Tropinet

Volume 15, No. 2/3 September 2004 Supplement to BIOTROPICA Vol 36 No. 3

The Association for Tropical Biology and Conservation

Organization for Tropical Studies
where science and nature converge

IN THIS ISSUE:
Researchers celebrate 25 years of study in Amazonian Brazil

REVIEWS:
- Herps of the Yucatán, reviewed by Richard Lehtinen
- Francis Hallé's elegy to plants, reviewed by Jimmy Grogan

Conservation committee of ATBC seeks input from members on issues

Why you and your closest friends should belong to the ATBC - A message from president-elect Thomas Lovejoy

Editor: **Lyn Loveless**, Department of Biology, The College of Wooster, Wooster, OH 44691. Phone: (330) 263-2022. Fax: (330) 263-2378. Email: mloveless@wooster.edu

Tropinet is accessible on the ATB website at http://www.atbio.org

Production Editor: **Carol Mozell** OTS
Design by **Katherine Hartman**

THE BIOLOGICAL DYNAMICS OF FOREST FRAGMENTS PROJECT:

25 Years of Research in the Brazilian Amazon

William Laurance[1,2], Rita Mesquita[1], Regina Luizão[1], and Flavia Pinto[1]

[1]Biological Dynamics of Forest Fragments Project, National Institute for Amazonian Research (INPA), C.P. 478, Manaus, AM 69011-970, Brazil

[2]Smithsonian Tropical Research Institute, Apartado 2072, Balboa, Panama

The Biological Dynamics of Forest Fragments Project (BDFFP) is the world's largest and longest-running experimental study of habitat fragmentation. On June 28, 2004, researchers, students, and associates of the BDFFP celebrated a watershed event—the 25th anniversary of the project. The event provided an opportunity to showcase the scientific and societal impacts of this landscape-scale investigation into the ecology and conservation of Amazonian forests.

PROJECT HISTORY

Initiated in 1979, the BDFFP is a bi-national, collaborative project between the Smithsonian Institution and the Brazilian National Institute for Amazonian Research (INPA). As one of the longest-term projects evaluating the impacts of human activities in the Amazon, the BDFFP is both a cutting-edge study of forest fragmentation and a model for similar investigations in other regions.

The project owes its genesis to a heated scientific debate in the mid-1970s, concerning the applicability of island biogeography theory to conservation planning. This debate, summarized as "SLOSS" (single large or several small reserves of equal area), eventually helped to galvanize many ecologists to study fragmented and other insular ecosystems. At the time, however, the arguments about SLOSS were more about ecological theory than actual data, because so few data were available.

The SLOSS debate was highly relevant to Tom Lovejoy, at that time the head of programs for World Wildlife Fund-U.S. (and currently President-elect of the ATBC). In late 1976, Lovejoy conceived of a giant experiment in the Amazon to study the implications of fragmentation and its relevance for SLOSS. INPA endorsed the project and, in 1979, the investigation—initially christened the Minimum Critical Size of Ecosystems Project—began in the rainforests near Manaus, Brazil, with

Continued on page 2

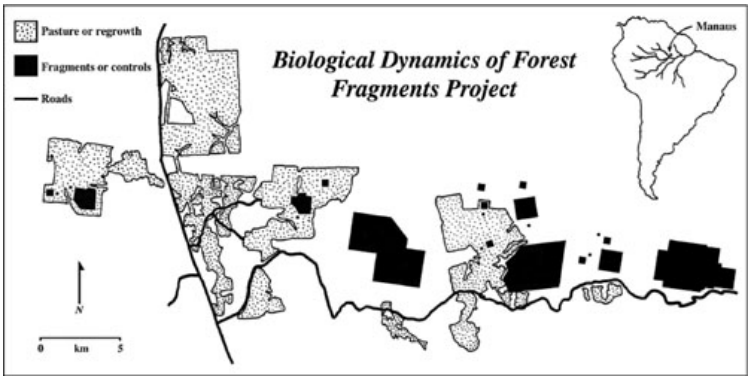


Figure 1. The BDFFP study area near Manaus, Brazil, showing the locations of forest fragments and control sites in intact forest (shaded blocks). Stippled areas are cattle pastures or regrowth forest, while unstippled areas are rainforest. Thick, solid lines are roads.

the fieldwork led by Richard Bierregaard.

Over the past 25 years, BDFFP researchers and students have assessed the impacts of Amazon forest fragmentation on a great diversity of species—trees, birds, primates, small mammals, frogs, insects, and many other plant and animal taxa—as well as on many ecological and ecosystem processes (Box 1). A key feature of the BDFFP is that abundance data were collected for many species prior to experimental isolation of the forest fragments, permitting a far more rigorous assessment of fragmentation effects than would otherwise be possible.

The BDFFP's 1,000-km^2 study area (Fig. 1) includes a total of 11 forest fragments ranging from 1-100 ha in area within three large cattle ranches, and extensive areas of intact forest that serve as experimental control sites. Despite its acidic, heavily weathered soils, the study area has extremely high tree diversity, averaging over 280 tree species ($\geq$10 cm diameter at breast height) per hectare in intact forest. Also present are secondary forests of varying ages and floristic composition that have regenerated on abandoned cattle pastures.

25TH ANNIVERSARY SYMPOSIUM

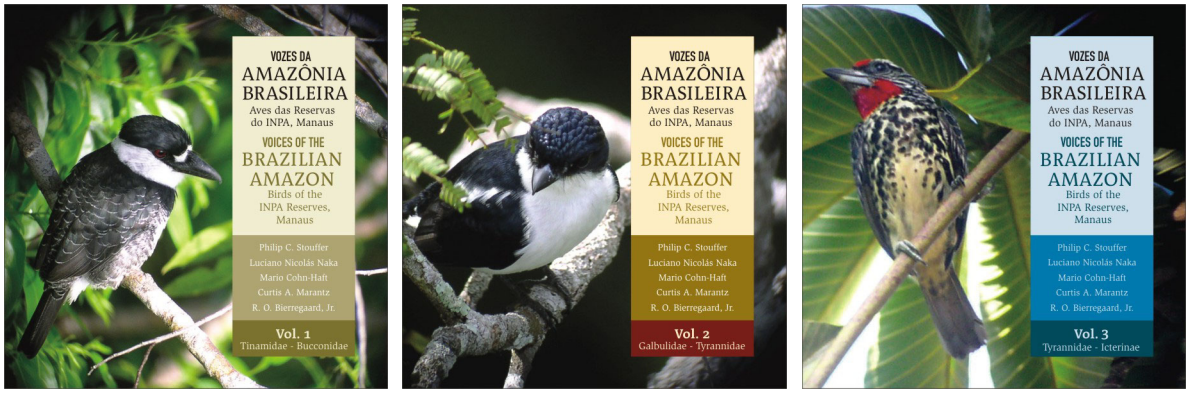
Today, BDFFP investigators have produced about 450 scientific publications, several books, and nearly a hundred graduate theses (Box 2). A special four-day symposium in Manaus provided an opportunity to see many of the fruits born by these investigations. The symposium brought together current researchers and students with the original investigators whose efforts initiated the project 25 years ago. For those in attendance, it was partly a scientific meeting and partly a giant family reunion.

The meeting was organized in seven sessions, each organized by a research leader. Session 1, organized by William Laurance, described the impacts of fragmentation on forest structure, composition, and dynamics. Session 2, led by Rita Mesquita, summarized studies of forest regeneration in degraded lands of the BDFFP landscape. The third session, coordinated by Richard Bierregaard, described how different animal species respond to forest fragmentation, whereas the fourth session, headed by Heraldo Vasconcelos, described how fragmentation altered ecological processes and species interactions.

The final three sessions focused on practical applications of BDFFP research. Session 5, coordinated by Eduardo Venticinque, described the increasing role of the BDFFP and its GIS laboratory in land-use planning and ecological zoning in Amazonia. Session 6, organized by Domingos Macedo, summarized the many educational programs offered by the BDFFP—from undergraduate and graduate courses to those designed for environmental decision-makers in Amazonia. The final session, led by Regina Luizão, focused on the future management of the BDFFP landscape and its surrounding forests—which are likely to change dramatically in coming years as a result of increasing forest colonization, logging, and other land-uses in central Amazonia.

The plethora of talks illustrated just how far the BDFFP has come, and how much it has evolved, over the past quarter century. Initially, the project had a relatively simple focus on assessing fragment area-related changes in rainforest communities. Today, the BDFFP's activities are far more diverse. It includes a more complex and sophisticated range of studies designed to assess the role of edge, area, isolation, and matrix effects on plant and animal communities; autecological investigations of key species; diverse studies of forest regeneration; spatial modeling of land-use changes throughout the Amazon

Continued on page 3



A three-volume CD of bird calls of Amazonian birds was unveiled at the BDFFP's 25th Anniversary Symposium. The CD was authored by Phillip Stouffer ,Luciano Naka, Mario Cohn-Haft, Curtis Marantz, and Richard O. Bierregaard.

BOX 1: IMPACTS OF FOREST FRAGMENTATION

The BDFFP has yielded scores of insights into the effects of habitat fragmentation on rainforest biotas. As expected, many species—large mammals, primates, understory birds, and certain beetles, ants, bees, termites, and butterflies—are highly sensitive to fragment area, and some have disappeared from even the largest fragments in the area. Surprisingly, a few groups, such as small mammals and frogs, have remained stable or increased in species richness after fragment isolation. These taxa have small area requirements, seem insensitive to edge effects, or readily use the mosaic (matrix) of modified habitats surrounding fragments.

BDFFP studies have also revealed the diversity of edge effects in fragmented rainforests. Such changes dramatically affect plant communities and various ecological and ecosystem processes. Edge effects also influence many animals. Species that favor disturbed forest or treefall gaps often increase in abundance near edges, whereas others, including many understory birds, bats, flies, bees, wasps, beetles, ants, and butterflies, have been shown to decline near edges. Such edge-avoiding species may be particularly vulnerable to forest fragmentation.

The matrix of modified habitats surrounding fragments also has important effects on fragment biotas. Fragments bordered by regrowth forest are less vulnerable to edge-related microclimatic changes and have lower tree mortality than do those adjoined by cattle pastures. The matrix also strongly influences fragment connectivity. Among rainforest frogs, birds, small mammals, and bats, matrix-avoiding species have been much more likely to decline or disappear in the BDFFP fragments than are those that use the matrix. Fragments surrounded by regrowth should therefore sustain more sensitive rainforest species than do those surrounded by hostile habitats such as pastures.

Another important finding is that even small clearings are barriers for many rainforest organisms. Many terrestrial insectivorous birds have disappeared from the BDFFP fragments and failed to recolonize even those isolated by only 80 m, despite a proliferation of regrowth around many fragments. Even an unpaved road of only 30-40 m width dramatically alters the community structure of understory birds and inhibits the movements of many species. Clearings of just 15-100 m are insurmountable barriers for certain dung and carrion beetles, euglossine bees, and arboreal mammals. In human-dominated landscapes, habitat fragments are often isolated by much larger distances than these from large forest tracts, suggesting that movement among fragments will be drastically curtailed for many rainforest species.

BOX 2. PUBLICATIONS AND INFORMATION ABOUT THE BDFFP

To learn more about the BDFFP, and to find a full list of the project's many publications and theses, visit the project website (http://pdbff.inpa.gov.br). Below are several key books and new resources:

Laurance, W. F., and R. O. Bierregaard, editors. 1997. *Tropical Forest Remnants: Ecology, Management, and Conservation of Fragmented Communities.* University of Chicago Press.

Gascon, C., and P. Moutinho, editors. 1998. *Floresta Amazônica: Dinâmica, Regeneração e Manejo.* Ministério da Ciência e Tecnologia, Manaus, Brazil.

Laurance, W. F., and C. Gascon, editors. 1998. *Ecology and Management of Fragmented Tropical Landscapes.* Special Issue of *Biological Conservation* **91**:99-247.

Bierregaard, R. O., C. Gascon, T. E. Lovejoy, and R. Mesquita, editors. 2001. *Lessons from Amazonia: The Ecology and Conservation of a Fragmented Forest.* Yale University Press.

Schroth, G., G. da Fonseca, C. Harvey, C. Gascon, H. Vasconcelos, and A.-M. Izac. 2004. *Agroforestry and Biodiversity Conservation in Tropical Landscapes.* Island Press.

Stouffer, P., L. Naka, M. Cohn-Haft, C. Marantz, and R. O. Bierregaard. 2004. *Bird Songs of Amazonia* (Set of three compact disks).

Barbosa Pires, J., and R. Mesquita. 2004. *E Nós Como Ficamos?* BDFFP Publication for Children.

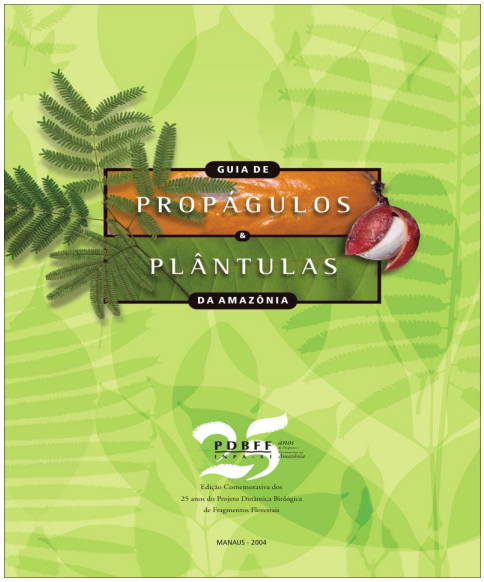
Ferraz, I., and J. L. Camargo. 2004. *Seeds and Seedlings of Amazonia.* BDFFP Publication.

Continued from page 2

basin, using the BDFFP's GIS and remote-sensing laboratory; studies of aquatic ecosystems; and long-term investigations of ecological changes in old-growth forests, possibly in response to global-change drivers such as increasing atmospheric CO_2.

Today, education and training also play a major role in the project's mission, to the extent that a number of leading decision-makers in Amazonia received their original graduate training through the BDFFP. The BDFFP also has important influences on conservation policies in Amazonia, via its publications, participation in public meetings, and other public outreach activities. The project's leading role in research and training was the reason it received the prestigious Henry Ford/Conservation International Award for Conservation Achievement in 2000. Another important change is that the Brazilian leadership of the BDFFP has steadily increased over time, to the degree that the last three scientific directors of the project have all been Brazilian. Clearly, the BDFFP has far transcended its original goals and vision. As a model of international cooperation, long-term scientific study, and research and training, the BDFFP has and will continue to make important contributions to our understanding of the ecology and the future of tropical forests.

Authors can be reached at the following email addresses:
William Laurence at laurancew@tivoli.si.edu
Rita Mesquita at rita@sds.am.gov.br
Regina Luizão at rccl@inpa.gov.br
Flavia Pinto at flavia@inpa.gov.br



LEFT: Also introduced at the BDFFP Anniversary Symposium was the "Guia de Propágulos e Plântulas da Amazônia" (Seeds and Seedlings of Amazonia Guide) by Authors Isolde Ferraz and José Luís Campana Camargo.

SCHOLARSHIPS AND FELLOWSHIPS

Student Scholarship Program
Bat Conservation International (BCI) announces its 2005 student research scholarship program. About 15 grants ranging from $500 to $2,500 will be awarded to research that is directly related to bat conservation and that documents roosting and feeding habitat requirements of bats, their ecological and economic roles, or their conservation needs. Students enrolled in any college or university worldwide are eligible to apply. Application deadline for 2005 scholarships is 15 December 2004. Information and forms are available at http://www.batcon.org/schol/schol.html.For questions, contact Sarah Keeton at skeeton@batcon.org or 512-327-9721.

Short Courses on Field Identification of Tropical Plants in Costa Rica. March 14-26, 2005 & June 27-July 9, 2005 (in English). Courses are given in 4 different environments (Life Zones) We offer partial fellowships. Details are available at <http://www.hjimenez.org/> . Direct contact: Dr. Humberto Jiménez Saa. Apdo. 8-5857-1000/ San José, Costa Rica. FAX: (506) 2534963. Phones: (506) 291-0862; 231-1236 (hjimenez@racsa.co.cr).

Oportunidad de beca para estudios de postgrado/ Fellowship opportunityfor postgraduate studies: BECAS MIGUEL DE CERVANTES PARA PROFESORES Y EGRESADOS DE LATINOAMÉRICA (Fecha límite 30 septiembre 2004 / 30 September 2004 deadline) (Sólo castellano / Spanish only) La Universidad de Alcalá convoca 200 becas de postgrado, doctorado/ máster con la colaboración de la Agencia Española de Cooperación Internacional (AECI) y del Grupo Santander. Las becas están destinadas a profesores y egresados latinoamericanos y de otros países hispanohablantes que deseen iniciar estudios de doctorado y máster, y a aquellos que hayan iniciado estudios de postgrado en la Universidad de Alcalá y no cuenten con ningún tipo de ayuda económica. El plazo de presentación de solicitudes finaliza el día 30 de septiembre de 2004. Mayores informaciones: http://www.uah.es/otrosweb/inves/ProgramasDeApoyo/becascerv.asp

2005-2006 Kleinhans Fellowship, Rainforest Alliance: Research in Tropical Non-Timber Forest Products. The Kleinhans Fellowship research area is restricted to Latin America. Applications for projects conducted in the Peten region of Guatemala or Southern Mexico are especially encouraged. Applications must be received before December 31, 2004. A decision will be made by May 1, 2005. For more information: Kleinhans Fellowship homepage at http://www.rainforest-alliance.org/programs/kleinhans/index.html

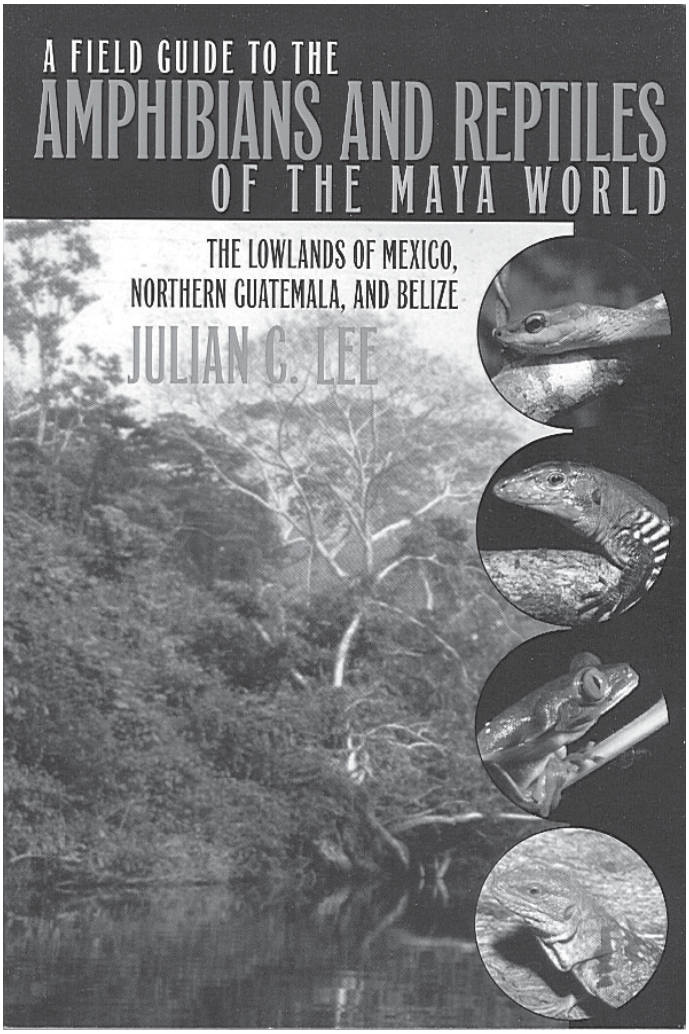
BOOK REVIEWS

A Field Guide to the Amphibians and Reptiles of the Maya World by Julian C. Lee. Cornell University Press, 2000.

Reviewed by
Richard M. Lehtinen, The College of Wooster, Wooster, Ohio USA
rlehtinen@wooster.edu

This sturdily constructed and compact volume was written to serve as a guide to the herpetofauna of the Yucatán peninsula (an area comprising Belize, the Guatemalan Department of Petén and all or part of the Mexican states of Campeche, Quintana Roo, Yucatán, Tabasco and Chiapas). Other guides to this region are already available (e.g., Campbell 1999) including Lee's previous guide to the herpetofauna of the Yucatan (1996). This updated version is more portable than its predecessor (and much less expensive) and seems geared more to the adventuresome tourist than to professional herpetologists. Nonetheless, there is much to admire in this volume and even experienced experts will find many interesting and useful nuggets of knowledge.

After first introducing the general biology of amphibians and reptiles and briefly discussing conservation issues facing these animals, Lee then spends a good deal of time discussing the climate and various habitat types present in the Yucatan. This section is followed by the species accounts, which takes up most of the rest of the volume. Without exception the writing is clear and informative, if a little bit stiff at times.



For each species entry, Lee first gives the taxonomy and details of identification (particularly valuable or diagnostic characters are placed in italics) and briefly discusses how to distinguish similar species. The taxonomy is current, and (where warranted) Lee mentions taxonomic disagreements concerning species status. Notes on distribution are then given along with a section on natural history that includes notes on reproduction, behavior, habitat, etc.). If any subspecies are recognized, the proper name(s) are given. A handful of undescribed species (e.g., *Eleutherodactylus* species A) are also provided a species entry. At the end of each species account is a single reference. This reference provides an entry into the scientific literature for each species. This seems quite skimpy, but is understandable given the intended audience. The resulting literature cited section amounts only to a scant seven pages.

Very nice color photographs add greatly to the appeal of this volume. Virtually all species have useful, high-quality color photographs. More than a few species have multiple images, often illustrating variation in coloration, sexual dimorphism or differences among life stages. Even better than the photographs, however, are the superb line drawings, which clearly illustrate many distinctive characteristics. Even tadpoles are nicely illustrated (including tooth row formulas), a detail that many comparable works omit.

Range maps are similarly attractive and are givenfor nearly all species. Rather than using symbols for where specimens have been collected, Lee chose to use shaded areas to indicate the known distribution of each species by filling in the blanks. Areas for which data were unavailable are indicated by question marks. While this is a oversimplification of the complex and heterogeneous nature of species ranges, it is probably all that is possible in the confines of a field guide. Even with this caveat, the maps of distribution are of consistently excellent quality.

One surprise is that there are no dichotomous keys included in this volume. The Campbell (1999) field guide to the same region includes keys, and for this reason specialists may prefer that work. Lee claims that the diagrams and descriptions provided will allow the identification of all the amphibians and reptiles in this region. I believe he is correct (although I might balk at some of the *Eleutherodactylus*), however, the inclusion of keys would save a lot of page flipping.

I was hard-pressed to find any errors of fact or omission. This is a well-written and well edited volume that certainly does what it purports to do: help the reader identify the amphibians and reptiles of the Yucatán peninsula. As indicated earlier, in many ways, this volume is organized more for the ecotourist than the professional. That being said, there is much of use to the tropical herpetologist in this volume - whether in the field collecting data, or visiting Mayan ruins on holiday.

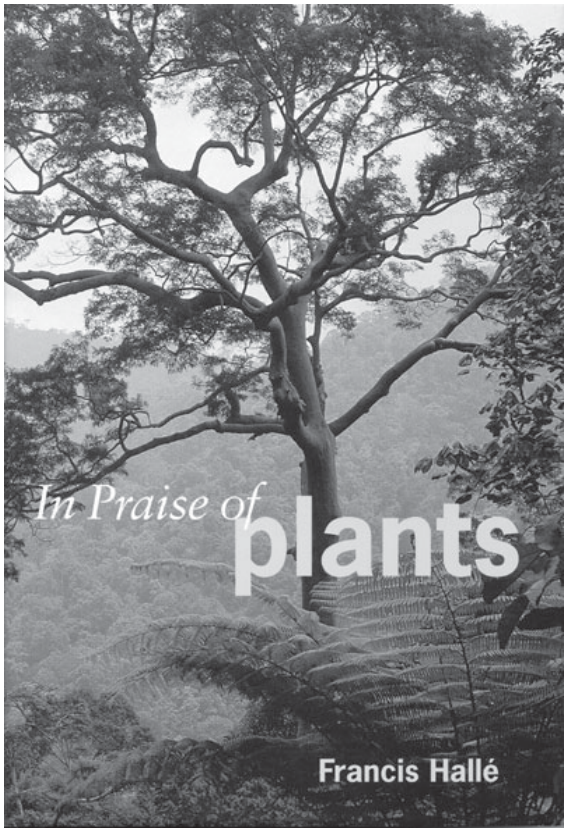
BOOK REVIEWS

In praise of Hallé

In Praise of Plants by Francis Hallé
Timber Press, Portland, OR, 1999.
Translated by David Lee.

Reviewed by Jimmy Grogan
Yale School of Forestry and Environmental Studies
jgrogan@crocker.com

In Praise of Plants, Francis Hallé's 1999 book now available in English thanks to David Lee's able translation, opens with the argument that people prefer what they most resemble – other animals – and that biological understanding consequently reflects our persistent zoocentrism. "What are plants? … To transcend their otherness, to try to understand what [they] are, what kind of being a plant is", Hallé describes differences and resemblances to animals by examining simple principles underlying form and function in both kingdoms.



Plants turn out to be (generally) sessile organisms whose cells are specially equipped with rigid walls, plastids, and vacuoles to maximize surface area for energy capture and assimilation. Plant immobility and autotrophism constrain cellular diversity but engender creativity: plant cells typically retain regenerative capacity following somatic injury, at the same time producing a vast array of biochemical compounds for defense and procreation. "Immobility" is a relative concept: plants substitute growth for mobility, filling space to express environmental constraints. Meanwhile reproduction entails rapid growth at regular intervals, gestures often dynamic and extravagant enough to be perceptible – resembling movement – on the scale of people-time. Plants don't separate germ from somatic cell lines like animals do, but they do lead dual diploid and haploid lives, however reduced and ephemeral the latter. Form and function have pushed plants to develop patterns of inheritance and evolution profoundly different from those of animals, including mechanisms favoring somatic mutation and genetic heterogeneity within individuals. Individuals of large plants, particularly trees, could more accurately be regarded as colonies, or meta-populations. These are but a sampling of the concepts and ideas packed into chapters on form, the cell, biochemistry, evolution, and ecology. Plus 'other living beings' in Chapter 6: fungi, corals, social insects, and crystals.

Francis Hallé's 40 years of "fraterniz[ing] with the most beautiful plants on our planet" have yielded major conceptual and practical contributions to the study of plant architecture and tree-top or canopy ecology, among other topics. In Praise of Plants is a terrific book that distills the basic precepts of plantness into language that is clear and accessible to professionals and non-professionals alike, including much that readers may find new and exciting. The author leavens vast knowledge and first-hand experience with willingness and ability to think constructively outside the disciplinary box. That is to say, he challenges himself and the reader with him to try to fully comprehend plants, their true nature, to see the world from their point of view – and what happens then to time, to mobility, to individuality? Hallé is not bashful about the lengths he has gone to in his life seeking this comprehension, nor does he shy from enlisting help from more intuitive practitioners, including "gardeners, poets, mere hikers, monks, dreamers, scholars, bonesetters, mushroom collectors." "We have allies who understand at what point they surpass us in insight … the sensitivity of such persons can prove to be more penetrating than the reasoning of a specialist." Indeed, English readers will find here tantalizing introduction to richly expressive French philosophical and poetic literature about the botanical world. The book is laced with humor and amply illustrated in the author's lively style. Most importantly, you might see the world with fresh eyes, or fresh insight, having read Hallé's paean to plants.

Hawaiian Biodiversity and Natural Resource Management Publications Available Online

A variety of publications spanning the last 32 years of conservation biology and natural resource management in Hawaii and the Pacific Islands have been scanned and posted on the web, thanks to support from the National Park Service and can be found at: http://www.botany.hawaii.edu/faculty/duffy/Report Index/
These include Park Technical Reports, IBP documents, information on endemic Hawaiian birds, and books on conservation biology, alien plants, and ecosystem management.
For more information, please contact, Stephanie Joe at sjoe@hawaii.edu, Department of Botany, University of Hawaii Manoa, Honolulu HI 96822.

CONSERVATION COMMITTEE SEEKS INPUT FROM ATBC MEMBERS

At its 2004 annual meeting in Miami, the ATBC Executive Council approved a proposal to form an ATBC Conservation Committee, which will be co-chaired by William Laurance of the Smithsonian Tropical Research Institute in Balboa, Panama, and Heraldo Vasconcelos of the University of Uberlândia in Uberlândia, Brazil.

The goals of the committee will include identifying critical conservation issues of general interest to the ATBC, and preparing draft resolutions for consideration by the Association's membership at its annual meetings. Such resolutions can play an important role in raising public awareness and attracting media attention for key conservation priorities. Other activities relating to the conservation of tropical ecosystems may also be undertaken by the committee.

To forward information about important conservation issues, or to submit a request to be formally appointed to this committee, please contact William Laurance (laurancew@tivoli.si.edu) and HeraldoVasconcelos (heraldo@umuarama.ufu.br).

COMITE DE CONSERVACION DE LA ATBC

Durante su reunión anual llevada a cabo en el año 2004 en Miami, el Comité Ejecutivo de la ATBC aprobó la propuesta de crear un Comité de Conservación que será co-presidido por William Laurance del Instituto Smithsonian de Investigaciones Tropicales en Balboa, Panamá, y por Heraldo Vasconcelos de la Universidad de Uberlândia en Uberlândia, Brasil.

Los objetivos del comité incluyen identificar aspectos críticos sobre conservación que sean de interés general para la ATBC y preparar resoluciones preliminares que serán puestas a consideración por los miembros de la Asociación durante la reunión anual. Estas resoluciones pueden jugar un papel importante al fomentar la conscientización pública y llamar la atención de los medios de comunicación en cuanto a prioridades claves en temas de conservación. El comité también puede asumir otras actividades relacionadas con la conservación de ecosistemas tropicales.

Para obtener información acerca de aspectos importantes relacionados con conservación, o para enviar una solicitud formal dirigida a este comité, favor contactar a William Laurance (laurancew@tivoli.si.edu) y Heraldo Vasconcelos (heraldo@umuarama.ufu.br).

COMITÊ DE CONSERVAÇÃO DA ATBC

Durante o seu encontro anual de 2004, em Miami, o Conselho Executivo da ATBC aprovou a proposta de formar um Comitê de Conservação da ATBC, que será dirigido por William Laurance do Smithsonian Tropical Research Institute em Balboa, Panamá, e por Heraldo Vasconcelos da Universidade Federal de Uberlândia, em Uberlândia, Brasil.

Os objetivos deste comitê são identificar assuntos críticos sobre conservação, de interesse geral para a ATBC, e preparar propostas de resoluções para consideração pelos membros da Associação durante seus encontros anuais. Tais resoluções poderão desempenhar um papel crítico em despertar a consciência pública e em atrair a atenção da mídia para prioridades de conservação. Outras atividades relacionadas à conservação dos ecossistemas tropicais poderão, também, ser conduzidas pelo comitê.

Para enviar informações sobre assuntos importantes em conservação, ou para solicitar um pedido formal de nomeação para este comitê, favor contatar William Laurance (laurancew@tivoli.si.edu) e Heraldo Vasconcelos(heraldo@umuarama.ufu.br).

BE AT THE HEART OF TROPICAL BIOLOGY AND CONSERVATION
JOIN AND SUPPORT ATBC

One of the most exciting and important areas of science and conservation is what is happening in the tropics of our planet. Even the newest of those of us who work in the tropics can see change, some for the worse, but others for the better (e.g. new conservation achievements)almost on a weekly basis.

I sometimes say that it will be a race to the finish between the destructive and positive forces between the tropics of Cancer and Capricorn. Our society is right in the middle of all this. Our publications and meetings are at the heart of the story, and we have been meeting in different locations pantropically to share our insights and learn from our colleagues. Ours is an exciting world of new insights, new challenges and new conservation achievement.

Each new member strengthens our efforts and is strengthened by them. So please join our lively band — or if already part of it, help us recruit new members. Our science and the future of the tropics depends on that to a significant degree.

Thomas E. Lovejoy
President-Elect, Association for Tropical Biology and Conservation
lovejoy@heinzctr.org

ATBC ANNUAL MEETING CONVENES IN MIAMI, PLANS FUTURE ENDEAVORS

The Association for Tropical Biology and Conservation

The 2004 annual meeting of the Association for Tropical Biology and Conservation was held in Miami, Florida, July 12-16. Under the direction of meeting organizers Theodore Fleming (University of Miami) and David Lee (Florida International University), the meeting took as its theme the topic "Geographic and Conceptual Frontiers of Tropical Biology." About 400 tropical scientists attended the four-day meeting. In addition to posters and contributed papers, the meeting featured 16 symposia on topics ranging from "Island Bats" to "Tropical Microbial Ecology and Evolution," and from "Seed Dispersal and Molecular Markers" to "Forest Ecology and Conservation in the Guiana Shield." A total of over 300 presentations during meeting provided insights into tropical biology from around the world.

The meeting banquet, held at the Miami Museum of Science, featured an address by ATBC President S. Joseph Wright, Staff Scientist at the Smithsonian Tropical Research Institute in Panama. Kamaljit S. Bawa, Professor of Biology at the University of Massachusetts, Boston, and president of ATBC in 1999-2000, was recognized during the banquet for his contributions to tropical biology and the ATBC by being elected to Honorary Membership in the Society.

The Alwyn H. Gentry awards, awarded annually to recognize research excellence in student presentions at the meetings, were announced by President Joe Wright in early August. Fifty-five oral presentations and 31 posters were enrolled in the Gentry competition. The speaker's award went to Nathan Muchhala, for his oral presentation entitled "The role of pollinators in the evolution of floral morphology: bats, birds, and *Burmeistera*." Carlos Garcia-Robledo won the poster award, with his work entitled "Assymetric pollen flow and morph reproductive function in the distylous herb *Arctophyllum lavarum*." His poster was co-presented with Floria Mora-Kepfer. Both winners are students in the Department of Biology at the University of Miami. They receive a cash award, a book grant from the University of Chicago Press, and an honorarium to recognize their efforts.

The Council for the ATBC met prior to the general meeting, to discuss association business. W. John Kress, Executive Director of the Society, announced that the Council has accepted proposals for annual meeting venues for the next four years. In 2005, the annual meeting will take place for the first time in the Southern Hemisphere, in Uberlandia, Brazil. In 2006, ATBC will return to Asia, with its annual meeting scheduled in K'unming, Yunnan, China. Returning to the Neotropics, ATBC meetings are scheduled for Morelia, Michoacán, México (2007) and Paramaribo, Surinam (2008). With this global scope, ATBC continues to pursue its goal of providing a truly international voice for tropical biology and conservation in the coming years.

MEETINGS CALENDAR

2004

Entomological Society of America, 2004 Annual Meeting, 14-17 November 2004, Salt Lake City Utah. A symposium on Wednesday, 17 November, will focus on *Arthropod Diversity at the La Selva Biological Station: Results from Project ALAS*, chaired by Dr. Jack Longino. For information, see the web site at: http://www.entsoc.org/annual_meeting/2004/ameeting.htm

5th International Symposium on Physiology, Behaviour and Conservation of Wildlife, 26-29 September,2004, Berlin, Germany. Main topics: management of captive and small populations, stress and disturbance, behavior, reproductive biology and wildlife conservation. Further information is available from Dr. Christian C. Voigt, symposium@izw-berlin.de and the web:http://www.izw-berlin.de

Third Annual IUCN Conference, 17-19 November, 2004. Queen Sirikit National Convention Center, Bankok, Thailand. The theme is "People and Nature – Only One World." For information, see the web at: www.iucn.org.

Biology in Asia International Conference, 7-10 December, 2004. Sponsored by the National Institute of Education, Department of Biological Sciences, NUS, and the Singapore Institute of Biology. For more information: www.dbs.nus.edu.sg/sibiolconference/index.html

2005

Working Forests in theTropics: Policy and Market Impacts on Conservation and Management. 13-15 February, 2005 University of Florida, Gainesville, Florida, USA. On-line registration and program information is on the conference web site: http://www.conference.ifas.ufl.edu/tropics

Natural Areas Association International Workshop to South Africa, 5-16 March, 2005 and 5-16 November, 2005. Visit 10 protected areas in the Western Cape to observe flora and fauna, and discuss research and management initiatives with local biologists. For more Information, see http://www.naturalarea.org/ or contact Abi Rome, abirome@earthlink.net

XVII International Botanical Conference, 18-23 July, 2005, Vienna, Austria. http://www.ibc2005.ac.at/

Society for Conservation Biology Annual Meeting, 15-19 July, 2005, Universidade de Brasilia, Brasilia, Brazil. The theme is "Conservation biology capacitation and practice in a globalized world." More information can be found at http://www.unb.br/ib/zoo/scb2005/

Association for Tropical Biology and Conservation, Annual Meeting, 24 – 28 July, 2005. Uberlandia, Minas Gerais, Brazil. The theme of this meeting will be "Frontiers in Tropical Biology and Conservation." More information can be found at the web site, at http://www.atbio.org/meetings.html

90th Annual Meeting, Ecological Society of America, 7-12 August, 2005. Montreal, Quebec, Canada. This meeting is held jointly with the IX International Congress of Ecology (INTECOL). The theme will be: Ecology at Multiple Scales. More information can be found at: http://www.esa.org/montreal/

XXII IUFRO World Congress (International Union of Forest Research Organizations), 8-13 August, 2005. Brisbane, Australia. For information, see the web site at iufro@forvie.ac.at

Society for Ecological Restoration, 2005 Annual International Conference. 12-18 August, 2005, Zaragoza, Spain. Details will be available soon at http://www.ser.org/content/2005Conference.asp

DIVERSITAS International Conference on Biodiversity, 9-12 November, 2005, Oaxaca, Mexico. The conference theme is "Integrating biodiversity science for human well-being." For details, see the web site at http://www.diversitas-international.org/bioconf_2005.PDF

If your group or society has a meeting of interest to tropical biologists, we are glad to publish an announcement in this listing. Send relevant information to the Editor.

Tropinet

Vol. 15 No. 2/3
September 2004
Box 90632
Durham, NC 27706-0632

***Tropinet* is published quarterly** by the Association for Tropical Biology and Conservation (ATBC) and the Organization for Tropical Studies (OTS) and is distributed free of charge to interested readers. To receive *Tropinet*, please send name and address to OTS. Suggested contributions of $15 or more are gratefully appreciated. Please write *Tropinet* on check payable to OTS and mail to OTS at address indicated below.

ATBC is an international society that promotes tropical biology and conservation in its broadest sense. ATBC publishes the quarterly journal BIOTROPICA and sponsors annual meetings and symposia. Information: W. John Kress, ATBC 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, Latin America, and Asia. Its mission is to provide leadership in education, research and the responsible use of natural resouces 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.

Tropinet
Vol. 15 No. 2/3
September 2004
Duke University
Organization for Tropical Studies
Box 90632
Durham, NC 27706-0632

Official Business
Penalty for Private Use, $300

Nonprofit Org.
US Postage
PAID
Durham, NC
Permit No. 60