graduate undergraduate and professional training and research facilities are provided at three field stations in Costa Rica. Information on OTS and *Tropinet* contributions: OTS, Box 90630, Durham, NC 27708-0630 USA.

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