

PLANTS & PEOPLE

A biannual newsletter published by and for the members of the Society for Economic Botany

Volume 15

Fall 2001

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DON'T MISS THIS GREAT MEETING IN A CITY NEEDING OUR VISIT...

2002 SEB ANNUAL MEETING

The next SEB annual meeting will be in New York City, hosted by The New York Botanical Garden, June 22-27, 2002. The first day, June 22, and the final day, June 27, will be devoted to field trips on the theme of "urban ethnobotany," with visits to places such as Chinatown, Little India, Hunt's Point Market, Union Square Market, and selected botánicas, all organized by Michael Balick. Participants may register on site beginning June 22 (which is also the date for the SEB Council meeting) and are invited to a welcoming reception that evening. The program for Sunday, June 23 will be devoted to the sponsored symposium, "Origin, Evolution, and Conservation of Crop Plants: A Molecular Approach," organized by Timothy Motley. June 24, 25, and 26 will be available for contributed papers, posters, and behind-the-scenes tours of the newly opened Herbarium Building, The LuEsther T. Mertz Library (where the SEB archives are deposited), the Plant Research Laboratory, The Enid A. Haupt Conservatory, and the living plant collections on the grounds of The New York Botanical Garden. Participants may arrange to use the library and herbarium collections during the meeting. The SEB Business meeting and evening banquet (with awards presentations) will be

held June 26 as well. The banquet, held in the NYBG's historic Snuff Mill on the banks of the Bronx River, will include a lecture by the 2002 Distinguished Economic Botanist, Professor Sir Ghilleán T. Prance.

Affordable, air-conditioned dormitory housing and meal options are available through Fordham University, located across the street from The New York Botanical Garden. For example, a single room will cost about \$45/night or \$280/week and the cost per person for a double is about \$40/night or \$240/week. Hotels are considerably more expensive, but a list of the more reasonable and convenient will be provided, along with other registration details in upcoming membership mailings and on the SEB website: <http://www.econbot.org>. The most convenient of the three New York City area airports is LaGuardia, but depending on your point of origin you may want to fly into JFK or Newark. Detailed directions to The New York Botanical Garden are available through its website: <http://www.nybg.org>. Watch the SEB website for details of the 2002 meeting and the call for papers and posters. The overall coordinator of this meeting's logistics is SEB Secretary David Lentz, dlentz@nybg.org.



Visit the updated SEB Website:
<http://www.econbot.org>

Plants & People

The Newsletter of
The Society
for
Economic Botany

Website:
<http://www.econbot.org>

Newsletter Committee

Trish Flaster, Editor
1180 Crestmoor Dr.
Boulder, CO 80303
Email: newsletter@econbot.org

Mike Balick
Charlotte Gyllenhaal
Kurt Allerslev Reynertson
David Theodoropoulos
Michael Thomas, Webmaster
Gail Wagner

Tita Young
www.WordScribe.com
Designer

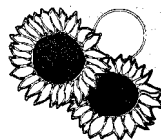
The articles within the Newsletter are independently submitted and do not represent the position of The Society for Economic Botany as a whole.

Deadlines for submissions are February 1 (Spring Issue) and September 1 (Fall Issue).

Notes from the Field

My column is short to make room for the many news items to share. Please remember to register early for our 2002 Meeting at the New York Botanical Garden. Past meetings held there have always been intellectually engaging and the field trips a window to new research possibilities. Also in this issue is the review of the 2001 meeting, awards received, and the courses that were offered to ethnobotany students in Hawaii by UH and NTBG.

Finally, it was with much sadness that this newsletter is written as I have included two obituaries, Dr. Schultes and Dr. Tyler. These great leaders have opened our frontiers in many ways; may we pay them respect through our future endeavors.



Trish Flaster

(tflastersprint@earthlink.net)

A Native Museum

An impressive collection of both fancy baskets and utilitarian baskets can be found at the Akwesasne Museum—many dating back hundreds of years. A trip to the Museum is well worth the drive to Cornwall and the gentle prodding of a custom's officer at the bridge crossing the mighty St. Lawrence into New York State! Splint dyeing demonstrations and pounding demonstrations were equally impressive—the latter requiring no small amount of elbow grease! Over an open fire at the bank of the St. Lawrence we were treated to a splint dyeing session, where natural dyes of red, yellow, and brown were fashioned with everything from sumac leaves and maple branches, to Spanish onion and tumeric. During the week of intensive learning, we even weathered rainstorms and deerflies for a look at some up-and-coming black ash stands in nearby Brasher Falls State Forest, New York. It is hoped that such stands will supply future generations with the material to continue a tradition near-and-dear to many an elder, like master basket-maker Henry Arquette—recently awarded the Ross Silversides Forestry Award for his contributions to the forest community in eastern Ontario. On the final day of the conference, we visited the recently established Black Ash Memorial Forest. Here, members of the community will be encouraged to dedicate black ash to loved ones who have spent a lifetime at basket making and who have since passed on to the spirit world. Sprinkled with delicate looking black ash seedlings as yet, it is hoped ultimately that this memorial forest will serve as a seed orchard for future black ash stands. Given the success of this year's event, it is hoped that a similar gathering will be held annually in the future—perpetuating a remarkable tradition for generations to come.

For more info call the National Aboriginal Forestry Association
(613) 233-5563 or FSC Canada at (416) 778-5568.

Conference Websites: <http://www.nafaforestry.org> and <http://www.fsccanada.org>.

Publications

Forestry Forum is a publication of the Eastern Ontario Model Forest—"a proud member of the Canada's Model Forest Network."

Contact Elizabeth Holmes, Editor, *Forestry Forum*
c/o Eastern Ontario Model Forest

P.O. Bag 2111, Kemptville, Ontario, K0G 1J0
Phone: (613) 258-8241 Fax: (613) 258-8363
<http://www.eomf.on.ca>, modelforest@eomf.on.ca
Aussi disponible en français. ISSN 1201-3978
Please note that the deadline for the submission of articles is the 1st of every month.

Herbal Medicine AudioTapes

The herbal Educational Series offers tapes of lectures by well-respected herbalist and practitioners in the field of complementary medicine. Contact them at: <http://www.Botanicalmedicine.org>

Antiquarian Flower Books and Prints.

You are kindly invited to visit the redesigned and updated website (<http://www.meemelink.com>), offering antiquarian books and prints in all fields of botany, horticulture, and garden design. It is now enhanced with thousands of pictures (remember to click the thumbnail images for more/larger pictures).

Antiquariaat Jan Meemelink
Mankesstraat 6, NL-2597 CN Den Haag
Netherlands

<http://www.meemelink.com>
tel. +31 (0)70 3240536, fax +31 (0)70 3243455
Member International League of Antiquarian Booksellers (ILAB), VAT NL 5632338B01

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Awards

SEB Klinger Book Award for 2001

The 2001 Klinger Book Award went to Mary Eubanks' *Corn in Clay* (1999. University Presses of Florida. Gainesville, FL.).

The other books nominated were:

Davidson, A. 1999. *The Oxford Companion to Food*. London. Oxford University Press, London. Nominated by Mark Nesbitt, 2 Mar 2000.

Paye, G. D. 2000. *Cultural Uses of Plants. A Guide to Learning about Ethnobotany*. The New York Botanical Garden Press, Bronx, NY. Nominated by: NYBG.

Guidelines used by the committee are now posted on the website. Those interested may examine these pages at <http://www.econbot.org/>. Select the "Awards" button on the left and then "Criteria" link in the line below the title.

Those wishing to see the five previous winners and other titles nominated will find them at <http://www.econbot.org/>. Select the "Awards" button on the left.

Nominations are now open for the 2000 award. Please send nominations (and books) to Daniel F. Austin, Book Review Editor, *Economic Botany*, Conservation & Science Department, Arizona-Sonora Desert Museum, 2021 N. Kinney Road, Tucson, AZ 85743 USA
New Email: daustin@desertmuseum.org.

Timothy C. Plowman Latin American Research Award 2000 Winner

The year 2000 recipient of the Timothy C. Plowman Latin American Research Award, presented by the Department of Botany of the Field Museum, was Maria Iracema Bezerra Lioiola, of the Universidade Federal Rural de Pernambuco in Recife, Brazil. Her project was entitled "Taxonomic Revision of *Erythroxyllum* sect. *Rhabdophyllum* (Erythroxylaceae)."

Ms. Lioiola used her award to visit the Herbarium of the Field Museum from 11 May to 2 June 2000. During this time, she reviewed the field Museum's holdings of *Erythroxyllum*, identified undetermined material, selected a loan for further study, and reviewed literature and unpublished work of the late Dr. Timothy Plowman.

Timothy C. Plowman Latin American Research Award 2001

The Botany Department at The Field Museum invites applications for the year 2002 Timothy C. Plowman Latin American Research Award. The award of \$1,500.00 is designed to assist students and young professionals to visit the Field Museum and use our extensive economic botany and systematic collections. Individuals from Latin America

and projects in the field of ethnobotany or systematics of economically important plant groups will be given priority consideration.

Applicants interested in the award should submit their curriculum vitae and a detailed letter describing the project for which the award is sought. The information should be forwarded to the Timothy C. Plowman Award Committee, Department of Botany, The Field Museum, 1400 South Lake Shore Drive, Chicago, IL 60605-2496 USA and received no later than 30 November 2001. Announcement of the recipient will be made no later than 31 December 2001.

Anyone wishing to contribute to The Timothy C. Plowman Latin American Research Fund, which supports this award, may send their checks, payable to The Field Museum, c/o Department of Botany, The Field Museum, 1400 South Lake Shore Drive, Chicago, IL 60605-2496 USA. Make certain to indicate the intended fund.

Premio de investigación Latinoamericano Timothy C. Plowman

El departamento de Botánica en "The Field Museum" invita aplicaciones para el premio de investigación Latinoamericano Timothy C. Plowman 2002. Este premio de \$1,500.00 fue diseñado para apoyar a estudiantes y profesionales jóvenes en visitas al museo de Field y utilizar sus extensas colecciones de botánica económica y sistemática. Se les dará consideración especial a individuos de Latinoamérica y a proyectos en los campos de etnobotánica ó sistemática de plantas económicamente importantes.

Las personas interesadas en aplicar a este premio deberán proveer su curriculum vitae y una carta detallando el proyecto para el cual el premio se utilizará. Esta información debe ser enviada al Timothy C. Plowman Award Committee, Department of Botany, The Field Museum, 1400 South Lake Shore Drive, Chicago, IL 60605-2496 USA y ser recibida antes del 30 de Noviembre de 2001. El ganador del premio será anunciado antes del 31 de Diciembre de 2001.

Cualquier persona que desee contribuir al Fondo de investigación latinoamericano Timothy C. Plowman, el cual apoya este premio, puede enviar su cheque, pagadero a "The Field Museum, c/o Department of Botany, The Field Museum, 1400 South Lake Shore Drive, Chicago, IL 60605-2496 USA". Asegúrese de indicar el fondo al cual se destina su contribución.

Publications Continued from page 2

New Titles

<http://www.cabi.org/Bookshop/>

Healing Plants of Peninsular India

J Parrotta, USDA Forest Service, International Institute of Tropical Forestry, Puerto Rico, USA
Publication Date: June 2001, No. of Pages: 944
Binding: Hardback ISBN: 0851995012
Price: £85.00 (US\$140.00)

There is considerable and growing interest in the Western world in medicinal plants and herbal drugs. In fact there is increasing debate to bring these products under legislative control in line with synthetic drugs. The Indian subcontinent is the source of many plants of medicinal importance. This book provides botanical descriptions and information on the medicinal properties of 545 plant species from central and southern India, many of which are also found elsewhere in the world. Scientific and common names (in 14 languages) are provided for each species, and they are superbly illustrated with high quality colour photographs.

Main Themes: Uses of Indian plants in traditional medicine (Ayurveda, Unani, Siddha, folk and tribal medicine). Botanical descriptions, local common names, geographical ranges and habitat information on Indian medicinal plants.

Foreword

"While this book will be valuable for researchers working in botany, ecology, medicine and pharmacology, it will also be highly attractive to a broad general public and particularly to naturalists both within and outside India. There is a pleasing mixture of detailed botanical description with more general consideration of the plant, its habitat and uses. Dr. Parrotta should be congratulated on this significant contribution to the scientific literature about the species covered and this major addition to the arguments for the wise conservation and use of our natural resources."

Professor J. Burley
President, International Union of Forestry Research Organizations (IUFRO)
Director, Oxford Forestry Institute, University of Oxford, United Kingdom
12 May 2000

Continued on page 8



Review of 2001 SEB Meeting

The Society held its annual meeting from May 28–June 2, 2001, in association with the Second International Summit meeting on Building Bridges with Traditional Knowledge, in the Hilton Hawaiian Village, Honolulu, Hawai'i. The meeting involved over 200 speakers (8 concurrent sessions were scheduled each morning), over 50 poster presentations, and over 800 registrants from 70 countries. Organising an event of this magnitude involves a massive commitment of time, and a considerable talent for fund-raising. Will McClatchey was Summit Coordinator while also serving on the Council of SEB. He was ably assisted by his wife Valerie and a dedicated team of students who fetched speakers from the airport, staffed the information desk, organised field trips, and also found time to present some impressive papers of their own. Those of us able to get to Hawai'i are extremely grateful to them for their achievements, energy, and patience.

Items relevant to SEB were interwoven throughout the five days of the meeting. The organisers' attention to detail was also manifest throughout. Speakers were greeted with a lei of orchid flowers on arrival at the airport, and garlanded with a lei signifying enlightenment at the start of their presentations. The Scottish ancestry of the Distinguished Speaker on the first evening, Professor Sir Ghilleen Prance, formerly Director of the Royal Botanic Gardens, Kew, was recognised when he was piped to the podium by the Hawaiian Thistle Pipe Band in full ceremonial dress. Later in the meeting, Sir Ghilleen was selected as the Society's Distinguished Economic Botanist for 2002 and honoured the Society by accepting this nomination.

The Society's Distinguished Economic Botanist for 2001, Dr. Isabella Abbott, received her award at lunch on Friday. Her plaque was far less colourful (though longer-lasting) than the beautiful and fragrant leis she was wearing, and the citation, read by Past-President Gail Wagner, had strong competition from the chant composed in Dr. Abbott's honour by her Hawaiian friends. After that, Dr. Abbott treated us to a fascinating talk on Hawai'ian ethnobotany.

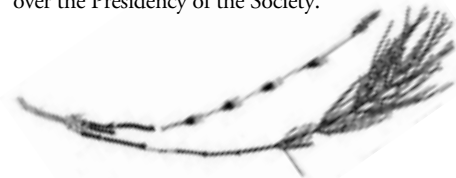
Other awards presented were the Klinger Award to Mary W. Eubanks for her book *Corn in Clay: Maize Palaeoethno-botany in Pre-Columbian Art*, the Morton Award to Sandra Anne Banack (California State Univ., Fullerton) and her colleagues for their poster on "Ethno-ecological Conservation of Totoro in Peru," and the Fulling Award to Puanani Anderson-Wong (Univ. of Hawai'i) for her paper on "Returning the Beloved Plant *laua'e maoli* to the Hawai'ian People and Clarifying the Role of the Invasive Alien *laua'e* (*Phymatosorus grossus*) Holds Significance for Cultural and Natural Conservation Efforts." Alice Warren-Bradley (Florida International Univ.) received an honourable mention for her poster on "Sustainable Harvest of Irapai (*Lepidocaryum tenue* Mart.) in the Peruvian

Amazon." Four contributed papers also received honourable mentions: Nat Bletter (CUNY Graduate Center/New York Botanical Garden) for "A Technique for Quantitative Comparison of Medicinal Plants for Different Diseases from Different Cultures"; Isaac Bruck (North Carolina State Univ.) for "K'ekchi' Mayan Ethnobotany and the Search for Novel Pesticide Compounds"; Jeanine Pfeiffer (Univ. of California, Davis) for "Malesian Fruit in Kempo Manggarai Traditions and Ecosystems, East Nusa Tenggara (Indonesia)"; and John Stepp (Univ. of Georgia) for "Ethnoecological Distribution of Highland Maya Medicinal Plants." The concurrent sessions gave the judges a particularly difficult task (the ability to be in at least two places at once would have been useful), and the number of honourable mentions showed, once again, the impressively high standard of student presentations.

The Economic Botany lunch was preceded by the annual symposium of the Society. The topic this year was "Crops and Cultures in the Pacific." The five principal speakers each covered a crop on which they were an acknowledged authority, and were asked to examine how recent advances in archaeobotany (particularly recovery and identification of macroscopic and microscopic remains) and botany (particularly molecular cytogenetics, DNA fingerprinting techniques, and DNA sequencing) had improved or altered understanding of the origin, evolution, and dispersal of their particular crop and hence of early agriculture in the Pacific. The speakers rose admirably to this challenge. Some drew extensively on new insights from molecular techniques (Laurent Grivet's most elegant presentation of the complexities of chromosome and genome evolution in polyploid sugar cane); others were more skeptical (Hugh Harries stated that coconut palms were the only trees that he believed in—but nevertheless presented a token evolutionary tree based on DNA data). Valérie Kagy included some fascinating ethnobotanical information on the "ancient" bananas of the Kanak of New Caledonia, while Peter Matthews made a case for the preservation of culinary knowledge as a basis for conserving genetic diversity in taro. Vincent Lebot gave a wide-ranging (both intellectually and geographically) presentation of chemical races in kava and man's role in their evolution and dispersal in the Pacific. Despite their diversity, the five papers fitted together well, and those who attended the symposium had a rare opportunity to hear about some extremely relevant work from speakers from whom we hope to hear more.

At the Business Meeting, members were informed of the results of the 2001 elections. Gary Martin is the new President-Elect and Javier Caballero and Nancy Turner are the new members of Council. The Society also voted to support the AIBS Public Policy Office Funding Initiative by paying an additional earmarked sum annually based

on the number of members in the Society. Council has accepted a proposal from the Arizona Sonora Desert Museum to host the 2003 meetings (dates subsequently confirmed as 30 May–2 June). At the close of the Business Meeting, Dr. Brian Boom took over the Presidency of the Society.



1st Curatorial Workshop for Ethno- and Economic Botany, Bishop Museum, Hawai'i, 2001

Including everything from abaca to zucchini, botanical and ethnographic collections of ethno- and economic botany are found around the world. These collections consist of specimens, products (medicine, food, fiber, oil, latex, etc.), and cultural artifacts (clothing, baskets, weaponry, tools, etc.) pertaining to plants and people. Research of many ethno- and economic botanists depends heavily on these collections. Yet these collections have no standards of curation, nor any organization to facilitate collaboration among scientists. So, our 1st Curatorial Workshop at the SEB meetings in Hawai'i this year began to remedy our needs.

With an initial participation of 20-odd botanists and anthropologists from 5 countries, we enumerated the kinds of collections (herbaria, cultural artifacts, seeds, paleoethnobotany, DNA, archives, maps, etc.), the components of those collections (databases, libraries, websites, images, plants, artifacts, etc.), the purposes of collections (research, education, conservation, development, etc.), and the activities within collections (acquisition, curation, research, support, exchange, disposal, etc.). We began defining common needs. We recognized the economic botany database standards being addressed by the International Working Group on Taxonomic Databases for Plant Sciences (TDWG, see Cook 1995¹).

Our long-term goals are to identify curators and collections, identify common needs, and prepare collaborative proposals for funding ethno- and economic botany collections around the world. To this end we invite curators of ethno- and economic botany collections to contact Jan Salick with your name, institution, kind of collection, components of collection, activities within the collection, and needs. We especially invite you to attend the 2nd Curatorial Workshop for Ethno- and Economic Botany at the SEB meetings in New York, June 2002. Jan Salick, Ph.D., Curator of Ethnobotany, Missouri Botanical Garden, PO Box 299, St. Louis MO 63166-0299

email: jan.salick@mobot.org; tel.: 314-577-5165

¹Cook, FEM 1995. *Economic Botany Data Collection Standards*. Royal Botanic Gardens, Kew.

AIBS Reports to SEB

The SEB Board has joined AIBS and I thought you may be interested in some of their reports. Please let me know if these are interesting and if I should include them regularly in the Newsletter, Ed.

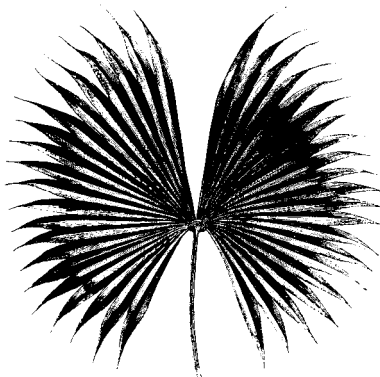
Bush Budget Request Not Kind to Science; Congress Is Likely to Exceed Request in Some Cases

The week of April 9th has been a time of FY2002 budget rollouts across Washington, D.C. The proposed 1.3% increase for the National Science Foundation, which, adjusted for inflation is actually a 3% decrease, is about the closest we can come to good news this year. Research and related activities would drop by 0.5%, while Education and Human Resources would receive a 6% increase, most of it for the Math and Science Partnership Initiative that is the cornerstone of the President's "no child left behind" education plan. Meanwhile, the Major Research Equipment account would drop by 21%.

The specifics for biology are as follows: an overall decrease of \$483.11 million (0.5% from FY2001); an increase of \$16.9 million for the Biocomplexity Initiative (BE) (although none of this new funding is in the Biology Directorate, the BE competition is open to all disciplines) an increase of 1.7% for environmental biology; molecular and cellular biosciences would decrease by 2.4%; the 2010 project to determine the functions of the 25,000 genes of *Arabidopsis* could receive an increase of \$5 million (total \$20 million for FY2002); no funding for the National Ecological Observatory Network.

The USGS budget proposal is as follows: an overall decrease of \$70 million—ostensibly an 8% decrease, but closer to 14% when adjusted for inflation. The Bush administration notes that the decrease returns USGS to FY2000 levels, but the 7% increase in FY2001 actually just compensated for years of stagnant budgets at USGS. The Biological Resources Division loses close to 9%, which is discouraging because the FY2001 increase of 15% brought BRD back to its 1994 funding level (adjusted for inflation). In addition, the true loss is 10.7%, because the cost of uncontrollables (salary increases and other administrative costs) would be taken from research funding. The National Biological Information Infrastructure would be eliminated. GAP (Gap Analysis Program) reverts to FY2000 levels, which would result in a slowing of the completion of the terrestrial analysis and elimination of the aquatic GAP. Research on the treatment of ballast water to prevent the spread of non-native invasive species would be jeopardized. The Center for Biological Informatics, which supports such websites as <http://www.invasivespecies.gov> and <http://www.frogweb.gov> and the development of geospatial technologies, would close.

The Department of Agriculture research programs are a mixed bag. The National Research Initiative remains stable at \$106 million, but the



Cooperative State Research, Education, and Extension Service total drops by 12.7%, to \$994 million. Decreases are in "Congressional earmarks for specific projects and locations." The Initiative for Future Agriculture remains funded at the authorized \$120 million for the third of its five years.

For 2002, the Forest Research budget is proposed at \$235 million, which is the 2001 enacted level plus uncontrollables. The House Science Committee Democrats criticized the President's FY2002 budget request for R&D programs, saying: "The trend toward parity between defense and non-defense R&D, nearly achieved in FY 2001, has ended." The existing imbalance between biomedical R&D and R&D in the physical sciences has become much more pronounced. The budget request stops in its tracks a growing consensus that the NSF budget should grow by at least at the same rate as the NIH budget; and Cooperative Federal-industry R&D programs fare poorly in the budget submission.

Smithsonian to Close Conservation and Research Center

The Smithsonian has announced that it plans to close its Conservation and Research Center (CRC), in Front Royal, Virginia. CRC is a world-renowned facility whose outstanding research and training programs in reproductive biology, ecology, and conservation methodology are regarded as invaluable by the scientific, conservation, and zoo communities. In fact, CRC pioneered many of the commonly used techniques in reproductive biology and small population management critical tools for endangered species management. The stated reason for the closing, scheduled to be completed by the end of the year, is fiscal. Smithsonian Secretary Lawrence Small stated that the Smithsonian wants to "maintain and increase spending on scientific research, and I just want to make sure it is focused on those things we can do very well." AIBS wrote a strong letter of protest, pointing out that the CRC is doing the things that the Smithsonian can do very well. That letter, which was sent to the Secretary, the Smithsonian Board of Regents, and key congressional offices, follows.

Meetings

The 100th American Anthropological Assoc. Meeting, Nov. 28-Dec. 2, 2001, Washington, DC <http://www.aaanet.org>

The Power and Politics of Plants: Critical Approaches to Ethnobotanical Knowledge

In the 1970s, development practitioners realized what anthropologists had long known: many local populations have an astute understanding of their environment that has evolved over generations. With this new appreciation of what is known as local or indigenous knowledge came a proliferation of research on the subject. Anthropologists joined ethnobotanists, ethnopharmacologists, and biologists in efforts to catalogue the local ethnobotanical knowledge of various groups around the globe. Many studies were undertaken in the hopes that the ethnobotanical knowledge collected could inform locally situated development projects in areas such as health care, agriculture, forest management, and income generation.

The papers in this session attempt to further our understanding of ethnobotany by employing a critical perspective. Moving a step beyond traditional ethnobotanical studies of what people know about plants and how they use them, the papers in this session examine the contested and politicized aspects of ethnobotanical knowledge. Among the specific topics addressed in this session are: medicinal plant discourse as a form of resistance in the Amazon; the changing meaning of maize agriculture among the Lacandon Maya; the creation of a new discourse on the healing potential of plants in Ecuador; the promotion of medicinal plants by state-sponsored clinics in Brazil; the changing and contested meanings of cultivated plants in Thailand; the political and economic struggles over forest resources in post-revolutionary Nicaragua; the social and economic power of biotechnology in society; the marketing, protection, and meaning of medicinal plants in Nepal; disparate forestry programs implemented in New Zealand's South Island; and bamboo cultivation as a subversive activity in Vietnam.

The use of a critical perspective highlights issues that are currently of interest in anthropology: the meaning, the uses, and the power of knowledge. First, plants not only have specific uses in a given culture (e.g., food, medicine, lumber), they also have meaning for the people who use them. The papers in this session explore some key issues in this area including how meaning is created, contested, and changing in local knowledge systems. Second, local ethnobotanical knowledge can be put to a variety of politicized uses. Within development, different groups (such as NGOs, farmers, government agencies, indigenous groups, etc.) have different agendas. At times, ethnobotanical knowledge is involved in the struggle to achieve these agendas.

Passages Richard E. Schultes, 86, Hallucinogenic Plants Authority, Dies

by Jonathan Kandell, <http://www.nytimes.com/2001/04/13/obituaries/13SCHU.html>

Richard Evans Schultes, a swashbuckling scientist and influential Harvard University educator who was widely considered the preeminent authority on hallucinogenic and medicinal plants, died on Tuesday, April 10, 2001, in Boston. He was 86 and lived in Waltham, a Boston suburb.

Dr. Schultes (pronounced SHULL-tees) was often called the father of ethnobotany, the field that studies the relationship between native cultures and their use of plants. Over decades of research, mainly in Colombia's Amazon region, he documented the use of more than 2,000 medicinal plants among Indians of a dozen tribes, many of whom had never seen a white man before.

"I do not believe in hostile Indians," Dr. Schultes was quoted as saying in a 1992 article about him in *The New Yorker* by E. J. Kahn Jr. "All that is required to bring out their gentlemanliness is reciprocal gentlemanliness."

Tall, muscular, wearing a pith helmet, he hiked and paddled through Amazonia for months at a time. He collected more than 24,000 plant specimens. More than 120 species bear his name, as does a 2.2 million-acre tract of protected rain forest in Colombia, Sector Schultes, which the government there set aside in 1986.

"The last of the great plant explorers in the Victorian tradition," was the way one of his former students, Wade Davis, described him in his 1985 best-selling book, *The Serpent and the Rainbow* (Simon & Schuster).

But more than a real-life Indiana Jones, Dr. Schultes was a pioneering conservationist who raised alarms in the 1960s—long before environmentalism became a worldwide concern—that the rain forests and their native cultures were in danger of disappearing under the onslaught of modern industry and agriculture. He reminded his Harvard students that more than 90 tribes had become extinct in Brazil alone over the first three-quarters of the 20th century.

"He believed ours would be the last generation fortunate enough to be able to live and work among these tribes as he had," wrote one of Dr. Schultes's disciples, Mark J. Plotkin, in *Tales of a Shaman's Apprentice* (Viking, 1993), "to experience their traditional way of life firsthand, and to record their vast ethnobotanical knowledge before the plant species—or the people who used them—succumbed to the march of progress."

Dr. Schultes's research into plants that produced hallucinogens like peyote and ayahuasca made some of his books cult favorites among youthful drug experimenters in the 1960s. His findings also influenced cultural icons like Aldous Huxley, William Burroughs, and Carlos Castaneda, writers who considered hallucinogens as the gateways to self-discovery.

Dr. Schultes disdained these self-appointed prophets of an inner reality. He scathingly dismissed

Timothy Leary, the drug guru of the 1960s who also taught at Harvard, for being so little versed in hallucinogenic species that he misspelled the Latin names of the plants.

According to a 1996 article in *The Los Angeles Times*, when Mr. Burroughs once described a psychedelic trip as an earth-shaking metaphysical experience, Dr. Schultes's response was, "That's funny, Bill, all I saw was colors."

Dr. Schultes may have contributed to the psychedelic era with his ethnobotanical discoveries, but to him these were the sacred plants of Indians that should be studied for their medicinal value. He was in many ways a throwback to an earlier epoch of scientific research. He had no interest in publicity or self-promotion. Rather than confine himself to a narrow specialty, he was a generalist who crisscrossed several scientific disciplines.

Dr. Schultes taught more by personal example than by the use of forceful intellect. His lecture room resembled an ethnographic museum, with huge maps of Amazonia, native dance costumes, demon masks, opium pipes, dried specimens of medicinal and hallucinogenic plants, and a blowgun



Photo courtesy of American Botanical Council

for poison-tipped darts, whose use he sometimes gingerly demonstrated in class.

Dr. Plotkin recalled a lecture in which the professor showed slides of masked dancers in the Amazon under the influence of a hallucinogenic potion. Referring to himself, Dr. Schultes told the class: "The one on the left has a Harvard degree. Next slide please."

Richard Evans Schultes traced his fascination with the South American rain forests to the fantasies evoked while he was bedridden as a child. He was born on Jan. 12, 1915, in Boston, where his father was a plumber and his mother was a homemaker. Confined to his room for months with a stomach ailment when he was about 5 years old, he listened

enraptured to excerpts read to him by his parents from "Notes of a Botanist on the Amazon and the Andes," a travel diary kept by the 19th century British naturalist Richard Spruce. The impression left by those passages was so powerful that the boy decided to follow in Spruce's footsteps.

Receiving a full scholarship to Harvard, Mr. Schultes wrote an undergraduate paper on the mind-altering properties of peyote, based on research he undertook with Kiowa Indians in Oklahoma who ingested the hallucinogen in ceremonies to commune with their ancestors. For his doctoral thesis, also at Harvard, he chose the plants used by the Indians of Oaxaca, a southern state of Mexico. In his research there, he came across a species of morning glory seeds that contained a natural form of LSD.

In 1941, Dr. Schultes traveled to the Colombian Amazon, where he spent most of his field research, and an area Spruce had studied. At first, Dr. Schultes concentrated on plants that produced curare. This substance, used by Indians as a fast-dissipating poison to hunt prey, also proved to be vital as a muscle-relaxant during major surgery in hospitals. The professor identified more than 70 plant species the Indians used to extract curare.

Dr. Schultes was deep in the Colombian rain forest when news of Pearl Harbor reached him more than a week after the Japanese attack. He immediately made his way back to Bogotá, the Colombian capital, and visited the United States Embassy to enlist in the armed forces. But the United States government decided his World War II services would be much more valuable as a botanist doing research on natural rubber, particularly since the Japanese occupied the Malayan plantations that accounted for much of the world's rubber supplies.

Dr. Schultes soon became the leading expert in the field, collecting and studying more than 3,500 specimens of *Hevea*, the tree family that produces the latex from which rubber is made.

Throughout the 1940s and the early 1950s, Dr. Schultes lived almost continuously in the South American rain forests, with only brief visits to the United States. On his journeys through the tropics, he traveled lightly. He navigated scores of tributaries of the Amazon River, using an aluminum canoe that he could handle himself, though he usually hired Indians as paddlers and guides.

His supplies included a single change of clothing, a camera and film, a hammock and blanket, and a machete and clippers for plant collecting. For food, he carried only cans of instant coffee and Boston baked beans, preferring to rely on food offered by his Indian hosts. This included the ground manioc roots that were their staple, fish, wild game, insect grubs, fruit and chicha, a drink made from fruits chewed and fermented by spittle.

Passages Continued from page 6

His medicine kit consisted of vitamins, antibiotics, and morphine in case he broke a limb and had to be transported for days before he could receive proper treatment.

To collect and preserve plant specimens, Dr. Schultes devised a method field researchers still use today. He soaked his plants in formaldehyde diluted with water and then pressed them between newspaper sheets. "On a good day, out in the forest, Schultes would collect 20 or 30 specimens that he thought merited further attention," Mr. Kahn wrote in *The New Yorker*. "Along a riverbank, where foraging was easier, he sometimes bagged 80 or 90."

Often Dr. Schultes would consult local Indian shamans about the properties of these species. A number of these medicinal plants now carry his name, including, among many others, *Pouroma schultesii*, a bark whose ashes are used to treat ulcers, *Piper schultesii*, a stem brewed as a tea to relieve tubercular coughs, and *Hiraea schultesii*, leaves whose soakings cure conjunctivitis.

Dr. Schultes asserted that contrary to popular conceptions, Indian shamans were eager to share their medical secrets with outsiders. But "time is running out," he warned in a 1994 article in the journal *The Sciences*, asserting, "The Indians' botanical knowledge is disappearing even faster than the plants themselves."

In 1953, Dr. Schultes moved back to the United States as a professor and botanical researcher and curator at Harvard. Six years later, he married Dorothy Crawford McNeil, an opera soprano who performed in Europe and the United States. His wife survives him, as do their three children, Richard Evans Schultes II, a corporate executive; Alexandra Ames Schultes Wilson, a physician; and her twin, Neil Parker Schultes, a molecular geneticist.

Dr. Schultes, who retired from Harvard in 1985, published 10 books and more than 450 scientific articles. For 18 years, beginning in 1962, he edited the scientific journal *Economic Botany*, and over much of the same period, he served as an active member of the editorial boards of *Horticulture*, *Social Pharmacology*, the *Journal of Latin American Folklore*, and others.

Among numerous awards, he received the 1992 gold medal of the Linnean Society of London, which is often equated to a Nobel Prize for botany. —Copyright 2001, The New York Times Company



Distinguished Economic Botanist's Varro Tyler Dies

It is with the deepest of sorrow and regret that our good friend and mentor Varro Tyler passed away August 22, 2001.

Professor Tyler, or Tip as he was affectionately known, was a true giant in the field of pharmacognosy and herbal medicine education in the U.S. and abroad. His many accomplishments, books, articles, and professional presentations are well known in the herbal field.

He had a distinguished academic career; he was the Dean of the School of Pharmacy and Pharmaceutical Sciences at Purdue University for 20 years and Executive Vice-President for Academic Affairs and Provost at Purdue for five years before retiring. He held the Lilly Distinguished Chair in Pharmacognosy and was active at Purdue as Dean and Distinguished Professor of Pharmacognosy Emeritus.

After retirement, his life became busier, with an almost peripatetic schedule to deliver speeches at conferences across the U.S. and internationally. As busy as he was, he always found time to help friends, edit an article, mentor someone on a book, and so on. He was always the consummate gentleman and diplomat, and his generosity of spirit was boundless.

Despite experiencing several health challenges in the past decade—most recently multiple myeloma, he was undaunted nevertheless in continuing to pursue his goal to establish rational herbalism as an appropriate healthcare modality in the U.S.

Tip and his wife Ginny had celebrated their 54th anniversary in Austria and had returned home in West Lafayette, Indiana Aug. 21. He passed away early the next morning in his home office.

Among his many roles, board positions, and consultancies, Dr. Tyler was a Trustee of the American Botanical Council and actively assisted with publications and related educational efforts, much of which have been patterned after his goals and objectives. For example, he was the motivating force behind the publication of the English translations of the German Commission E monographs. His loss is deeply felt by all, including those in the pharmacognosy and medicinal plant communities.

For more information regarding memorials may contact the American Botanical Council.

Sincerely, Mark Blumenthal, Director, American Botanical Council, P.O. Box 144345, Austin, TX 78714-4345; tel: 512-926-4900, fax: 512-926-2345; <http://www.herbalgram.org>



Photo courtesy of American Botanical Council

Ethnobotanews

SEB Distinguished Economic Botanist Received Award

Plant Breeding News—edition 128, Aug. 31, 2001 III.3. Carlos Ochoa Wins William L. Brown Award for Excellence in Genetic Resources Conservation <http://www.cipotato.org/new/pressreleases/english/ochoaAward.htm>

CIP taxonomist Carlos Ochoa, author of the recently published book on wild potato species, *Potatoes of South America: Peru*, has been awarded the first William L. Brown Award for Excellence in Genetic Resources Conservation by Genetic Resources Communications Systems (GRCS), publishers of *Diversity* magazine. The commendation is one of many for Ochoa (see bio), who has devoted most of his life to exploring remote areas in hopes of rescuing ancient species of potato from extinction.

LIMA, Peru, 2 Feb.—Reputed Peruvian scientist Carlos Ochoa has just added a new honor to his already long list: the American scientific journal *Diversity* has named him the first winner of the William L. Brown Award for Excellence in Genetic Resources Conservation. Announcing the award in Washington, DC, Don Plucknett, Chairman of the Selection Committee, did not conceal his satisfaction that the first winner of this new award is a man "who has labored for years in a developing country with limited resources and accomplished so much."

Professor Ochoa, Scientist Emeritus of the International Potato Center (CIP), based in Lima, Peru, was chosen for the US\$10,000 prize from a list of 30 prominent scientists from all parts of the world. He plans to use the award to finance the publication of a new book that will be of great importance to the study of the botany of the potato. During his long and distinguished career Carlos Ochoa has discovered more than 80 wild species of potato (almost one-third of all those known), and has collected and classified more than 12,000 accessions of wild and cultivated potatoes. In addition, as a breeder, he has developed more than a dozen potato varieties, including some in great demand, such as Tomasa, Yungay, and Renaissance. Among Professor Ochoa's previous honors is the award of the Bernardo A. Houssay Inter-American Science Prize by the Organization of American States, the conferment of an honorary Ph.D. by University Ricardo Palma, Peru, and being named a Knight of the Order of Agricultural Merit by the president of Peru.

For more information please contact: CIP Public Affairs Office, tel. (51-1) 349-6017; Fax: (51-1) 317-5326; email: cip@cgjar.org

—Copyright 1996, 2001 International Potato Center, P.O. Box 1558, Lima 12, Peru.

Continued on page 8



Ethnobotanews

Continued from page 7

International Water Conference Ends, with March in Support of Abducted Water Activist and Indigenous Leader

VANCOUVER, July 8 /CNW/

On the closing day of an international conference dedicated to gaining recognition of water as a fundamental human right, water activists and experts from around the world joined a youth march to the Colombian consulate demanding information about the disappearance of Colombian indigenous leader and water activist Kimy Pernia Domico. Mr. Pernia was scheduled to lead a discussion on water and indigenous rights at the "Water for People and Nature" conference held this weekend by the Council of Canadians. He was abducted at gunpoint early last month.

"The disappearance of Kimy highlights the pressure on the developing world, on the poor and on First Nations to hand over their water resources for private benefit, no matter the cost. We are here in Canada with delegates from over 30 countries to push back, to protect the world's water from the corporate forces that want to profit from it, and today we're doing this in Kimy's name" said Maude Barlow, chair of the Council of Canadians.

For more information: contact Media Officer Jennifer Story, cell: (613)795-8685 <http://www.canadians.org>

Garden Club of America Bulletin June-July 2001—Wildcrafting and Medicinal Plants

(I have made many comments and additions here as I have been participating in this project, Ed.)

Americans are using herbs so the GCA has teamed up with US Fish and Wildlife's Medicinal plant working group and the US Forest Service and other volunteers to investigate the sustainability of *Actea racemosa*, black cohosh and *Actea podocarpa*, yellow cohosh in the wild. Together they have designed and implemented a sustainable harvesting research project. The project started in the Fall of 2000 when many GCA members came to the coves of North Carolina forests, laid plots, and counted plants. Recently, again in the coves of North Carolina, the GCA counted plants and harvested 0%, 33%, or 66% in an attempt to mimic wild harvesters and find what is a sustainable percentages. This project will continue for several years so accumulated data can lead USFWS to make sound judgments to create equitable permitting systems thus preventing over regulation. We will be able to see the effect wild harvesting has on plant populations and on the chemical baseline of the harvested materials. This will allow for decisions to be made on where to limit wild collection, encourage cultivation, and how the quality of the harvested medicinals may be affected by natural pressures. We are hoping that a template will also be a result and can be tried on other plants

and in other geographic regions. If you want to start a project near you or join us contact the Editor, Trish Flaster (tflastersprint@earthlink.net) or Mary Maruca at 800-358-2104.

Weeds Are the Answer?

The study, by John R. Stepp (UGA) and Daniel E. Moerman (Univ. of Michigan-Dearborn), appears to turn some theories of medicinal flora on their heads. "I was really amazed by what we found," said Stepp. "The study is based on my field work with the Highland Maya in Chiapas, Mexico. We also used an exhaustive database of over 2,500 medicinal plants used by Native North Americans." Rain forests certainly provide one source of medicinal plants, acknowledges Stepp. But indigenous peoples who have used plants for medicinal purposes for hundreds of generations don't necessarily spend their time searching for elusive cures in the depths of the rainforest; they're much more likely to go searching in a weed-filled field.

To view the article see: <http://www.personal.umd.umich.edu/~dmoerman/jepweeds.pdf> or http://news.nationalgeographic.com/news/2001/03/0319_medicinalweeds.html

Top Award for Environmentalist Dr. Calestous Juma,

former Executive Secretary of the United Nations Convention on Biological Diversity, has received the prestigious Henry Shaw Medal for his dedication to protecting the environment while promoting sustainable development.

The award honours Juma as "one of the world's leading authorities on protecting the environment while promoting ethical sustainable development in developing countries." He called on the international community to work toward blending environmental goals with development strategies.

Juma is Director of the Science, Technology and Innovation Program at the Center for International Development at Harvard University <<http://www.cid.harvard.edu/cidtech/>> and Senior Research Fellow of the Belfer Center for Science and International Affairs at Harvard University. He is a previous recipient of the Pew Scholars Award in Conservation and the Environment (1991), the Justinian Rweyemamu Prize (1992), and the United Nations Global 500 Award (1993).

The Henry Shaw Medal Missouri Botanical Garden's highest award honors those who have made a significant contribution to botanical research, horticulture, conservation, or the museum community. The medal is named in honor of the Garden's founder, the 19th century St. Louis philanthropist. It was first presented in 1893 and previous medalists include William Ruckelshaus, Jose Sarukhan, Edward O. Wilson, Peter H. Raven, William McKibben, and M.S. Swaminathan.

Publications

Continued from page 3

David Michael, Wondu Holdings, (02) 9369 2735 or 0400 805 800

Tim Evans, RIRDC Communications, (02) 6272 4735 or 0409 661 961

UK, Africa and Europe:

Dr. John Wilkinson

Middlesex University

Middlesex UK

0208 362 6425, 0794 169 6409, International +44 794 169 6409

Email: JW1@fsmail.net

A commissioned 140-page document on the production of herbal medicines from tropical countries is now available. It includes details of the marketing figures of the sales of herbal medicines for specific plants as well as for particular therapeutic areas and all for only for 20 Australian Dollars!

A summary of the report can be found at: <http://www.rirdc.gov.au/reports/Ras/00-173sum.html>

PROSEA, short for Plant Resources of Southeast Asia, is an international program focused on South-east Asia. Its purpose is to make available the wealth of dispersed knowledge on plant resources for education, extension, research, and industry through a computerized data bank and illustrated multi-volume handbook. A thorough knowledge of plant resources is essential for human life and plays a key role in ecologically balanced land-use systems. Extensive information on the plants growing in the region is needed to enable the plant resources of each country to be used optimally.

One of the main objectives of the PROSEA is to publish an illustrated multi-volume Handbook. A large international team of experts is invited to prepare the texts on particular species or genera, which are published in commodity groups. All taxa are treated in a similar manner with details on uses, distribution, botany, ecology, agronomy or silviculture, genetic resources, diseases, breeding, prospects, and literature.

To avoid the handling & postage cost, you may contact your embassy in Jakarta (the capital city of Indonesia), to get information on the possibility for sending the books from Jakarta to your address free / no charge. If this is possible, we will send the books to your embassy in Jakarta.

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Germplasm News & Views

by David Theodouropoulos (dtsc@rahul.net)

"Around the world, the issue is who owns the seed."

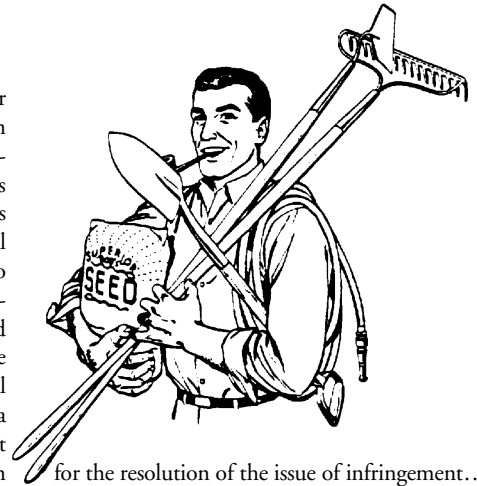
—Bill Redekop

While intellectual property and biotech are old (and perhaps tedious) news to members of the Society, they continue as a major issue to farmers and seed producers around the world.

The well-publicized contamination of food products with the unapproved, possibly allergenic StarLink maize led to the recall of taco shells and corn dogs, a huge USDA program to buy all 45 million bushels of the maize produced last year, and the cancellation of the variety's US registration. "This means that StarLink corn can no longer be planted for any agricultural purposes," said the EPA. Public awareness of GMO issues was raised, but opinions on safety, labeling, etc., seem dependent on the framing of the questions. Japan annually imports 600 million bushels of US maize, has rejected a shipment due to GM presence, and has passed a new law mandating serious fines and imprisonment for importing unapproved varieties. Although 99% of the 2000 harvest of StarLink was successfully removed from the food stream, some 430 million bushels of commingled maize remains from the 1999 harvest. The USDA has requested all seed corn companies to test all maize sold for seed for the presence of the Cry9C protein from StarLink, and has begun accrediting labs for detection of GM grain.

As predicted here in 1997 (you read it here first!), the accidental contamination of traditional varieties

with GM or patented genes has become a major issue. Since certified organic crops must not contain GMO genes, farmers with an investment in certification may be jeopardized by pollen from a neighbor's field. "We can't sit by and take this. If our farmers have to dump organic corn on the conventional market because of contamination, someone has to be liable." —Jim Boes, Heartland Organic Marketing. Interestingly, Jerry Kermicle of UW has found that a gene from teosinte may provide an effective barrier to entry of GMO genes into conventional maize via cross-pollination. However, this is a patented technology, so organic farmers will be put in the position of having to use proprietary seed. An interesting "Catch-22." As Boes pointed out, the responsibility for preventing contamination should rest on GMO developers, not the farmers. Traditionally, liability for harm from pesticide and herbicide drift, pollution, and even the spread of weeds or insect pests from uncontrolled infestations, rests on the source. Nebraska is considering legislation to hold seed companies liable for such cross-pollination. In Canada, Monsanto won its test case against canola farmer Percy Schmeiser, whose field was contaminated by Monsanto's proprietary herbicide-resistant variety. "The judge ruled that even if I have regular canola in my field, and their genetically engineered canola cross-pollinates with it, the plant becomes Monsanto's property," said Schmeiser. According to Judge MacKay, "The source of the Roundup resistant canola ... is really not significant



for the resolution of the issue of infringement..." GM-free and organic crops are lucrative options for farmers, and these crops may be jeopardized by GM contamination. In 1999, non-GM soybeans sold at a premium of 10-25 cents per bushel, and non-GM corn for an extra 7-35 cents per bushel. In Africa, interest is being shown in producing GM-free products. In India, a muskmelon has been produced that contains rabies vaccine. E. Ann Clark of the University of Guelph has asked "What happens when traits that move are not HT [herbicide tolerance], but vaccines, pharmaceuticals, plastics, and industrial enzymes?" And she asks, "Why should non-GM growers have to absorb costs of coping with gene flow that is unwanted, involuntary, and unavoidable—or face prosecution?" For small-scale, diversified growers, such costs may be prohibitive; for example, a PCR assay for a single inserted gene may cost over US\$100 per sample.

Advanta Seeds certified "non-GE" canola seed for planting in Europe was contaminated by GM canola, and European farmers had to destroy their fields. Monsanto's Roundup-resistant 'Quest' canola was found to be contaminated with an unapproved Roundup resistance gene, leading to the recall of thousands of bags of seed. StarLink maize off-types have been found in seed of numerous companies: "The source of the contamination is likely to be cross-pollination, where a field is pollinated by StarLink corn from faraway fields." —Charles Hurburgh, Iowa State University. This is likely permanent. "I know you are wondering: Will there ever be an end to this? Unfortunately, the answer is no..." —John Wichtrich, Aventis CropScience.

This contamination of traditional varieties with genes from GM crops may be beneficial in that the resulting widespread testing will demonstrate that complete reproductive isolation of sexually reproducing crops is impossible, and this has implications for proprietary non-GM crops. Clearly, genes have been flowing between proprietary varieties and public domain varieties in spite of conventional isolation techniques. This inevitable, uncontrollable flow of genes clearly proves that patents or other intellectual property applied to single genes are invalid and unenforceable.

Citations available on request. dtsc@rahul.net

New Members Highlight

PROFILES OF NEW MEMBERS, 2000-2001

Giorgio Samorini, <giorgio.samorini@iol.it>
Casella Postale, 40050 Dozza (BO) (Italy)
Tel/Fax: ++39 0542678278
<http://eleusis.lycaeam.org>
<http://www.telesterion.it>

I'm an ethnobotanist belonging to the Museo di Rovereto. Specializing in psychoactive plant's traditional use, I'm the Editor of the international scientific journal *Eleusis. Journal of Psychoactive Plants and Compounds*, where all articles are bilingual, Italian and English. This journal belongs to the Museo di Rovereto (see <http://eleusis.lycaeam.org>). I have written books and articles on the ethnobotany of psychoactive plants, many of which have been translated or directly written in English, German, or Spanish, etc.

Marisela Pando-Moreno, <mpando55@hotmail.com>
Associate Professor, Facultad de Ciencias Forestales, UANL, P.O. Box 41, Linares, Nuevo Leon 67700 Mexico; phone/fax (821) 2 42 51

I am currently working as Associate Professor in one of the largest universities in Mexico (University of Nuevo Leon), lecturing on Arid Zone Management, Agroforestry and Remote Sensing. I hold a MSc. degree from the University of Adelaide in Australia where I worked with satellite remote sensing in the arid rangelands, and I will shortly finish my Ph.D. at the UNAM (National University of Mexico) with a thesis on factors promoting desertification in northeastern Mexico.

I have conducted most of my research in arid environments dealing with 1) evaluation of factors and processes of desertification, 2) the impact of soil degradation in the soil seed bank, 3) population dynamics of several arid plants and, more recently, with 4) production of natural pigments from insects associated to Opuntias.

I could say that my main interests deal with alternative means of production for the rural population in the dry regions of northeast Mexico.

Best regards, Marisela Pando-Moreno

In The Classroom

The Three Ps of Scientific Talks: Preparation, Practice, and Presentation —Part 2 (Practice)

by Brad Bennett, Chair of the Education Committee (Continued from Vol. 15, spring 2001, page 9)

Remember the joke, “How do you get to Carnegie Hall? Practice, practice, practice.” The punch line may be old, but its message is one that all good speakers know. Rehearsing your talk will give you confidence, help eliminate the need for note cards, and insure that you stay on time and on the topic. Practice with your visual aids and with a timer and, if possible, ask a colleague to critique your presentation. Keep practicing until you feel totally confident with the material. On my first run, I think about what I want to say with each slide (My usual problem is trying to stay focused and avoid pursuing too many tangential points). I continue to look for slides that can be removed and review the slides until I know the order without being prompted. For most people, previewing slides 2 to 3 times is sufficient to eliminate the need for note cards.

Many speakers use their slides or other visual aids as cues, requiring them to periodically turn away from the audience and look at the screen. If you need cues, use note cards. That way you can continue in a seamlessly manner as you change slides. On a related note, never read off the screen. The audience can read as well or better than you. Instead, explain the points in greater detail. The brevity of the slide helps establish the take-home-message but may be insufficient without additional explanation.

Anyone, with practice and preparation, can become a good speaker and good speakers can become outstanding

Practice will also insure that your slides are in the correct order. If you use slides, bring your own carousel preloaded. That way you will not have to worry about inserting a slide in the wrong position. There are seven incorrect ways to place a slide in a carousel, but only one correct way. If you load at the last minute, you are certain of having at least one slide in the wrong position. During practice sessions, I try to tweak a talk by moving a slide here or there, substituting more appropriate shots, and always eliminating any slides that are not essential. I have given hundreds of talks, and only once did I say afterwards, “I wish I had used more slides.” If you use PowerPoint, check your system with the actual projection equipment, not just in a preview room. Always continue eliminating

slides until you easily can complete your talk in less than 80% of the allotted time.

While practicing, be aware of the rate at which you speak. One of my former students was from the Deep South and spoke so slowly that I sometimes wanted to put an electrode to his tongue. However, when it came to presentations his pace was perfect. He was one of the few students who did not need to slow down. During your rehearsals, enunciate, project your voice, and look your ersatz audience in the eye. Know how to pronounce scientific terms, place names, and ethnic names. As I write this, a radio reporter just discussed falling water levels in Florida’s largest lake, which she pronounced as Okeychobee. Floridians pronounce the second syllable with a short a or short u sound. An NPR reporter recently spoke about Everglades National Park’s Taylor Slough. Slough rhymes with through, not with rough as the reporter thought. While there is no universally accepted pronunciation of botanical names, there are some more correct than others. Mispronunciations attract criticism faster than tax break attracts Republicans.

Be careful about ums and ahs. At a meeting last week, a student had the annoying habit of interjecting ums after every pause. He was wearing a very sensitive microphone and, to make matters worse, he aspirated each utterance:

“Today, hhhhhum I will present hhhhhum the results of hhhhhum 3 years of research hhhhhum on my work in the Everglades. This hhhhhum project, which began hhhhhum in 1999, will demonstrate the hhhhhum” Every hhhhhum sounded like someone had slapped a hand down on the microphone.

Finally, think about the endgame. As you practice, anticipate questions that the audience might ask so that you will be prepared for them. Think how you will end early,

if the moderator says you have one minute left and you have 15 slides remaining. During my second scientific presentation, the previous speaker ran 10 minutes over his allotted time. Half way through my talk the moderator, whose student had been the long-winded speaker, cut me off. Fortunately, the next scheduled speaker, out of pity or a desire for justice, granted me time from her presentation. Since then, I have tried always to include a slide about three quarters of the way through my talk that can be an alternative terminus. If time permits, I can finish all the slides; if it doesn’t, I can end early without telling the audience that I had ten more slides.

To be continued....

Meetings Continued from page 5

Therefore, some of the papers in this session explore the role of ethnobotanical knowledge in local power struggles, the appropriation of local plant-centered discourses, the commercialization of local knowledge, and the state’s relationship to ethnobotanical knowledge. Finally, with the growing importance of ethnobotany, those who have and control local knowledge can gain access to power. In this vein, the papers in this session explore how ethnobotanical knowledge empowers various groups and how plants gain and lose power within a culture.

They have the preliminary program online: <http://www.aaanet.org>.

The panel has been accepted and is scheduled for Thursday, November 29th from 1:45 to 5:30. The title of the panel is “The Power and Politics of Plants: Critical Approaches to Ethnobotanical Knowledge” and it is being organized and chaired by J. Montgomery Roper, Grinnell College and Coral Wayland, Ph.D. cwayland@email.uncc.edu Dept. of Sociology and Anthropology, UNC-Charlotte, 9201 University City Blvd, Charlotte, NC 28223, tel: (704) 687-2290

Conifer Plantation Management Workshop

October 2, 9, 13, & 16. Be sure to mark your calendar if you missed the earlier Conifer Workshop delivered by the Model Forest. This four-day workshop (held over a three-week period and including one day in the field) is a don’t-miss event!

For more information, contact Mark Richardson mrichardson@eomf.on.ca Tel. (613) 258-8416

Continued on page 11

Jobs

Environmentals Jobs A helpful page
<http://www.EnviroNetwork.com>



Botanizing the Web

WISIA-online

At <http://www.wisia.de> the German Federal Agency for Nature Conservation (Bundesamt für Naturschutz, BfN) has recently launched a searchable database that holds information on the national and international protection status of more than 10,000 animal and plant species.

This Internet tool presents a synoptic view of the diverse field of species conservation legislation. Permanent updated data is guaranteed by the Federal Agency for Nature Conservation (Bundesamt für Naturschutz) when one of the relevant species conservation regulations is amended.

Which legislation is covered? Annex A & B of the EC Regulation No 338/97 which implements the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES); EC Birds Directive; Annex IV of the EC Habitats Directive (92/43/EEC); German Federal Nature Conservation Act (BNatSchG); and Annex 1 of the German Federal Ordinance on the Conservation of Species (BArtSchV).

Who needs WISIA-online? With WISIA-online the Federal Agency for Nature Conservation provides an important service for everyone concerned with species conservation. It is a useful tool for customs officers, companies trading animals and plants, animal breeders and plant nurseries, associations, and in general for the interested public.

Contact: Dr. Uwe Schippmann, wisia@bfn.de
Head CITES Scientific Authority Plants
Bundesamt für Naturschutz
Konstantinstraße 110, D-53179 Bonn
Germany



Stinking Beauty

June 11, 2001—Blooming of the Titan Arum <http://www.news.wisc.edu/titanarum/index.html>
Not since New York Botanical Garden 1937 has there been an 8' 5" *Amorphophallus titanum* inflorescence like the current one at Univ. of Wisconsin, where it is reported, "At 1:30 p.m. on Monday, June 11, the top half of the titan arum's spire-like spadix fell over, exhausted by its titanic reproductive effort." A sight to behold, and the fate of the spadix is documented by web-cam, time lapse photos, a growth chart, and the tale of cross-pollination with an arum from Florida. This is the plant that stimulates enthusiasm for botany, so the Greenhouse provides complete promotional materials—shirts, postcards, posters, signed lithographs—to memorialize what is referred to as the "stinking beauty." Site by Univ. of Wisconsin-Madison.

IPGRI

<http://www.ipgri.cgiar.org/themes/human/home.htm>

Human and Policy Aspects of Plant Genetic Resources. IPGRI's Human & Policy theme focuses on the ways people use and value genetic resources and how this affects conservation. It includes information on the Global Home Gardens project (and the CBD case study on the project), the Date Palm Diversity project in North Africa, Ethnobotany research on Taro, African Gourds and Egusi Melons, Fonio, Yunnan Indigenous Vegetables, Cocoyam, and African Leafy Vegetables. There is a page on the Biodiversity and Economics for Conservation project (BioEcon), IPGRI's gender focus, new Nutrition Initiative in Bangladesh, Land Tenure in Central Asia, and much more. Of course, it also includes Ethnobotany links and publications!

Northwest Natural Resources Group (NNRG) <http://www.nnrg.org/>

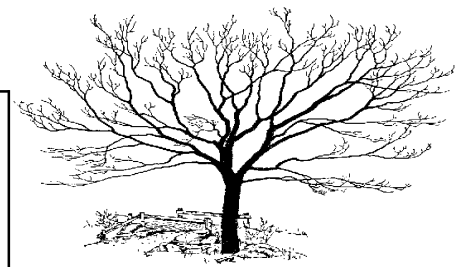
The 2001 Celebrating Wildflowers On-Line Event Directory is now up on the web at <http://www.nps.gov/plants/cw/events.htm>. Browse events by state on the web or you can download a PDF file for offline viewing or printing. Spread the word about the Directory to colleagues, friends, and family.

Eldis, the gateway to development information, is now offering an Intellectual Property Rights Resource Centre, containing research, articles, the latest news and conference information, job postings, links, and an extensive archive on the subject of IPR. We also offer an email updating service, which regularly sends out bulletins to registered users. <http://www.ids.ac.uk/eldis/ipr/>. This Eldis IPR site is aimed at, and emerges from, policy-makers, grassroot organisations and NGOs, academics, and researchers. Inclusion on and use of Eldis is completely free. We provide a description of organisations with contact details, a link to their website's home page and also direct links to full-text documents held on their site, or to other significant documents or pages.

Abigail Jermain, IPR Editor ajermain@ids.ac.uk
<http://www.ids.ac.uk/eldis/ipr/>; +44(0)1273 877330
Institute of Development Studies
University of Sussex, Brighton BN1 9RE, UK

USDA accession database

This site is quite amazing. You can search: http://www.ars-grin.gov/npgs/acc/acc_queries.html a few different ways. Scroll down to search by taxonomical name of your favorite cultivar.



Meetings Continued from page 5

I CONGRESO LATINOAMERICANO DE FITOQUIMICA IV REUNION DE LA SOCIEDAD LATINOAMERICANA DE FITOQUIMICA

Buenos Aires, Argentina, 8-10 de Mayo de 2002,
Organized by Sociedad Latinoamericana de Fitoquímica-Latin-American

The Society of Phytochemistry was created in 1983 by the initiative of some Latin-American scientists with the aim of promoting the scientific exchange and dialogue among the different investigation groups in the region. Three meetings have been held by the Society since then in 1987, 1996, and 1999.

The IV meeting will be held in Buenos Aires from May 8-10, 2002. Due to the success of the last meeting held at Gramado, the Organizing Committee has decided to name this IV Meeting of the Latin-American Society of Phytochemistry as the I Latin-American Congress on Phytochemistry.

The Congress will cover the following main topics: Analysis and Structural Determination; Synthesis; Screening and Bioassay Strategies; Pharmacology; Plant Biochemistry; Enzymology; Biotechnology; Methodology and Analytical Techniques; Biodiversity as Source of New Natural Products; Industrial Applications.

The deadline for the presentation of abstracts is October 30, 2001. All presentations should be original and will be evaluated by a Scientific Committee. The summary should be presented in a 12.5 x 17.0-cm frame. The title should be in block letters and bold, followed by a free line, the authors name (last name and initials of first name), complete address (include email address). Letter should be Times New Roman 12. Abstracts should be sent by

post (three written copies plus an electronic version) to the Congress address cited below or by email as attached document in Word 6.0 or more.

Registration fee is \$150 (US\$ 150). Students and accompanying persons \$50 (US\$ 50).

For additional information contact
Dr. Virginia Martino
C-tedra de Farmacognosia
I Congreso Latinoamericano de Fitoquímica,
Facultad de Farmacia y Bioquímica
JunIn 956- 2 piso, Buenos Aires C1113AAD
Argentina,
Email to fitoquim@ffyb.uba.ar
<<http://www.ffyb.uba.ar/eventos.htm>>

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Summer Programs and Classes

A few issues ago there were some comments requesting courses to be listed in the Fall issue. I hope these are helpful. If you have gone to a course, please, send in a review so people can attend or have a greater ability to differentiate between courses, Ed.

REVIEWS: Summer 2001 offered two terrific opportunities for aspiring ethnobotanists and others who could benefit from this specialized training. These courses coincided with the Building Bridges with Traditional Knowledge Summit/Society for Economic Botany meetings held in Honolulu, Hawai'i.

At the two-week intensive graduate course on Tropical Ethnobotany held at The National Tropical Botanical Garden (NTBG) on Kauai, 13 students learned practical techniques for ethnobotanical research that included plant systematics, vouchers, techniques, the role of plants in indigenous society, basic tropical botany and interview techniques with indigenous healers and artisans. Students were also asked to keep field notebooks with drawings and other useful information.

*Especially helpful for me was the opportunity to practice interview techniques with (extremely patient) healers and artisans. I realized how I had a tendency to ask leading questions or get caught up in academic theory rather than let the interview unfold. Being videotaped was very humbling. Seeing (and hearing) myself in action has allowed me to become more "childlike" and assertive when conducting participant/observation.

*Our class was particularly fortunate to have, in addition to our excellent lecturers and guest speakers, SEB members, several members of indigenous communities, who had arrived for the conference, attend the class. These special guests demonstrated some of their gifts and encouraged students to ask questions, which allowed us to peek into unique worldviews and share in this specialized knowledge. Another highlight was being able to participate in a real kava ceremony. We were provided with a very quick lesson in etiquette by NTBG Education Director Gaugau Tavana but then left to our own devices. Other visitors also participated in this powerful ceremony. (I thought, though, that in the future, this event might be offered at the commencement of the course to facilitate camaraderie and really throw us into the culture, much as the participant/observation exercises did.)

Of the ethnobotany courses offered this summer at UHawai'i, Manoa required that students select one of three tracks: Advanced Ethnobotany, Medical Ethnobotany, or Quantitative Ethnobotany. The first assignment involved attending as many sessions of the Building Bridges Conference as possible and writing summaries of them that addressed specific questions. Students were also asked to interview, with permission, one of the speakers and ask them what the speaker felt was the "cutting edge" in ethnobotany.

Post-conference courses were based at the UH Manoa campus but numerous field trips to such places as The Lyon Arboretum, The Bishop Museum's Herbarium, a local community garden, Chinatown, the Hawai'i Studies School (for a lesson in the sophisticated techniques of Hawai'i Lo'i Agriculture), and other related areas (see class photos until 10/10? <http://www.botany.hawaii.edu/summercourses/photos.htm>).

Highlights for me were (for the graduate course in Quantitative Ethnobotany) hands-on training in measuring forest plots and transects led by specialist Art Whistler, more experience in conducting ethnographic interviews, the marketplace survey in Chinatown (where my partner and I gathered data on the assortment of beverages found in three large markets within Chinatown), and the excellent lectures and participation of UH graduate students and staff. Perhaps the most practical training, however, was through an exercise designed by Will McClatchy that required role-playing to help illustrate some of the difficulties involved in successful negotiation of an Intellectual Property Rights agreement. The class was divided into two "villages," one of a fictitious traditional culture, the other a fictitious scientific culture. Each student was then given a slip of paper with their role (chief, religious leader, craftsperson, scientist, conservationist, industrialist, etc.), the end goal being to develop a set of conditions by which the villages could exchange information, as evinced by the production of a document by a certain date. It was noted that some of the roles would be most successful if NO agreement was produced and signed. Unlike the traditional culture (members of which were expected to work together) the scientific culture had members with their own agendas—some at odds with each other. The students took their roles very seriously, perhaps too seriously at times (was Drama a prerequisite?). This important exercise showed clearly the multi-leveled challenges one will likely encounter when conducting research within cultures and countries different than our own.

I can't forget to mention the hospitality displayed by the hosts of these courses. Dr. Paul Cox and Dr. Gaugau Tavana at NTBG and Dr. Will McClatchy at UH, whose wife even prepared a feast for the class with very short notice when the campus food service was closed on King Kamahameha Day.

Submitted by Krisa Fredrickson (email krisafredrickson@hotmail.com)

2002 Courses and Programs

IOC-SECA STUDENT PROGRAM
SUMMER 2002 STUDENT EXCHANGE DELEGATION IN CUBA, <http://www.seca.org/ioc/>
or write ProEspiral@aol.com

2 WEEKS, JULY 13 - 27, 2002 \$1250

4 WEEKS, JULY 13 - AUGUST 10, 2002 \$1800

The International Outreach Educational Center and the Student Exchange between Cuba and America have collaborated to create a summer program for high school and college students in the United States. Students from other countries are also welcome to participate. This program is part of the Cuba Outreach Program and offers a unique opportunity for high school and college US students to learn about Cuba, understand the culture, and enjoy the beauty of the Island by learning, having fun dancing, and meet other young people.

Rainforest and Reef

We are a nonprofit organization specializing in outstanding and affordable Field Courses Rainforest and Marine Ecology presently offered in nine countries (<http://www.rainforestandreef.org>). All programs are operated by partner organizations that have shown a strong commitment to conservation and education over time at each site. Ninety-nine percent of all participation fees stay with our partners to assist in conservation and education projects.

Local Guides and Biologists are featured in the study of natural history, rainforest and coral reef ecology, medicinal uses of native plants, conservation, land management, local cultures, archaeology, geology, and much more. In the past our programs have been attended by university, community college and high school groups, as well as "independent participants," such as university professors and students, K-12 teachers, science professionals, and curious travelers. Past participants have come from across the United States, Canada, Latin America, Europe, Australia, and the Far East.

Three undergraduate or graduate credits are available for attending through Aquinas College (<http://www.aquinas.edu>) of Grand Rapids, Michigan.

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SEB Council is seeking input on changing the name of the Society. When we began, many generations ago, economic botany was our primary focus. Now we have members that have a broader focus and international issues that supercede just the economics of botany. We want to "modernize" and be inclusive. Send your ideas to Newsletter@econbotn.org, Ed.

Ethics

by the SEB Ethics Committee

Gail E. Wagner, Column Editor, Chair of the SEB Ethics Committee and Associate Professor, Dept. of Anthropology, Univ. of South Carolina

As I was preparing to leave for the meetings in Hawai'i, on MSNBC.com (May 19) Alan Boyle reported that 50 Amazonian indigenous doctors in Colombia comprising a Union of Yage Healers completed the creation of a code of ethics. The process began in June of 1999 and culminated in the presentation of the code to the Colombian government in April of 2001. The code apparently defines appropriate behavior for healers as well as defining who is a healer or an apprentice.

In the Spring 2001 issue of *Plants & People*, we reported on an ethical field dilemma posed by Dr. Cynthia Fowler (Dept. of Anthropology, College of Charleston). We examined how several professional codes of ethics addressed the problem she raised, and asked for comments from a philosopher specializing in environmental ethics. We include here a response from Dr. Joseph A. Weinstock (Senior Environment Specialist with the Asian Development Bank, Manila, Philippines), who wished to comment on the published column from his viewpoint as an environment/rural development

specialist with 25 years of experience in Indonesia. Dr. Weinstock writes:

"Indonesia has well developed, although not always properly enforced, environmental legislation and procedures. This includes required Environmental Impact Assessment (EIA), known in Bahasa Indonesia as AMDAL, for all projects. If the road

government level—province or district (*kabupaten*)—to inquire whether an AMDAL was prepared. If so, she should review this document first to determine whether a proper environmental impact assessment was conducted and whether proposed mitigation measures are adequate to compensate for identified environmental impacts. If not, then (and

**What is a code of ethics? What are ethical guidelines?
What are ethical principles?
What is the purpose of a code of ethics?**

in question is new, then a full AMDAL would be required. If the construction activity is upgrading of an existing road, then possibly only a partial AMDAL is required.

"Dr. Fowler should first contact the Highways Division (*Bina Marga*) of the Public Works Department (*Pekerjaan Umum*) at the local

only then), would Dr. Wagner be justified in trying to promote public awareness of environmental issues."

I thank Dr. Weinstock for his thoughtful input. I wish to clarify that the Spring 2001 Ethics column was not an attempt to promote public awareness of environmental issues, but rather an attempt to test the SEB code of ethics against an actual ethical dilemma. If you would like to see other ethical dilemmas discussed in this column, send us some examples with names and places made anonymous.

At the joint conference of the Society for Economic Botany, Building Bridges with Traditional Knowledge II summit, and the International Society for Ethnopharmacology in Honolulu, Hawai'i (May 28-June 1, 2001), two working groups or workshops each spent a half day addressing ethical issues. The Intellectual Property Rights working group was led by Maui Solomon, Aroha Te Pareake Mead, Alejandro Argumedo, and Elaine Elisabetsky. Your column editor, Gail Wagner, led discussion in the Ethics and Ethical Guidelines workshop, here briefly reported. Altogether 29 people attended for a lively session. Attendees were given a nearly 300-page handout that included introductory material; copies of seven professional codes of ethics; copies of declarations, codes, memorandums, and conventions dealing with ethics as they relate to traditional knowledge; and a bibliography. Special thanks are due to the Center for World Indigenous Studies (<http://www.cwis.org/>) for the ready permission they gave to include some of their documents in the handout. In their library and on their website, where they collate "Fourth World" or indigenous documents, you can find many treaties, memorandums, declarations, and conventions that are otherwise not always easily available.

The workshop asked the participants, what is a code of ethics? What are ethical guidelines? What are ethical principles? What is the purpose of a code

Summer Programs and Classes

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High Falls Gardens, Chinese herbs

High Falls Gardens is pleased to report that our Student Gardens program is underway. Twelve of the accredited and candidate colleges of acupuncture and Oriental medicine, of the more than 40 such graduate programs now established in the United States, are participating. Thanks to a grant from the Stanley Smith Horticultural Trust, participants will receive start-up stipends and a joint website will be constructed. (We will post a later announcement concerning the website.) Asian medicinal plants and seeds propagated by High Falls Gardens in Columbia County, New York will be contributed to each participating college.

The purpose of the Student Gardens program is to support opportunities for students of acupuncture and Oriental medicine to do hands-on horticultural work in connection with their herbal studies. Participants submitted a brief proposal, generally involving the creation of a display garden on the grounds of their college or as part of a community gardens facility or local farm. Local collaboration is encouraged.

The 12 plans are varied, imaginative, and as a group indicate a solid future for Asian medicinal plant studies in the United States. Our hope is that, over the next decade or two as the knowledge of Oriental herbal medicine is assimilated, American

practitioners will be able to make a collective, informed choice among cultivated or responsibly wildcrafted plant species used as the traditional medicines. Whether those species are Asian, European, or North American in origin has yet to be determined, and is part of the learning adventure. We are working toward a future in which medicinal plants are cultivated according to sound ecological principles, and the people who do the cultivating are respected and properly compensated.

For general program information, or to receive a copy of the HFG newsletter, please contact:

Jean Gilette, Director
hfg@capital.net>hfg@capital.net
HIGH FALLS GARDENS
Box 125 Philmont NY 12565 USA
518-672-7365



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AIBS Continued from page 5

AIBS member societies are urged to write letters protesting the closure of CRC; they are also urged to encourage their members to write. Addresses for the letter-writing campaign can be found at <http://www.econbot.org>.

Send letters, NOT Emails! Email is routinely ignored by Congressional offices that are overwhelmed with email. Send letters to addresses found on SEB's website: <http://www.econbot.org>.

AIBS LETTER PROTESTING CLOSING OF CONSERVATION AND RESEARCH CENTER

The American Institute of Biological Sciences (AIBS) opposes the planned closing of the Smithsonian's Conservation and Research Center, which also will result in the closing of the Migratory Bird Center and the reduction of other scientific research programs conducted at the National Zoo's Department of Zoological Research, as these programs were consolidated under CRC last year. Closing this world-class research facility will seriously undermine the Smithsonian's research program and reputation for leadership in conservation. AIBS comprises 79 scientific societies with a collective membership of over 190,000 scientists in disciplines spanning all of biology from basic to applied, from molecular to organismal, from agronomy to zoology. We consider the CRC to be a stellar research facility in all regards. Closing CRC will result in the loss of highly-regarded programs in marine mammal biology, molecular genetics, small population genetic management, migratory birds

(including the Migratory Bird Center), field ecology, GIS and remote sensing, animal behavior, monitoring and assessment of biodiversity programs (MAB), and conservation biology (including long-term ecological field studies in the US and abroad). We are, in fact, incredulous that the Smithsonian could even consider closing CRC.

Perhaps the greatest loss resulting from the closure of CRC will be the inevitable reduction in the training programs offered by this facility. Countless students and natural resource management professionals from around the world have been trained at CRC and in their own countries. In addition, CRC conducts in-country training programs for scientists and natural resource managers. These programs allow these countries to become valuable partners of the United States in the effort to conserve biodiversity.

The Migratory Bird Center, which was launched in 1991 with a congressional appropriation, is the only research center focusing entirely on migratory birds. Its leadership in research into the effects of sun-grown coffee and sun-grown cacao on bird populations has been the basis of conservation efforts throughout the world. Through its Bridging the Americas education program, initiated in 1993, students in the United States and Central and South America and the Caribbean exchange artwork and letters about the birds that spend part of the year in North America and return south for the winter.

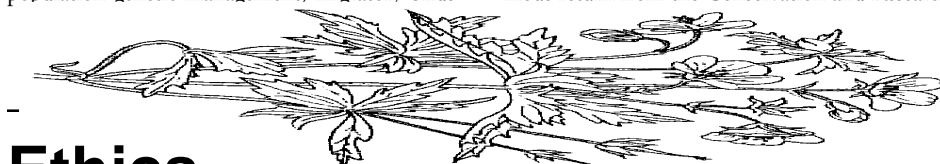
The Smithsonian and the nation receive an enormous return from the Conservation and Research

Center—many times greater than the \$5.2 million CRC budget. Closing the Conservation and Research Center will save the Smithsonian a few dollars, but will cause irreparable and incalculable harm to the Smithsonian's status as a world leader in research.

We urge the Smithsonian [the Congress] to take such measures as are necessary to keep CRC open and its research programs fully staffed and funded.

PUBLIC Policy

AIBS AND OTHER SCIENTIFIC SOCIETIES PLAN EFFORT TO PERSUADE CONGRESS TO SCUTTLE THE SANTORUM AMENDMENT ON EVOLUTION—AIBS Executive Director Richard O'Grady and Public Policy Representative Ellen Paul, along with Wayne Carley, Executive Director of the National Association of Biology Teachers, participated in a strategy session on 24 July at AAAS Headquarters to determine the most effective way to persuade the conference committee members to scuttle the Santorum amendment when the conference meets to reconcile the House and Senate versions of the Elementary and Secondary Education Act. The conference committee has already started to align the two versions of this massive bill, but is not expected to complete its work until after the August recess. It was quickly and unanimously agreed by the participants—including Jay Labov of the National Academy of Sciences, David Cooper, Joanne Padron Carney, and Jim Miller of AAAS, David Applegate of the American Geological Institute, Pete Folger of the American Geophysical Union, Eugenie Scott of the National Center for Science Education, and Jodi Peterson of the National Science Teachers Association—that it would be best to have the amendment, which is a nonbinding "sense of the Senate," scrapped entirely. Failing that, the group agreed on amendatory language that would render the amendment less offensive. Key among the changes was the deletion of the phrase, "whenever biological evolution is taught," to be replaced by "whenever controversial issues involving science are taught." The National Academy of Sciences has drafted a statement for consideration; AIBS has agreed to join in this statement should it be issued. Meanwhile, AIBS sent a strong letter to the conferees, urging them to exclude the amendment from the final bill (this letter is included in the online version of this AIBS public policy report—see the public policy section of <http://www.aibs.org>). AIBS is also organizing visits by biologists to key members of the conference committee and will be meeting with congressional staffers over the next few weeks to discuss this issue. The scientific societies that attended the meeting agreed to meet again to plan a long-term strategy to prevent this kind of thing from recurring.



Ethics Continued from page 13

of ethics? These are not new questions, and an excellent discussion by Sarah Laird and Darrell Posey can be found in *People & Plants Online*, Lecture 17, Participatory Research Methods (WWF, UNESCO, RBG, KEW), <http://www.rbgekew.org/uk/peopleplants/regions/thailand/lecture17.html> (Incidentally, if you have trouble with this URL, you can get to the web page via <http://www.kew.org/peopleplants> and then choosing Regions and Themes and following through to Thailand and Lecture 17.)

The participants in this workshop felt that codes of ethics are important for discussion, for creating dialogue, for presenting a professional face to the public, and especially for education.

One view that emerged was that if there is any particularly valuable guideline or starting point for developing a code of ethics, that starting point should be respect for the people with whom you work. Another view is that a code should state that

a researcher would work to establish ethical guidelines within the community. I wish to thank the people in the workshop for their informed, respectful, and caring participation in discussion.

National organizations such as the American Association for the Advancement of Science (AAAS), Sigma Xi, National Science Foundation (NSF), and American Anthropological Association (AAA) are united in calling for formal training in professional and applied ethics across all disciplines. Workshops such as these at our annual meetings are one step in the right direction, as is posting an ethics section on our web page. For the first time, the AAA will be offering workshops on Teaching Ethics at their national conference, and an ethics component will be included in their Teacher's Institute held the day before the conference. The AAA is also working to survey how ethical issues are mentioned in the introductory anthropological textbooks.

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Cross-Pollination

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Experimental Replication of 17th Century Native Agriculture

My current and long-term research interests revolve around the subsistence of First Nations peoples. I felt that to develop a better understanding of why "they did what they did," I had to experience, first-hand, the overall process of "doing."

As a result, my Master's Thesis focused on the replicated methodologies of Native agriculture employed in 17th century northeastern North America. Using primary documents, archaeological records and the memory of Six Nations agriculturalists on the Grand River today, both slash-and-burn and non-ash fields have been established. Traditional flour corn has been planted using historical practices of mounding and seed distribution in order to ascertain yield and, ultimately, carrying capacity of a Native population over a number of years of sedentary agricultural activity.

The resultant journey of discovery has provided some remarkable revelations within the first four growing seasons (1998-2001) of this study. Preliminary results demonstrate that, without doubt, agriculture initially based on a slash-and-burn methodology outperforms an equally fertile field that has not been subjected to burning. Likewise, corn yields and harvest quantities from these fields disagree with the archaeological estimations of this time period.

All this aside, however, it is now that the true test of the experiment begins. For my doctoral work I plan to continue and expand my current research project. What will happen to corn yields and plant growth as successive years of planting on slash-and-burn soil take their toll? Will the actual protein and nutrient content of the kernels offer less and less sustenance to a burgeoning Native population? How will these results substantiate or deny the body of theorized knowledge on Native movement and agricultural sustainability in those early pre-contact years?

In summary, the research will enable a more accurate analysis of not only sustainability and settlement demographics, but also of nutritional value—an imperative piece of the analytical puzzle involving the determination of human skeletal remains found on village sites. It is my intention to continue with this research throughout my doctoral degree until the results of at least eight (ideally ten or more) growing seasons are available for analysis. Only then, can a "tested" hypothesis on settlement and land carrying capacity be matched to the theorized patterns now accepted as academic "fact" by today's scholars.

Lauri-Ann L. Attenborough-Deakin,
lattenb@yorku.ca
York University, Toronto, Ontario

Meetings

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INDUSTRIAL ECOLOGY SUMMIT 2001

November 13-15, 2001 at the scenic Marconi Conference Center, San Francisco, CA

What We Learned in the Rainforest: Tools Inspired by Nature for Corporate Accountability and Sustainability

Three years ago, in a speech entitled "What I Learned in the Rainforest," Tachi Kiuchi set forth a bold vision: Instead of extracting resources from nature, businesses could harvest nature's ideas. By running our businesses like the rainforest—innovative, adaptive, resilient, and sustainable—we can emulate nature's capacity to create value without consuming its base. We can begin to profit sustainably, and create affluence without effluence.

Like last year's Industrial Ecology 2000, our 2001 summit will draw together a rich combination of forward-thinking executives, practical visionaries, and business change agents. What We Learned in the Rainforest is a WORKING conference. Instead of keynotes and breakout sessions, we will be working side-by-side in intimate roundtable sessions. And instead of last year's 400 participants, less than 100 registrants will be permitted—50 of them hand-selected, to assure that we have the catalytic mix of participants we need. For more information, contact Nikole Wilson, Conference Coordinator, The Future 500
email: nikole@globalfutures.org, Tel:(510)681-4191

Herbal Workshop

Hosted by the EU Centre of Development of Enterprise in the Pacific in the first week of Dec. 2001. Contact: Denzil Phillips <denzil@denzil.com>

Rothamsted International BioMarket

BioProducts from Plants and Microbes to be held at Rothamsted, Harpenden, UK, Nov. 7-9 2001

This event is an international commercial networking event for all those involved in developing and commercialising novel added-value products from plants and microbes and would interest involved in sectors such as Agbiotechnology, Bioprospecting, Bioremediation, Biotherapeutics, Crop Protection, Diagnostics, Functional Foods, Genomics, Industrial Feedstocks, Marine Biotechnology, Microbial Inoculants, Pharmacognosy, Plant Molecular Biology, and Renewable Feedstocks.

The event will comprise conference talks, delegate partnering meetings, delegate presentations, and workshops.

Conference talk topics will include technology and business issues with key speakers to include Professor Steven Briggs (Syngenta, USA) on crop genomics and Roger Wyse (Burrill's, USA) on agbiotech financing. The European Commission "Quality of Life" programme is sponsoring a Cell Factory workshop and showcase to support their key action of the same name.

Ethics

Continued from page 14

I want to report here on a Sigma Xi grant awarded to the University of South Carolina for holding an ethics workshop during fall semester, 2001. Rather than holding a one-day, one-shot workshop, I am attempting to encourage a semester-long university-wide (and K-12) dialogue on several common ethical topics that cross-cut every discipline: ethics training, intellectual property, informed consent, and conflict of interest. My wish is for teachers to include discussion of these topics in their regular courses this semester, and to give credit to students for collecting and analyzing original case studies (as we did in the last column) or for collecting and annotating bibliographic items. Yes, there will also be a plenary speaker and a one-day workshop with papers, discussion roundtables at the luncheon, break-out discussion groups, and whole-group discussion. But, the anticipated product from our cross-disciplinary semester-long dialogue is a workbook (and possibly a web page) with case studies compared to codes of ethics, an annotated bibliography, codes of ethics, and teaching tips. It will be designed to provide material useful to the teacher who would like either to teach a course in professional ethics in their discipline, or incorporate ethics modules or discussion into their existing courses.

We would like to continue to offer original case studies in this column, along with analyses of how our Guidelines for Professional Ethics (and other sets of professional ethics) help or don't help in deciding how to handle the situation. But, in order to do so, our readers need to submit some case studies! Please change the names and places to make the situation anonymous. You may send your submissions to: Gail Wagner, Dept. of Anthropology, University of South Carolina, Columbia, SC 29208, gail.wagner@sc.edu



For more information, including costs, visit <http://www.biomarket.iacr.ac.uk> or contact Amanda King/Roger Atkin <email: biomarket@bbsrc.ac.uk> Rothamsted BioMarket 2001
IACR Rothamsted, Harpenden AL5 2JQ, UK
Tel: +44 (0)1582 763133 x 2840/2
Fax: +44 (0)1582 760981

Cross-Pollination

Aloha! The Building Bridges Summit was a fantastic event that brought together people from all areas of research from around the world. It was an amazing conference set in a lush, beautiful place. Hopefully, the botanists from temperate climates who attended had an opportunity to get away from the Hawai'ian Village and explore some of the tropical vegetation. The Summit gave all the students attending a chance to meet and trade knowledge, opinions, and information—across many disciplines.

Also noteworthy is the fact that students have now gained a new voice within the Society. During the Business Meeting, Michael Casaus, from Cornell University, introduced an idea that has been kicking around the Internet for a while—the formation of a Student Committee that will make recommendations to the Council. Presently, students

make up approximately 25% of the Society's membership, representing the future of the SEB, so it was agreed that the formation of a Student Committee was an idea whose time had come. During the meeting, newly installed President Dr. Brian Boom named Michael Casaus as the Chair of the Commit-

New to the Student section of the SEB website is a number of abstracts submitted by SEB student members. These can be viewed on-line and students are encouraged to submit their abstracts. In the past, we have printed abstracts here in the newsletter, and we are continuing to do so with Lauri-Ann Attenborough-Deakin's description of her research focusing on First Nations peoples' agricultural practices. It is hoped that printing abstracts will produce a cross-pollination of ideas, and that the Newsletter can generate some

feedback and interest for the research being highlighted. If you would like to see your ideas in print, email them to me at kreynert@lehman.cuny.edu.

—Kurt Reynertson

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The Student Network is housed in the SEB website.

Write to join the ListServe for students!

tee. The Chairperson will attend Council meetings as the committee representative. Students interested in having input should join the student ListServ, as we students are widely distributed around the globe. The ListServ can be joined by going to the SEB homepage, <http://www.econbot.org> and following the links to the Student pages.



Economic Botany Newsletter

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