

# PLANTS & PEOPLE

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

Volume 16

Spring 2002

## In This Issue:

Notes from the Field .....	2
Publications .....	2
Awards .....	3
EB Views from the Membership .....	4
AIBS Reports to SEB .....	5
Passages .....	5
Herbaria Today .....	6
Ethnobotanews .....	7
Jobs .....	8
Membership .....	8
In the Classroom .....	9
Botanizing the Web .....	10
Summer Classes .....	11
Cross-Pollination .....	11



## 2002 SEB's 43rd ANNUAL MEETING at The New York Botanical Garden June 22-27, 2002

**June 23 Symposium: Origins, Evolution, and Conservation of Crop Plants—A Molecular Approach**

By now many of you have received your notice with lots of details about the annual meeting at The New York Botanical Garden, June 22-27, 2002.

The papers and registration materials for the SEB 2002 meetings are posted on the Society for Economic Botany's website (<http://www.econbot.org>). By visiting the website you can register for the conference and submit an abstract. Abstract deadlines are May 1, 2002. And remember, you must be a member of the Society to present a paper or poster at the meeting so get your friends to join.

Also, there is a downloadable poster, like the one included in this issue, that you may want to duplicate and hang everywhere, in your local institutions, places you enjoy frequenting, or your friends' refrigerators.



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](mailto:newsletter@econbot.org)

**Mike Balick**

**Charlotte Gyllenhaal**

**Kurt Allerslev Reynertson**

**David Theodoropoulos**

**Michael Thomas, Webmaster**

**Gail Wagner**

**Tita Young**

[www.WordScribe.com](http://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.

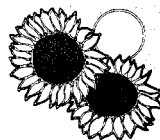
Deadlines for submissions are February 1 (Spring Issue) and September 1 (Fall Issue).

## Notes from the Field

Time is passing faster than usual it seems. I know for me there are many changes that are occurring in our disciplines. There seems to be more room for us to hybridize with other disciplines; within industry and with NGOs. More people know the word ethnobotany and are more familiar with tropical and temperate varieties of plants. Due to this I hope you will continue to send in hot topics as we can all gain from the cross-pollination.

Many of you let me know the untimeliness of the information about the Smithsonian Conservation and Research Center closing. At the time it was important for members to know about the closing and during the printing and distribution the issue had passed. We try and keep you informed and many have suggested listing things on the website. Our Webmaster has suggested that the Newsletter be electronic. I look for feedback from you as to whether we should eliminate the newsletter totally or just eliminate the paper form. In this electronic age of globalization it is hard not to be outdated.

Send me your news from your part of the world.



Trish Flaster

([tflastersprint@earthlink.net](mailto:tflastersprint@earthlink.net))

## Publications

### A New Journal: *Integrative Cancer Therapies*

Written for everyone involved in comprehensive cancer treatment and care, from physicians and other health care professionals to researchers to complementary practitioners, *Integrative Cancer Therapies* focuses on evidence-based and scientifically sound alternative, complementary, experimental, and traditional non-Western medical practices and their responsible integration into conventional health care. *Integrative Cancer Therapies* spearheads a new and growing movement in cancer treatment—integrative care—patient-focused care that aims to improve health outcomes and quality of life.

Editor-in-Chief of the journal is Dr. Keith Block, Medical and Scientific Director of the Institute for Integrative Cancer Care in Evanston, Illinois. Associate Editor is Dr. Charlotte Gyllenhaal, of the Institute and the University of Illinois at Chicago, and a long-time member of the Society for Economic Botany.

Examining specific patient and treatment concerns from the different viewpoints of a multidisciplinary health care team including the patient, *Integrative Cancer Therapies* analyzes the theory and practice of diet, lifestyle, psychological factors, nutritional supplements, experimental vaccines, chronotherapy, and other advanced treatments, as well as current clinical trials, evaluations of innovative and recently introduced therapies, models for integrating complementary and conventional treatments in research, patient's perspectives, case histories, evaluations of botanicals, food, and dietary supplements.

Society members will find some articles in the first issues of particular interest: Will McClatchey writes on the ethnobotanical and alternative medicine background of the popular cancer remedy noni juice, *Morinda citrifolia*. Harry Fong has contributed an article on herbal regulations. A team from the Vietnamese Institute of Traditional Medicine has written up a clinical trial of an antioxidant supplement based on mung beans in preventing side effects of radiation therapy for breast cancer. A detailed review by Jeanne Wallace examines the usefulness of pharmacological COX-2 inhibitors in many cancers, and how dietary and herbal strategies can contribute to the suppression of COX-2 and other pathways of prostaglandin and leukotriene synthesis. A panel of soy experts examines the question of whether soy consumption is harmful for breast cancer patients. In an innovative feature, the Integrative Tumor Board, an actual cancer case is presented to a panel of conventional and complementary/alternative practitioners, who each give their treatment recommendations. Herbalists (Chinese and Western), naturopaths, nutritional counselors, and others have contributed so far; a particularly detailed analysis of a case of advanced breast cancer from Traditional Chinese Medicine practitioners is especially interesting.

Continued on page 3

## Awards

### Dr. Ruth Kiew, Malaysian Botanist, Recognized for Plant Exploration by National Tropical Botanical Garden

(Miami, FL, February 8, 2002). The National Tropical Botanical Garden (NTBG) today announced the award of the prestigious David Fairchild Medal for Plant Exploration to Ruth Kiew, Ph.D., keeper of the herbarium and library at the Singapore Botanic Gardens, in recognition of her indefatigable dedication to the conservation of endangered species and her remarkable enterprise in exploring remote and inaccessible areas of Borneo, Sarawak, and Malaysia.

"Dr. Kiew has been the first botanist to explore some areas of Malaysia that are accessible only by extraordinarily strenuous physical effort," said Paul Alan Cox, Ph.D., Director of the NTBG, a congressionally chartered research institution in Hawai'i and Florida dedicated to tropical plant conservation and ethnobotany, the study of how indigenous peoples use plants. "Her work exemplifies the three-fold mission of the NTBG, to promote conservation, research, and public education about tropical plants."

"I am extremely honored, and hope that through this public recognition I can call attention to how much we need to protect our tropical resources, which are disappearing at an alarming rate," said Dr. Kiew, a botanist who specializes in begonias and African violets. According to Dr. Kiew, only 30 percent of Malaysia's native plants have been identified, while 2 percent have already become extinct. And she warns that this rate could skyrocket in the near future because of accelerating agricultural development that causes massive clearing of forests.

Dr. Kiew also expressed concern over waning attention to taxonomy, the science of categorizing and naming plants, which is rapidly being supplanted by the allure of more "high-tech" molecular biology. She notes that as taxonomists age, and few students enter the field, they may become as extinct as the plants they categorize, resulting in the loss of critical knowledge.

"The scientific name is the key to everything that's known," explained Dr. Kiew. "If you have a plant, but don't know its name, you have no link with what has been discovered about it previously,

In the course of describing more than 100 new plant species, Dr. Kiew has traveled extensively for her work in Malaysia, but being named the David Fairchild Award winner has prompted her first-ever visit to the United States. She hopes to use her trip as a springboard to discuss a particular concern of hers—learning in the computer age.

"I see more and more children today getting their information on the Internet, where they are given facts rather than finding things out for themselves," said Dr. Kiew. "I am concerned that people are losing the ability to make their own observations

**Recipient of award considered "Nobel Prize" for plant conservation warns of the perils of vanishing species and disappearing expertise.**

and you cannot put that plant to any practical use. Identification is the fundamental element of the scientific information."

Dr. Kiew, the daughter of two scientists who were also avid gardeners, credits much of her success in effectively exploring the wilds of Malaysia to befriending native tribes in the region, including some descendents of headhunters in Borneo, who commonly serve as her guides. "As soon as you tell them what you're looking for, they can help you find it," Dr. Kiew marveled. "They really are in tune with the forest."

and learn from their own senses."

Dr. Kiew indicated she is particularly interested in seeing how schools and other public institutions in the United States engage students in hands-on science education projects.

"Dr. Kiew was chosen for the Fairchild Award because, like the researcher for whom it is named, she is an expeditionary scientist who seeks to protect the biodiversity of the planet and conserve plants for generations to come," said Dr. Cox. "She plans to use the \$5,000 cash prize to commission paintings of the things she appreciates most—plants."

Continued on page 4

## Publications Continued from page 2

SEB members who are working in the area of cancer and traditional or alternative medicine are specifically invited to submit papers to this new journal. Information on article submission may be obtained from the editors at <http://ICT@blockmedical.com>.

For current subscription rates or a sample copy, please visit <http://www.sagepub.com> or contact Customer Care:

Sage Publications  
2455 Teller Road

Thousand Oaks, CA 91320 U.S.A.

Phone: 800-818-7243 (U.S.) 805-499-0871 (Outside of U.S.)

FAX: 800-583-2665 (U.S.) 805-499-9774 (Outside of U.S.)

Email: [order@sagepub.com](mailto:order@sagepub.com)

### *Cultural Uses of Plants*

Gabriel DeBear Paye has written *Cultural Uses of Plants*, a guide to learning about ethnobotany. This book, published by New York Botanical Garden Press, is a delightful book for teachers, students of all ages, and families. She has covered all poignant topics, has inserted definitions and current topics within chapters, and has well developed classroom/lab activities in each chapter. Even though it is written for younger students, the depth of information makes it valuable for any age. This book can be used as a lab manual, a weekend outing, or for summer outdoor education classes. It is a fun book to sit down and relax on a snowy day, like today, with friends, family, or a warm beverage. Order from <http://www.nybg.org/bsci/spub/>.



# EB Views from the Membership

This could be a new column yet it is still in its primordial stages. I am not sure it will continue because it is based on current trends and depends on individuals to submit articles/comments. I rarely write editorials, but I could not hold back on this one. Please send in your comments too.

During a discussion at the 2001 meetings in Hawai'i, a highly regarded Ethnobotanist and SEB member said, during discussion, that Bioprospecting is dead. We have spent lots of money on it and (we) just have not seen the response we had hoped. As a person who has one foot in industry and the other in "faux academia," I disagree entirely. It is just that we as Ethnobotanists are on the cutting edge of these issues while industry and government regulators are slow to respond. They do not understand the implications of bioprospecting and are not able to incorporate this "academic" process as fast as we would like or as fast as we move intellectually. For the system to work sustainably we need to define for them the difference between bioprospecting and biopiracy and help create an infrastructure that ecologically, culturally, and economically supports the transition from the field to market.

Following are two articles. The first discusses Devil's Claw, *Harpagophyton procumbens*, a plant that is used for arthritic inflammation in the world marketplace. It was proposed for CITES Appendix II listing, but the stakeholders, (see Statement below) found that listing it was not in their best interest until proper research could be shown that it merited restriction. The only way plants and people can survive is if there is a well thought-out plan for the consequences of integrating bioprospecting into the marketplace. How do we protect the plants that become economically valuable? Isn't this at the heart of our society? I think we are entering the next stage of bioprospecting, not the end. We are entering the broad implementation, where the small producers and marketplace meet. It is no longer limited to the elite companies and academics, but rather to those who have access to the Internet.

Do we close borders or do we develop equitable plans/partners to support biological and cultural diversity? We cannot close borders as this approach is not profitable in any way to anyone. But if we investigate what is culturally important to protect and what is critical for the ecosystems and have this reflected in the market, then we may succeed. We will find which plants are flexible enough to be widely traded and a system of trade that supports the stewards.

The second article discusses the problems of cross-cultural medicinals and the consequences of poor quality control. I view this as one of the results of moving forward without the infrastructure proposed in the first article. Well, those are my thoughts; what about yours? (Editor).

## The Sustainably Harvested Devil's Claw Project—Namibia Challenges and Future Work

In 1996 we researched and proposed The Sustainably Harvested Devil's Claw Project. In 1999 this covered some 307,415 hectares of range-land under commercial and communal tenure arrangements. The project worked directly with 328 harvesters and households, producing 10,210 kg of Certified Organic Devil's Claw.

Prior to the establishment of the project in the communities/areas in which we worked, the primary producers obtained from N\$1.00 (or even lower!) to an upper and exceptional N\$8.00 per kg for dried, sliced Devil's Claw. They often supplied stock under dubious credit arrangements and were often "paid" in alcohol or other consumer goods at highly inflated values. They had very poor links to exporters, usually through a series of middlemen, and from season to season they did not know for sure if buyers would turn up to purchase their stock. They had limited choices or options regarding buyers, only sold very limited amounts, and had no idea of the actual weight of the material they passed on. Also, they had no idea what the product was being used for (outside of their own local utilization) or even where it was going to when it was sold. The suppliers had no opportunity to link better quality supply with better prices and they had no assistance regarding ecological/sustainability issues. They had no voice in the industry and no opportunity to take up issues with wider stakeholders.

These conditions are similar to those experienced by the majority of Devil's Claw harvesters in Namibia and as such are not specific or exclusive to the primary producers with whom the project works. Subsequent to the establishment of the project the communities now obtain a minimum of N\$12.00 per kg for their dried, sliced Devil's Claw. The suppliers are paid cash at strategic stages during the harvesting season. They now deal directly with the exporter—GAMAGU (Mike and Sabine Krafft, Dordabis, Namibia), with whom a practical and operational relationship is being developed (though in some areas it may become prudent to use "functional" middlemen from rural area to exporter). The suppliers now have access, if necessary, to other exporters/traders and they can plan their harvesting level knowing they can sell all their stock every season. They can and usually do sell more significant quantities than before. There are scales at community storage facilities now, which allows each harvester to know how much they produce and sell and the community will know how much is being sold to the exporter. The suppliers have an improved understanding of what their product is

used for in the export market, and in some case have even met the importers of their product. They understand and exploit the link between good quality material, and the higher price possibility with respect to organic certification. The suppliers are assisted annually with ecological surveys for quota setting, post-harvest surveys, and organic certification, and have since been well represented at various national and international stakeholder fora.

It is important the industry understands primary producer issues and how, under existing conditions, middlemen or marketing agents can be either "functional" or "opportunistic." We believe that there are several opportunities that working more closely with the primary producers can provide to industry and other stakeholders. These include rationalizing of costs and margins; development of benefit sharing mechanisms; more effective channels to improve quality; more effective channels for resource management; and a means to work with organized primary producers on cultivation and other possible value-adding efforts.

Continued on page 12

## Awards

Continued from page 3

### About the David Fairchild Medal for Plant Exploration

The award, established in 1998, is named for Dr. David Fairchild, one of the greatest and most influential horticulturists and plant collectors in the United States. Dr. Fairchild personally introduced over 2,000 plants (tropical fruits; flowering trees, shrubs, and vines; grasses; and palms) to the United States from around the world, revolutionizing our diet and enriching our agriculture. The award honors courageous individuals worldwide who, at great personal risk and self-sacrifice, take on the race against time to discover new plant species before they become extinct. This award is considered to be the "Nobel Prize" for plant conservation.

### About the National Tropical Botanical Garden

The National Tropical Botanical Garden is dedicated to the conservation of tropical plant diversity, particularly rare and endangered species. Located in the only tropical and sub-tropical regions in the United States, NTBG has assembled what is believed to be the largest collection of federally listed endangered plant species anywhere, including the largest collection of native Hawai'ian flora. See <http://www.ntbg.org> for more information.

## AIBS Reports to SEB

### NEWS FROM THE AIBS PUBLIC POLICY OFFICE, 11 February 2002. Volume 3, Special Edition A FIRST LOOK AT FISCAL YEAR 2003 FUNDING FOR BIOLOGICAL RESEARCH: WHAT THE ADMINISTRATION IS REQUESTING

President Bush on February 4 delivered the Administration's official budget request to Congress. A preliminary analysis of the budget reveals that the biological sciences would, for the most part, stay at Fiscal Year (FY) 2002 levels or decline somewhat. More detailed analyses will be provided by AIBS over the coming weeks, but the big picture is not good. Except for the National Institutes of Health (requested change: 17 percent), NASA, EPA, and NSF, all research and development agency budgets—including those of the Department of the Interior and the USDA—would decline.

### National Science Foundation

The NSF has been singled out by the Bush Administration as a "true center of excellence" and has received the only "green light" rating handed out by the Office of Management and Budget. However, the Administration's fondness of NSF is not particularly evident in its proposed budget for the agency. On the surface, NSF appears to be getting a 5-percent increase (~\$240 million) to approximately \$5.0 billion for FY2003. Once transfers of funds from other agencies and increases in salaries and expenses are taken into account, only half of the NSF increase will make its way to research and education.

Research and Related Activities are increased by \$184.6 million (5.1 percent); however \$74 million of this increase comes from the transfer of programs from other agencies, such as NOAA Sea Grant program (\$57 million, which is a decrease from FY2002's appropriations of \$62.4 million), EPA's education program (\$9.0 million), and USGS's hydrology of toxic substances program (\$10 million). Therefore, the effective increase in NSF's Research programs is only 3.0 percent (compared to the 7.6-percent increase granted to NSF in FY2002).

NEON funding. For the first time, the Administration has included funding for the National Ecological Observatory Network (NEON): \$3.0 million within research for operations and \$12.0 million in major research equipment for construction of two prototype NEON sites. The budget documents also show a total of \$12 million for FY04 and \$16 million in FY05 for NEON in the major research category. The Administration cites NEON as a potential "early detection system" for a wide array of biological and chemical threats, from invasive

species to chemical and biological warfare agents.

Department of the Interior, U.S. Geological Survey: The Biological Research Program would lose nearly \$6 million under the Bush budget request. Of this amount, \$2.8 million comprises a transfer of funds for fire ecology research to a central Department of the Interior Wildland Fire Management Account. Some, but not necessarily all, of this funding might eventually be allocated to research. Other cuts included what OMB characterizes as earmarked projects. While some of these projects were, in fact, added by individual members of Congress, that fact alone does not justify termination. For instance, two of the earmarks fund studies of non-native invasive species in ballast water and of amphibian declines. We have not yet determined how the National Biological Information Infrastructure will fare under the proposed budget; there is no plan to eliminate this funding.

Overall, the USGS budget is slated to decrease by \$46.6 million (about 5 percent). Much of the proposed decrease consists of the "absorption" of "uncontrollables"—the ordinary inflationary increases in salaries and other costs. In past years, the Administration has sought to force USGS to absorb 100 percent of the inflationary costs, which, of course, would result in a serious erosion of programmatic funding. Congress has always rejected this flawed cost-saving measure. This year, the Administration proposes that USGS absorb 50 percent of the uncontrollables. The largest cuts are in Water Resources Investigations, where the Administration proposes to transfer the Toxic Substances Hydrology program to the National Science Foundation's Geology Directorate. Of the \$13 million base funding for this program, \$10 million would go to NSF while the other \$3 million would be eliminated from the USGS budget. In addition, the Administration wants to decrease the National Water Quality Assessment Program (NAWQA) by \$5.8 million, again arguing that the users of the data generated by this program—mostly EPA and the states—should bear at least part of the cost of the program. And again, they have not proposed a commensurate increase in the EPA budget. The Administration also proposes to terminate USGS support for the Water Resources Research Institute, a decrease of \$6 million to this state competitive grants program. Altogether, the cuts proposed for Water Resources total \$28 million dollars.

USDA National Research Initiative: The NRI is proposed to double, to a total of \$240 million, with the focus on new and emerging pests and diseases of crops and livestock, agricultural genomics, management of agricultural operations, and investigations into the nutritional value and functional properties of food products. Funding for expanded graduate training will be made available through NRI.

## Passages

Members of the Society will learn with regret of the death, of our Distinguished Economic Botanist for 1991, Professor Norman W. Simmonds, in Edinburgh, Scotland, in early January. Best known to economic botanists due to the book *Evolution of Crop Plants*, now in a second revised edition, Simmonds conceived, edited, and part-authored this remarkable compendium using his network of international contacts and friends to ensure that virtually every crop was treated by a world authority. His books on bananas (*Bananas*, now in its third edition, and *The Evolution of the Bananas*) are also classics, and his textbook on *Principles of Crop Improvement* has also gone into a second edition.

These books, and his list of substantial published papers, reflect the breadth of Professor Simmonds' professional interests, which stemmed from and influenced the various posts he held during his scientific career. He graduated with a First Class



degree from the University of Cambridge, where Professor Catchside encouraged him in what was to become his life-long interest in genetics and plant breeding. He went from Cambridge to the then Imperial College of Tropical Agriculture (ICTA) in Trinidad, where he became part of an influential group including E.E. Cheesman, Joseph Hutchinson, and John Purseglove, all of whom made major contributions to the origins and evolution of tropical crops. Professor Simmonds remained in Trinidad for 15 years. He eventually became Senior Cytogeneticist in the Banana Research Section of ICTA and established important links with the commercial banana breeding work in Honduras, where large-scale facilities could be provided for the ultimately successful breeding of this bulky and, for the plant breeder, particularly intractable crop.

# Herbaria Today

Herbaria are alive and well. It has been my experience that Herbaria are often neglected and money is allocated to other biological areas. I was please to learn about this expansion, (Ed.)

On May 11, 2000, the dedication of the new \$1,800,000 Claude E. Phillips Herbarium was held at Delaware State University. This herbarium follows the paradigm of BRIT in being both open to the public and aesthetically pleasing, but three attributes make the Claude E. Phillips Herbarium unique:

1) It is the only herbarium in the world that cooperates with several federal, state, and private institutions\* through signed memoranda of understanding.

2) It is the only public herbarium on the Delmarva Peninsula.

3) It is the largest herbarium at a Historically Black College or University.

Other relevant facts about the Herbarium are as follows.

1) With more than 110,000 mounted specimens of vascular plants, it ranks 87th out of 535 herbaria in the United States.

2) It documents plants dating back to 1799.

3) It has a comprehensive, worldwide representation of flowering plant families.

4) It houses a collection of over 2,500 books and numerous issues of 73 different periodicals. The oldest book was published in 1737 and the periodicals date back to the 19th century.

5) It houses collections of photographic slides (35 mm) on the flora of North America.

## MISSION

The mission of the Claude E. Phillips Herbarium of Delaware State University is documentation, research, and education on wild and cultivated flora, particularly of the Delmarva Peninsula. The Herbarium seeks to maintain, provide access to, and augment its extensive collection of vascular plants, mosses, liverworts, lichens, fungi, algae, and fossil plants. In addition, the Herbarium supports research, teaching, and extension activities in such fields as systematics, economic botany, conservation, and biodiversity studies.

## HISTORY

In 1977, Norman H. Dill and Arthur O. Tucker established a herbarium at Delaware State College (now University). At that time, the herbarium consisted of their own collections, which occupied two cabinets. In 1979, with funding from the U.S. Fish and Wildlife Service, Dill and Tucker co-authored the first reports on rare, threatened, and endangered plant species for Delaware and Maryland. As a result of this renewed interest in the flora of the Delmarva Peninsula, the University of Delaware's Department of Plant Science formally

transferred the herbarium of Society of Natural History of Delaware to Delaware State College in 1980. The Society herbarium, about 50,000 specimens, contained many valuable collections, particularly those of William M. Canby and his correspondents (rich in types) and Robert R. Tatnall (vouchers for his *Flora of Delaware and the Eastern Shore* of 1946). Later acquisitions for the growing herbarium at Delaware State College included the H. R. Baker collection from the Delaware Department of Public Health, the C. O. Houghton collection from the Department of Biology of University of Delaware, the C. Dunham collection from the Department of Plant Science of the University of Delaware, the H. Ling slime mold collection, and the E. Tatnall collection from Colorado College. Delaware State College Dean James Lyons located space within the stacks area of the former library to house these additional collections, and students were hired to renovate the walls and floors, as well as moving the cabinets.

On June 12, 1982, the Delaware State College herbarium was formally dedicated to Claude E. Phillips (1900-1981) with a symposium that included exhibits, field trips, an edible wild plants dinner, and speakers. Claude was the most active field botanist on the Delmarva Peninsula for most of the latter half of the twentieth century. He had served the University of Delaware's Department of Agronomy for 38 years, including as professor and chairman. He authored 8 books on plant identification and conservation, including *Wildflowers of Delaware and the Eastern Shore* (1978).

In 1986, the Claude E. Phillips Herbarium received another major input with collections from Catholic University that included all specimens from Delmarva, all the Lamiaceae (mint family), and all the Apiaceae (carrot family). Additional cabinets were later acquired on donation from the National Arboretum and the Smithsonian. In the most recent (eighth) edition of *Index Herbariorum* (1990), the Claude E. Phillips Herbarium, with an official abbreviation of DOV, had an estimated 106,000 specimens. At that time, staff of DOV consisted of three co-Curators (Thompson Pizzolato of University of Delaware, Norman Dill, and Arthur Tucker) and one assistant (Nancy Seyfried). Also in 1990, DOV ranked 87 out of 535 herbaria in the U.S. in terms of holdings. Not only is it still the only public herbarium on the Delmarva Peninsula, it is still the largest herbarium at a historically black college or university by at least 10-fold.

During this time, while the collections continued to expand, financial support was essentially lacking, and space gradually became limiting. Assaults occurred with water damage to some specimens from leaks in offices above the Herbarium. Due to limited accessibility, visitors averaged only about 22 per year from 1982 to 1999, fluctuating from a high of 75 in 1986 to a low of 2 in 1995. With the death

of Norman Dill in 1994, the future of the Claude E. Phillips Herbarium seemed uncertain.

During 1995-1999, Arthur Tucker obtained memoranda of understanding from the Delaware Department of Natural Resources and Environmental Control; Delaware Department of Agriculture; and Mt. Cuba Center for the Study of Piedmont Flora. Also, he established the Advisory Board for the Herbarium with representatives from each of the cooperative units. Donations allowed the establishment of an endowment.

In 1996-1997, Kenneth Bell, Dean of the School of Agriculture and Related Sciences of Delaware State University, and William DeLauder, President of DSU, obtained funding from the U.S.D.A. and the Longwood Foundation to construct a new herbarium building and equip it with many new cabinets. Homsey Architects was chosen as the architectural firm, with an initial design by Leonard Sophrin and completion by Curtis Harkin. With its bright, pleasing, and inviting interior, the new herbarium building successfully achieves budgetary, aesthetic, and utilitarian balance. Truly, it is a place where both the public and research scientists will feel welcome.

## \*COOPERATORS

The Claude E. Phillips Herbarium is a cooperative herbarium, under signed memoranda of understanding, with the following institutions:

Natural Resources Conservation Service of United States Department of Agriculture  
 Delaware Department of Agriculture  
 Delaware Department of Natural Resources & Environmental Control  
 Delaware Nature Society  
 Mt. Cuba Center for the Study of Piedmont Flora  
 University of Delaware  
 Wesley College

For these institutions, the Herbarium provides the scientific basis for their plant-related statements and publications. Formal and informal links also exist with Society of Natural History of Delaware, The Herb Society of America, International Herb Association, and Delaware Herb Growers & Marketers Association.

—Submitted by Art Tucker, email: atucker@dsc.edu



## Passages

Continued from page 5

In 1959, when post-colonial considerations led to a reduction in British support for research at ICTA, Simmonds returned to the United Kingdom as Head of the Potato Genetics Department at the John Innes Institute. He then moved to Scotland as Director of the Scottish Plant Breeding Station. He found administration/management less congenial than direct involvement in research, but he managed to maintain his interests in tropical crops through consultancies at the West Indies Central Sugar Cane Breeding Station and the Rubber Research Institute of Malaysia, among others. After retiring from the Plant Breeding Station, he returned to university life in the Edinburgh School of Agriculture. His stimulating and often provocative approach to his subject, his refusal to follow conventions simply because things have always been done that way, and his rigorous insistence on high standards, both for himself and those whose work he reviewed, influenced all who worked with him. One of the recognitions of his achievements was his election as a Fellow of the Royal Society of Edinburgh.

Professor Simmonds would never have accepted that he was an ethnobotanist. However, some of his lesser publications on "Fishing rod botany" or "A morning in the market" certainly fall into that category, as does his major 1984 review for the World Bank of the farming systems research being conducted in the International Agricultural Research Centers. This latter experience led him to characteristically vigorous debate (particularly in the *Journal of the Tropical Agriculture Association*) with those social scientists who appeared to feel that problems of poverty and food security in developing nations could be resolved by abstract mantras. Simmonds was a convinced and persuasive advocate of continuing hard-science-based research into environmental constraints and agronomic ways of increasing biological outputs.

Though he faced it with resolute courage, Simmonds never recovered from the death of his wife Christa before Christmas 2000. He was in and out of hospital several times during the last months of his life. It is pleasant to record that he beguiled one such episode by taking into hospital with him the set of back issues of *Economic Botany* that had recently reached him. According to his obituary in *The Scotsman*, his recognition as Distinguished Economic Botanist by the SEB was one international award that gave him considerable pleasure.

Knowing Norman Simmonds likewise gave considerable pleasure to those of us privileged to do so. We shall miss the direct stimulus of his company, but are thankful that we retain the intellectual stimulus, and considerable legacy, of his published works. He was one of the last members of the old school of tropical agricultural scientists who perfected their trade by learning from farmers in the dust and heat of the tropical day.

—Submitted by Dr. Barbara Pickersgill

## Ethnobotanews

Sunday's Canada Briefs, 12/16/01: *Ecuadorian Shaman, Son Await Court Date in Healing-Ceremony Death*

Gore Bay, Ontario (AP): A renowned Ecuadorian shaman and his son, charged in the death of a woman in a healing ceremony, are victims of an "attack on indigenous medicine," their lawyer says, as he prepares for their court appearance this week in Gore Bay, Ontario, a northern community near Sudbury, Ontario.

"When a sick person dies under the control of white medicine, they don't charge them," said Lloyd Greenspoon, suggesting that an inquest would have been a preferable way to deal with the November death of Wikwemikong First Nation elder Jane Maingowi, 71.

Juan Uyunkar, 48, his son Edgar, 21, both from Ecuador, have been charged with criminal negligence causing death, administering, trafficking in, and importing into Canada a controlled substance.

Their translator, Maria Ventura, 32, of Manitowaning, Ontario, was also charged with criminal negligence causing death, administering, and trafficking in a controlled substance.

After the shaman's first successful trip to Wikwemikong, he was invited back to perform another healing in November, where 260 people turned out for treatment.

The substance the Uyunkars and Ventura are accused of administering during the late November ceremony is a mixture of South American plants, tobacco, and water, called ayahuasca.

When boiled together, the ingredients make a powerful brew that has side effects—including hallucinating and vomiting—similar to those of LSD or mescaline. Anthropologists say it has been used by South American Indians for more than 1,000 years for healing and worship.

Because of a publication ban on the evidence heard at the bail hearing, it is not known how many people ingested the substance, or if it was, in fact, present during the ceremony.

Excerpted from *People and Plants* Newsletter Number 4: *New Leaflet Produced: Conservation and the sustainable use of plants...*

*People and Plants* has just produced a 16-page leaflet explaining the background and current projects, as well as listing our publications. It also highlights the important Good Wood Campaign, and looks to the future after the main programme comes to an end in 2004, with the aim of creating a global network for community-centred plant conservation. Leaflets are available from WWF-UK, Panda House.

Global Plant Conservation Strategy

Alan Hamilton and plant conservationists from many organisations were successful in Montreal in lobbying for the adoption by SBSTTA of the Global Plant Conservation Strategy, which will be considered for adoption at COP 6 in April 2002. In particular, WWF lobbied for the recognition of community-based plant conservation and the need for capacity building in *in situ* plant conservation and practical management that aims to balance conservation and use.

"Noting the vital roles of communities in plant conservation, WWF emphasizes the need for increased capacity for community-centred plant conservation." "WWF believes that work under the Global Strategy should be especially focused on *in situ* conservation, with the development of practical management systems balancing conservation and use."

With the hoped-for adoption of the Strategy by COP 6, WWF would have a key role in the implementation of Target 14 concerned with capacity and network building in plant conservation.

So congratulations to Alan Hamilton, WWF-UK and Paul Sanchez-Navarro from WWF International for lobbying successfully with other plant conservation colleagues.



## Jobs

The Department of Archaeology, Faculty of Arts and the School for Resource and Environmental Management, Faculty of Applied Sciences at Simon Fraser University invite applications for a Tier II Canada Research Chair in First Nations Cultural and Environmental Resource Management commencing either May 1, 2003 or September 1, 2003.

The appointment will be held jointly between the two departments. Appointment will be as Assistant or Associate Professor, commensurate with experience. A Ph.D. is required.

We are interested in candidates who have expertise in First Nations cultural and environmental policy as it relates to resource management and land-use planning. The successful candidate will have an active research program in one or more of the following areas: Cultural Resource Management, resource planning and policy, and traditional cultural values, systems of land use, and ecological knowledge. The successful candidate will be expected to bridge academic and research interests between Archaeology and Resource and Environmental Management and to contribute effectively to both programs. Individuals must show strong potential for publication, research, teaching, and graduate supervision.

All qualified candidates are encouraged to apply. Applications will be accepted until April 19, 2002 or until the position is filled. Interested individuals can obtain more information about Canada Research Chairs at <http://www.chairs.gc.ca>. This appointment will be contingent on the candidate

being approved for a Tier II CRC award by the CRC Secretariat.

Simon Fraser University is committed to the principle of equity in employment and offers equal employment opportunities to qualified applicants. Candidates should send a detailed curriculum vita as well as a letter of interest outlining specialization areas and experience in research and teaching. Candidates also must arrange to have forwarded six (6) letters of reference. Applications, letters of reference or inquiries on the position should be sent to:

Dr. David V. Burley  
Chair Department of Archaeology  
Simon Fraser University  
Burnaby, B.C., V5A 1S6  
CANADA  
email: <burley@sfu.ca>

Konohiki Program in culturally based resource management.

Five, nine-month, tenure-track positions as assistant or associate professors are available as part of the Hui Konohiki Program. The program brings a Hawai'ian centered worldview to resource management. It recognizes that ancient wisdom has been captured in Hawai'ian language and practices and blends this with modern understandings from biological sciences. The purpose of this program is to train a new generation of leaders, who, like the konohiki of old, hold an integrated view of entire watersheds from mountains to reefs, and now can blend scientific and cultural practices into the decision making process. This is a team program in both

research and teaching with participants expected to develop combined and individual academically rigorous programs that include obtaining extramural support. Researchers may focus on any problem in their area of expertise, with at least half of their effort aimed at the combined research needs of the Hui Konohiki Program. Significant opportunities exist for those interested in rare species.

The positions allocated to this program include: Applied Ethnobiology, Natural Resource Biology, Marine Resource Biology, and Hawai'ian Resources Management. In addition, an Information and Communication Science position will support the integration effort and promote distance learning. Although the heart of the program resides within an understanding of Hawai'ian worldviews, previous experience with Hawai'ian culture and language is not a prerequisite for serious consideration. Interested scholars should visit <http://www.konohiki.hawaii.edu>. Information may be requested via email <konohiki@hawaii.edu> or fax (808) 973-0988.

The University of Hawai'i is an Affirmative Action/Equal Opportunity Employer. Women and members of minority groups are strongly encouraged to apply. 1. The closing date for acceptance will be April 10th. 2. There are no individuals who have been pre-selected. This is a genuine opening for ANYONE who is qualified and desires to be a part of a fresh program. Please pass this message along. 3. Applicants do not need to speak Hawai'ian to apply, but must be willing to learn as soon as possible.



## Membership

Did you know that 20 percent of our members are students? No wonder we are always expanding our ideas. We always want to expand our members to have a mix of ages so we can all share the depths of experiences. You can visit the SEB web site (<http://www.econbot.org>) and offer membership to colleagues. Is your professor or colleague a member? Ask them today.

# In the Classroom

## The Three Ps of Scientific Talks: Preparation, Practice, and Presentation —Part 3 (Presentation)

by Brad Bennett, Chair of the Education Committee (Continued from Vol. 15, fall 2001, page 10)

**Appearance:** Scientific meetings range from the very informal to coat and tie affairs. In southern Florida, where matching socks are considered formal wear, we can always pick out job candidates by their coats or dresses. They know, however, that it is always better to overdress than to underdress. Three well-known tropical biologists commonly show up at meetings dressed like the local grounds crew. You can probably think of others who need not worry about making any best-dressed list. Call me old fashioned, but I believe it is appropriate to dress respectfully when making a presentation. You may not necessarily need a coat or dress, but neither should you look like you just returned from 4 months of field research in Borneo.

**Style:** There is no one style that is appropriate. Good speakers gradually develop their own approaches that may differ greatly. One common attribute, however, is that all great speakers are excited about their subjects and they convey that excitement in an almost evangelical manner. Whatever your approach, make sure that you follow the story line that you have prepared (Intro, Main Body, Conclusion) and speak with confidence. Inexperienced presenters sometimes start with apologies for poor slides. If the slide is truly bad, throw it out. Some apologize for limited data. An astute audience will find the weaknesses in your research, you need not point them out. Often you can change phrasing to put a positive spin on your research and still be truthful. Instead of confessing,

**Question and Answer Session:** Always allow time for questions. Given a 15-minute block, speak for no more than 12 minutes, allowing three or more minutes for questions. With an hour-long seminar, speak for no more than 50 minutes. I have never heard a complaint about a seminar ending early, and shorter seminars leave more time for questions. If you have prepared adequately, no question should come as a total surprise. Good speakers actually set up the audience to ask the question they want asked, just as a cornerback sets up a quarterback for an interception. One goal of every talk should be to generate a lively question and answer session. If you motivate your audience to ask questions, you have succeeded.

Remember, it is the moderator's job to direct questioning. When you have finished, thank the audience, turn toward and thank the moderator, then wait for the moderator to direct questions. If the moderator does not know his job, you may have to take a more active role. In large rooms, repeat or rephrase the question then answer each question directly. You may want to encourage others by saying, "That's an excellent question" or "Thanks for the great question." Don't do what I did during my Master's defense. Dan Austin, my major advisor, pointed out that I responded to every question by saying, "That's an interesting question."

Always answer questions honestly. You may have to say, "I have no idea."

Pleading ignorance is a much wiser approach than trying to bluff your way out of an uncomfortable question. A colleague told me about a meeting he attended, in which the speaker was asked a very pointed question. The speaker answered defensively, "Everyone knows that Hammersmith proved the opposite in his 1988 publication." Unmoved, the questioner replied, "I am Hammersmith and I did no such thing!" This repartee brought the presentation to an abrupt and embarrassing close.

Some questions will be irrelevant, but be polite. After more than one public presentation, the first query from the audience has been, "Do you know Mark Plotkin?" Though I wanted to say, "What has that got to do with my talk, you moron?", I do not. Some questions are vaguely disguised editorials. One person said to me, "Of course you're familiar with my publications." I wasn't nor were most of the people in the room. A now departed Distinguished Economic Botanist did not question speakers, but instead lectured them, often in a reprimanding manner. In such cases, the proper thing to do is hold one's tongue and humbly endure the chastisement.

If the moderator, does not say it, offer to be available at the end of your talk to answer additional questions. Students attending their first meeting may be nervous about asking a question in front of a group. Make them comfortable by speaking to them one on one. At the end of the question and answer session, thank the audience and the moderator once more, then step away from the podium.

**Conclusion:** Few scientists have succeeded without strong oral communications skills. There are no secrets to becoming an effective speaker. It requires careful preparation, diligent practice, and the development of presentation skills. In addition to the hints listed here there are many books that offer advice for speakers. Perhaps your best source is speakers themselves. At your next seminar or meeting, note the strengths and weaknesses of the presentations. Pay careful attention to those speakers who capture the attention of their audiences. Why do they succeed? What stylistic approach do they use? Why are their visual aids effective? Note their successful methods then employ them in your next talk until you find your own style.

**Becoming an effective speaker requires careful preparation, diligent practice, and the development of presentation skills.**

"I only have one season's data . . .," say, "Data from my first season shows . . ."

Whatever the style, you should be aware of your tone, volume, posture, body language, and facial expressions. The body expresses as much as the words. Unless you have been awarded a Nobel Prize, slouching over a lectern will not endear you to your audience. Make frequent eye contact with individuals in the audience. Act like you are delighted to be there and respond to your audience. Vary your pace and allow for pauses as needed. After you have made a bold assertion, stop and let it sink in. You may even repeat the statement. Silence after an expression lets the listener know that you think it is important.

Humor can be useful in establishing rapport with the audience; self-deprecating jokes are especially appropriate. But use humor cautiously since there is little escape for jokes that fall flat. I gave my first scientific talk at a conference on Wetland Restoration. My presentation was the last of the meeting and after opening with two jokes that elicited absolutely no response from the audience, I embarrassingly sidled into my message.

Most beginning speakers and even some veterans experience bouts of apprehension. As long as you keep it under control, nervousness can be used to your advantage. First, remember that you are the world authority on your research. If your scholarship is solid, no one will know more about your topic than you do. My department recently interviewed three job candidates: two young Ph.D.s on post-docs and an associate professor with 10 years of university experience. The former showed tinges of nervousness but, in doing so, portrayed a bit of humbleness. The more experienced candidate was confident, perhaps overly so. Some may interpret his confidence as cockiness and, though we have not yet voted, I suspect he will rank third.

# Botanizing the Web

New U.S. Non Timber Forest Product Database:  
<http://ifcae.org/ntfp/>

This database currently lists 857 commercial and non-commercial non-timber forest product species and is intended to help in the identification, development, and conservation of NTFP species in your region. You can search by scientific name, common names, product use, parts used, state range and distribution, and whether or not it is known to be commercially harvested.

In addition to the Product Database, the U.S. NTFP Website has a searchable bibliographic database and Internet links database.

The U.S. NTFP Website is a free service hosted by the Institute for Culture and Ecology.

Eric T Jones, Partner  
 Institute for Culture and Ecology (501c3)  
 Post Office Box 6688  
 Portland, Oregon 97228-6688 USA  
 Phone: 503-331-6681  
 Website: <http://www.ifcae.org>

For all you nonvascular types here is a beautiful site:  
<http://www.lichen.com/>

AIDS ReSearch Alliance of America Announces Landmark Agreement to Share Drug Revenues with Samoan Village Healers

<http://ntbg.org/prostratinrelease.htm>

(West Hollywood, CA, December 13, 2001)  
 AIDS ReSearch Alliance of America (ARA) today announced a landmark agreement to return 20 percent of any commercial revenues from an experimental but promising anti-HIV compound called prostratin to the people of Samoa who helped American researchers discover the potential plant-derived therapy. The arrangement provides a share in the potential proceeds from the first compound ever licensed by the National Cancer Institute for development by a non-profit research institution.

"We are thrilled with the agreement," said Hans J. Keil, Samoa's Minister of Trade and Tourism. "This is a breakthrough—a plus for indigenous cultures around the world. If prostratin is successful, the return to Samoa is great, and we will put the sum to good use."

The agreement signed by ARA and the Samoan Prime Minister culminates years of research by the National Cancer Institute (NCI) of the National Institutes of Health (NIH) in Bethesda, Maryland, and ARA based on a plant collected by Paul Alan Cox, Ph.D., Director of the National Tropical Botanical Garden, a congressionally chartered research institution in Hawai'i and Florida dedi-

cated to tropical plant conservation and ethnobotany, the study of how indigenous peoples use plants.

Dr. Cox found that Samoan healers used the bark of the plant *Homalanthus nutans* to treat hepatitis and sent their mixtures to the NCI, which isolated prostratin.

Before beginning his research, Dr. Cox and the Samoan village chiefs agreed that a portion of any future financial benefit would be returned to the village. In licensing the compound for development, NCI requested that there be a negotiation with the Samoan government for a benefit for the Samoan people.

ARA, a non-profit research institution that shared this philosophy, licensed prostratin from NCI to explore the compound's ability to protect cells from HIV and to activate the virus that lays dormant in the body and beyond the reach of currently available HIV drugs.

"Ethnobotanical research in Samoa helped us to learn about this important natural resource and its potential for treating HIV," said Irl Barefield, Executive Director of ARA. "It is only right that the

address that issue that the Samoan chiefs and I agreed—before I began my research—that the village should share in any success."

The profit-sharing agreement with Samoa also demonstrates how the NIH encourages such pharmaceutical discovery relationships with other countries.

"The NIH collaborates with many foreign nations, and is concerned with returning benefits both in the short- and long-term," said Gordon Cragg, Ph.D., Chief of the Natural Products Branch of the National Cancer Institute. "This agreement is an excellent example of how both countries can benefit from the discovery process. This is also the first drug licensed by the NCI to a non-profit research institution for development."

Most recently, a study in the November 15 issue of the journal *Blood* confirmed the earlier work of researchers at several institutions—including NCI, ARA, and UCLA—who learned that prostratin exhibited dual action, inhibiting HIV replication while activating dormant, or "latent" HIV. This is significant because cells latently infected with HIV continue to replicate and reside in the body for up

to 60 years, hidden from the immune system despite treatment. Prostratin can stimulate latently infected cells so that the virus potentially can be recognized by the immune system

or eradicated by currently available drugs.

In the study, researchers at the NCI and Jefferson Medical College in Philadelphia showed that in laboratory experiments, prostratin can activate dormant HIV in cells taken from HIV-positive patients. The study authors suggest that future studies should examine combination therapy involving prostratin and other anti-HIV drugs to activate pockets of dormant HIV in the hopes of eradicating the virus.

See <http://www.aidsresearch.org> for more information about AIDS ReSearch Alliance of America.

*People and Plants* website has a huge list of links. Check it out you may never have to go to any other site <http://www.rbgekew.org.uk/scihort/eblinks/>

**Promising rain forest-derived anti-AIDS compound is first ever licensed by National Cancer Institute to a non-profit research institution.**

people of Samoa share in any potential reward, and we hope that this agreement will set a standard on ethical dealings with medicines derived from indigenous cultures."

Under the terms of the agreement, money from commercialization of prostratin, perhaps millions of dollars annually, would go to the Samoan government, the village where the compound was found, and each of the families of the healers who helped discover it. ARA will use any revenues it derives from prostratin for additional HIV/AIDS research.

Barefield said he hopes that clinical trials of prostratin in humans can begin within a year.

"Too often in the past, the role of a country's indigenous people has not been recognized in the drug discovery process," noted Dr. Cox. "It was to

## Summer Classes

Plants and Civilization, an introduction to the science of ethnobotany and the role of plants in human affairs and the rise of civilizations, will be taught by Kathleen Harrison, M.A. Kathleen has worked in the field of ethnobotany for over 25 years, and is a co-founder of Botanical Dimensions, a non-profit research organization dedicated to the preservation, propagation, and study of ethnomedically significant plants and their lore. Botanical Dimensions maintains a private medicinal plant preserve located on the Big Island of Hawai'i. Her course, Plants and Civilization, has been offered previously at Sonoma State University and has received excellent reviews.

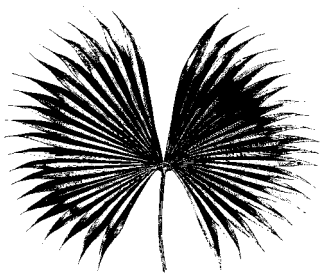
People, Plants, and Drugs: An Introduction to Ethnopharmacology is the second course in the series and will be taught by Dennis McKenna, Ph.D. Dr. McKenna has worked in the interdisciplinary field of ethnopharmacology for over 30 years, and is best known for his interdisciplinary investigations of the Amazonian psychoactive drink, *ayahuasca*. His course, People, Plants, and Drugs: An Introduction to Ethnopharmacology, has been a regular course offering of the Center for Spirituality and Healing at the University of Minnesota since spring 2001.

We're asking for your assistance in getting word of this program out to colleagues, students, and others who may have an interest in these topics. Lectures and class sessions will be supplemented with frequent field trips, and guest presentations by distinguished authorities on Hawai'ian and Polynesian ethnobotany will take maximum advantage of the unique learning opportunities offered by the beautiful Big Island of Hawai'i. It should be a very exciting three weeks! Please come join us.

Note: Enrollment is limited to 20 students.

You do not have to be a student at the U. of Minnesota to register. Students at other schools can receive UMN credit that can be transferred to their home institution. Non-degree students are also eligible, and can register through continuing education.

Contact Nancy Feintheil (612/624-5166); email: eintheil@umn.edu



## Cross-Pollination

Once again print media has been trumped by the web, and now many student abstracts are available within the student network pages of the SEB website. So rather than reprint something here that you can access on the web, the focus of this column is going to change a little. Instead of spotlighting student research by printing an abstract, I will be focusing on the activities of the student ad-hoc committee created at the last conference in Hawai'i. To see some excellent abstracts regarding current student research, we now direct your attention to the website.

There already exists a fairly strong network of students in Economic Botany-related fields; currently, there are over 400 members on the student ListServ. The students' committee is planning to build up that network and use it to create more access to resources for students in our fields. By utilizing this network, the committee can act as a voice for students within the Society and within the various fields of Economic Botany (EB). Students are the future of the Society and EB research, and as such have many ideas and visions about the directions the Society could take. Students wishing to take part should join the student ListServ and plan to attend the annual conference in June. There we'll be working on many of these goals on a face-to-face

basis. In addition to lunch meetings, there will be a student party—on Tuesday June 25th—to mix informally and compare notes.

We have a few projects in our sights. The student committee is planning to take a more active role in increasing student enrollment and participation in the Society. We hope to increase the number of events and topics of direct interest to students, including skills training workshops, scholarships, and awards. We are also planning to update the list of schools with programs in ethnobotany and related fields, integrating information from students about their programs. This way, we can compile a more interesting list—one with comments and evaluations by and for students. To students searching for a program, information about funding opportunities, courses, resources, and advisors is crucial. Students often have the real story—one that brochures and informational packages produced by the schools cannot supply. We will begin compiling this information at the conference in June... so I hope to see you there!

For more information on the student ad-hoc committee, write Michael Casaus [mbc11@cornell.edu](mailto:mbc11@cornell.edu) or contact me: Kurt A. Reynertson [kreynert@lehman.cuny.edu](mailto:kreynert@lehman.cuny.edu)

**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](mailto:Newsletter@econbotn.org),**

## EB Views... Continued from page 4

The future challenges and work include demonstrating to and convincing the necessary stakeholders in the market chain from exporters onwards to consumers, of the benefits, and getting them to commit to the producers and their product. This would transfer the lessons and opportunities from the SHDC Project to a wider number of Namibia producers and traders—at lower transaction costs. “Privatizing” or “commercializing” these types of operations makes it so they run independently of our project support, and the revenue from sales covers costs (including certification). Channeling cultivation/propagation support to a wide number of producers enables significant enrichment of the overall resource base, and allows longer-term involvement of traditional harvesters in the industry and more value adding, which is an entire market chain issue, and includes improvement in the following areas: quality (mycotoxins, bacteria, moisture levels, cleanliness, and packaging), levels of active ingredients (linked to supply of correct species), certification (organic/environmentally friendly, fair trade), added processing steps (milling, grinding, and crushing prior to extraction), and link to branded products (marketing positive socioeconomic and geographical origin images).

Presented at 1st Regional Devil's Claw Conference, 26-28 February 2002, Windhoek, Namibia  
Contact: CRIAA SA-DC, [criaawhk@iafrica.co.na](mailto:criaawhk@iafrica.co.na)  
PO Box 23778, 22 Johann Albrecht Street, Windhoek, Namibia  
Ph +264 61 220117/225009, Fax: +264 61 232293  
—Submitted by Cyril Lombard, CRIAA SA-DC.

**Common Statement by the Participants of the First Regional Devil's Claw Conference, 28th February 2002, Windhoek, Namibia,**

We the participants in the conference, being representatives of the various stakeholders in our communities and countries, recognize the importance of the contribution of Devil's Claw to the health sector and to sustainable development, specifically the contribution to the livelihoods of the most marginalized communities in Botswana, Namibia, and South Africa (the range states).

The sustainable development of the Devil's Claw rests on the following key concepts: management and sustainable utilization of the resource; regional collaboration, knowledge generation and information sharing; commercial and economic viability and, social justice.

We agree to the following principles:

1. In the area of regional collaboration participants agreed to set up national stakeholder working groups, with a view to forming a regional working

group within the next year; that there should be no export of genetic material without prior informed consent, pending the development of national access legislation; to harmonize regional accreditation, certification, standards and quality control; to identify and strengthen existing networks and institutions that support the sustainable development of Devil's Claw; and to encourage the formation of trade associations with the aim of bringing economic benefits to our countries.

2. On aspects of research participants agreed that there is a need to repatriate publicly generated knowledge; build research capacity in the range states, and encourage public private partnerships.

3. With respect to the cultivation of Devil's Claw, participants agreed that cultivation has the potential to both conserve and overwhelm the wild gathered resource. Notwithstanding the above, participants also agreed that space and opportunities should be provided for all types of production; that there is a role for government in setting policy and supporting research particularly with regards to small holders, and that the market for Devil's Claw should be managed to mitigate extreme market conditions.

4. With regard to CITES, participants agreed that communication between regional and national representatives is essential; listing and trade controls are only acceptable where they contribute to sustainable development; CITES should promote awareness that listing does not mean that trade is unsustainable; and listing Devil's Claw should be delayed pending the outcome of ongoing research initiatives.

In seeking to promote the achievement of the above, we have agreed to the following: form representative multi-stakeholder national working groups; establish a multi-stakeholder regional working group; promote a resource center concept to service the information and networking needs of stakeholders; and seek out funding to support the above objectives.

In conclusion, collaboration between all stakeholders is necessary for the sustainable development of Devil's Claw and that the issues pertaining to Devil's Claw are not exclusive and may be applicable to a broad range of natural resources.

### PC SPES: A Tempest in a Teapot

Prostate cancer patients in the United States have been using PC SPES, an herbal formula, as an alternative to or alongside conventional medical treatment for the last several years. PC SPES contains reishi (*Ganoderma lucidum* Karst), Baikal skullcap (*Scutellaria baicalensis* Georgi), rabdosia (*Rabdosia rubescens* Hara), dyer's woad (*Isatis indigofera* Fort.), chrysanthemum (*Dendranthema morifolium* Tzvel.), saw palmetto (*Serenoa repens* Small), San-qi ginseng (*Panax notoginseng* Burk.) and licorice (*Glycyrrhiza uralensis* Fisch.). Seven of these are herbs used in traditional Chinese medicine, while the eighth, saw palmetto, is native to the United States and has been shown to be clinically useful in benign prostatic disease.

PC SPES has been shown to have estrogenic activity *in vitro*, and several of the plant species are known to contain phytoestrogens. This is of special interest to prostate cancer patients, as administration of estrogens is one of the standard conventional treatments of prostate cancer. PC SPES has long been observed to cause side effects in men who take it that are similar to those observed in men taking estrogens, such as nipple tenderness. Many men taking the formula have also found that their disease appeared to be controlled. Most frequently, men have observed that their blood levels of a tumor marker (prostate specific antigen or PSA) used to monitor the progress of the disease, have fallen or stabilized while they were taking PC SPES. The many compelling case reports and preliminary findings of estrogenic activity led to preliminary clinical studies that demonstrated disease stabilization, and, finally, to a randomized controlled trial under the supervision of Dr. Eric Small of the University of California at San Francisco and Dr. William Oh at the Dana Farber Cancer Institute. In this trial, PC SPES is to be compared to the synthetic estrogen, diethylstilbestrol (DES), a common estrogen used in the past for the treatment of prostate cancer.

PC SPES is a product of BotanicLab, Inc. of Brea, California, whose founder, Dr. Sophie Chen, is

Continued on page 13



## AIBS Continued from page 5

**Forest Service Research:** The Forest and Rangeland Research program would increase by \$1 million, to \$254 million. The language in the USDA budget overview suggests that there will be a shift in emphasis in Forest and Rangeland Research: "The FS maintains one of the world's largest forest research organizations. While it has a very broad mission to develop the knowledge and technology needed to enhance the economic and environmental values of all the Nation's Forests and related industries, it also must support the specific research needs that arise from the FS's prime responsibility of managing the National Forest System (NFS). The budget eliminates low-priority research and Congressional earmarks consistent with other Departmental research agencies and redirects these funds for priority research projects, including an additional \$5 million for biobased products and bioenergy research and an additional \$5 million for a quantitative and analytic data project, and fully implements the Forest Inventory and Analysis Program." Details will be provided in a later report.

**BIO Directorate funding.** Within the Research and Related Activities funding, the Biology directorate (BIO) will receive a \$17.2 million (3.4 percent) increase over FY2002. (For reference the BIO directorate received a 4.9-percent increase in last year's appropriations.) Within the Bio directorate, NSF is placing a new emphasis on "emerging frontiers." NSF officials tell AIBS that this is not a new division within BIO, but a "virtual" division that will emphasize multidisciplinary research, including projects that may not have been fundable in other directorates.

### NEWS FROM THE AIBS PUBLIC POLICY OFFICE, 15 February 2002. Volume 3, No. 3

#### CANADIAN RESEARCH FUNDING IMBALANCE? WHILE SCIENCE SEATS TURNOVER AND GOVERNMENT RELEASES LONG-AWAITED WHITE PAPER ON INNOVATION, PROMISING TO DOUBLE FEDERAL R&D SPENDING

According to a February 1 report in *Science*, a handful of Canadian research universities are getting the lion's share of the government research funding, and this situation is not sitting well with faculty members. The imbalance arose from the effort of the Canadian government to create one or more superior research institutions. Three programs—the \$600 million Canada Research Chairs program, the Canada Foundation for Innovation

(CFI), with an initial endowment of \$520 million, and the newly restructured Canadian Institutes of Health Research (CIHR), the budget of which has doubled in 3 years to \$353 million—have led to the funding shifts, because the funds are awarded on a competitive basis using a formula that favors large institutions with a successful track record in attracting grants, whereas those with medical schools have a decided advantage in competing for CFI and CIHR awards. As a result, 10 Canadian institutions are reportedly receiving 2/3 of the government research funding. The issue was to have been examined during national consultations on Ottawa's long-overdue white paper on innovation. The consultations were delayed because Industry Minister Brian Tobin unexpectedly resigned in December. Tobin's successor, Allan Rock, released the report on February 12. Billed as a blueprint to boost industrial productivity, scientific research, job skills, and Canada's overall standard of living, the two strategy papers sponsored by Industry Minister Allan Rock and Human Resources Minister Jane Stewart omitted any estimate of how much it will cost. Specifics of the plan include:

—A reiteration of past pledges to double federal spending on research and development and lift Canada into the top five countries in the world on that score by 2010.

—A "world-class" scholarship program to attract high-powered students from abroad and keep Canadians at home.

—Financial incentives to Canadian graduate students, including an eventual doubling of federally funded scholarships and fellowships for master's and doctoral studies.

—Improved loans and subsidies for part-time students to help adults with continuing education and job retraining. But the government is backing away from previously promised tax-free savings accounts as a way to accomplish that goal.

However, Jim Turk of the Canadian Association of University Teachers told the *Toronto Star* that the plan wrongly places an emphasis on narrowly commercial research to the detriment of basic scientific study.

In another change in Canadian leadership, Maurizio Bevilacqua was named Secretary of State for Science, Research, and Development. First elected as a Member of Parliament in the 1988 election, Bevilacqua, who holds a B.A. from York University in Toronto, served as Parliamentary Secretary to the Minister of Human Resources Development and to the Minister of Labour. He has also been Chair of the Standing Committee on Finance and the Standing Committee on Human Resources Development.

## EB Views...

Continued from page 12

familiar with traditional Chinese medicine and was responsible for the formulation of Chinese and American herbs. BotanicLab also has another product popular with cancer patients, SPES, which many patients use for cancer pain. SPES is also a formulation of Chinese herbs. Both are manufactured in China, using proprietary extraction techniques, to which BotanicLab attributes their effectiveness.

Many prostate cancer patients in the United States are very active in sharing information on a host of Internet websites and chat rooms; PC SPES has been a common topic of discussion in these sites and many patients have shared their positive experiences with the herbal formulae there. Unfortunately, one of the things many patients must share is that PC SPES—and conventional therapies including DES—sometimes stops working. Prostate cancer cells can evolve resistance to the effects of estrogens, natural or synthetic. Thus, last summer, Susan Domizi, wife of prostate cancer patient David Domizi and head of a company that manufactures seaweed-based supplements for human and veterinary use, turned to the Internet when PC SPES stopped working for her husband. She was concerned that her husband had finally developed estrogen-resistant cancer, but was startled to find that many other patients taking PC SPES had also found that it had stopped working, and, significantly, that they were no longer experiencing the estrogenic side effects of the herbal formula. She began wondering if there had been an undisclosed change in the formula of PC SPES that had caused it to cease being effective for so many men at one time. She then collected samples of older PC SPES that had worked for patients, and the newer, possibly ineffective, PC SPES, and submitted them to an independent laboratory for testing.

The laboratory reported to her in early July 2001, that the older, effective samples contained DES, the synthetic estrogen. Domizi reported this finding in the Internet sites where she and her husband were in contact with patients. The finding was then picked up by a prostate cancer support organization, PSA Rising, whose website (<http://www.psarisng.org>) has been chronicling the story of PC SPES ever since. BotanicLab has been responding to the news items of PSA Rising and other organizations on its own website (<http://www.BotanicLab.com>). In August another lab, Rocky Mountain Instrumental Laboratories, confirmed the finding of the first lab. These labs used analytical techniques that were supposedly more sensitive than those used by the U.S. Food and Drug Administration and the California Department of Health, both of which had previously assayed PC SPES for the presence of DES due to estrogenic side effects, and found none. Because of the August findings, BotanicLab issued

## EB Views... Continued from page 13

a recall of the DES-tainted batches as a precaution in early September, and began an investigation to find the source of this apparent adulteration. Much discussion ensued in prostate cancer websites, but little resolution was available at the time due to the conflicting results of different laboratories.

Meanwhile, others interested in PC SPES conducted their own investigations. Dr. Eric Small supervised testing of the four lots of PC SPES that were designated for the clinical trial. In January, he reported finding small amounts of DES in some of the trial lots. Patients taking PC SPES would actually get more than a minimal amount, as most patients take 6 to 12 tablets a day. In communication with us, Small has mentioned that he will discuss his findings in detail at the American Society of Clinical Oncology meetings in May 2002. Small and Oh stopped the clinical trial due to the presence of this undeclared prescription drug, and reported their findings to the FDA and the National Cancer Institute. The premature stopping of the trial was unfortunate and upsetting to many patients, since the PC SPES group had been doing much better than the control group. As reported by the PSA Rising website, in the herbal group, 45 percent had experienced a drop in tumor markers of 50 percent or more, while in the control group, only 21 percent of the patients had had a drop in tumor markers of 50 percent or more.

Also in January, the California Department of Health Services reported finding not DES, but the prescription anticoagulant warfarin in recent samples of PC SPES (<http://www.dhs.ca.gov>). In addition, they found alprazolam, a prescription tranquilizer (Xanax) in SPES, the other of BotanicLab's Chinese herbal formulas. Alprazolam is used to treat anxiety and panic disorders, but can be addictive and cause withdrawal symptoms if stopped suddenly. Warfarin could cause excessive bleeding, but would also be helpful in counteracting a common side effect of both DES and PC SPES—blood clots. It seems unlikely that the addition of both DES and warfarin would be completely random.

Both drugs could interact with other medications that patients might be taking. The California laboratory advised BotanicLab to issue a withdrawal notice for both drugs, which BotanicLab instituted with notices on its website. The FDA posted a notice on PC SPES on its Medwatch website as well (<http://www.fda.gov/medwatch/SAFETY/2002/safety02.htm#spes>).

BotanicLab also announced a six-month program to improve the quality control of its herbal supplements, but stated that they would investigate whether the warfarin could actually be a naturally occurring "phyto-coumarin," or whether the DES could have naturally "evolved" during storage of the older samples from the combination of herbal phytoestrogens in the formula (neither of these is a

likely scenario from a chemical viewpoint). No resolution has been provided yet on these issues.

The findings of undeclared prescription drugs in these herbal formulas is distressing to all in the herbal industry, none more so than BotanicLab, which has publicly stated that such prescription drugs had never been part of the formulation of these products. Prostate cancer patients are confused and upset. PC SPES has worked for many who want to keep taking despite the prescription drug contents. Others, on the other hand, are quite upset that a supposedly natural remedy has been adulterated with prescription drugs. It is likely that any such drugs are entering the products at the Chinese manufacturing facilities. In China, many herbal formulas legally contain prescription drugs, as the blending of traditional and Western medicine that China has advocated extends even to the level of pharmaceuticals. But while such mixing is accepted in China, it is not legal in the United States, and most physicians have now advised their patients to stop the use of PC SPES.

The apparent lack of control that BotanicLab had over its Chinese manufacturing facilities, will raise the level of suspicion of Chinese herbal products—already high in some quarters due to previous findings of undeclared prescription drugs. The attribution of the effectiveness of PC SPES to its special extraction process is now under justifiable suspicion as well. None of this will help the reputability of the U.S. herb industry, which is still struggling, with the persistent question of doctors and patients alike of where good-quality supplements can be obtained. The reputation of the entire field of alternative and complementary medicine in fact, has been tarnished in this incident. Clinical trials of PC SPES had received substantial funding from the federal government, and it was certainly one of the "stars" of the alternative cancer treatment field. This incident is clearly an embarrassment to the National Center for Alternative and Complementary Medicine, the branch of the U.S. National Institutes of Health responsible for funding of such projects. It makes clear that the institution of standards for Good Manufacturing Processes in the U.S. herb industry—and its global supplier—is a necessity. The development of true expertise in phytochemistry and pharmacology must now take precedence over the pursuit of profits, which seems to have overtaken sectors of the herb industry, or there will be no more herb industry in this country—an outcome that would have a distinctly negative effect on health for many people.

Perhaps the most curious feature of this entire contentious issue is the possible effectiveness of the herbal constituents of the product. Small and Oh had recorded notably better results in their PC SPES group than the DES group until the trial was stopped in January, despite the relatively small doses

of DES given inadvertently to the herbal group. It is possible that the PC SPES herbs might actually have an additive or synergistic effect with DES, and could be used in conjunction with it to increase effectiveness while decreasing side effects that might be seen with the drug at its full dosage. Some patients whose cancers have become resistant to estrogen have also reported drops in PSA levels with the use of PC SPES, indicating that other mechanisms besides estrogenicity could be at work in the herbal formula. Both possibilities need much more investigation. Given the currently unsettled state of affairs, it is questionable whether either will ever receive the attention it deserves.

—Submitted by Keith I. Block M.D. and Charlotte Gyllenhaal, Ph.D.

Institute for Integrative Cancer Care  
1800 Sherman Ave., Suite 515  
Evanston IL 60201

### Literature

Anonymous. Product Recall Statement. Available at: <http://www.botaniclab.com/html/recallmore.html>

Anonymous. State health director warns consumers about prescription drugs in herbal products. News release No. 02-03, California Department of Health Services. February 7, 2002. Available at: <http://www.applications.dhs.ca.gov/pressreleases/store/pressreleases/02-03.html>

Strax J. No DES in prostate cancer herbal supplement, BotanicLab vouches. July 10, 2001. Available at <http://www.psarisngl.or/medicalpike/>

Strax J. BotanicLab recalls samples of herbal supplement after second lab finds diethylstilbestrol (DES). Sept. 7, 2001. Available at <http://www.psarisngl.or/medicalpike/>

Strax J. PS SPES trial halted, doctors say prostate cancer herbal product contains synthetic estrogen. Feb. 2, 2002. Available at: <http://www.psarisngl.or/medicalpike/>

Strax J. Xanax, warfarin and DES found in herbal supplements. Feb. 5, 2002. Available at <http://www.psarisngl.or/medicalpike/>

Strax J. BotanicLab denies synthetics in PC SPES, admits Xanax in SPES. Feb. 7, 2002. Available at <http://www.psarisngl.or/medicalpike/>



The 43<sup>rd</sup> Annual Meeting of the  
**SOCIETY FOR ECONOMIC BOTANY**

at

**The New York Botanical Garden**

**June 22 - 27, 2002**

Symposium (June 23):

**Origins, Evolution, and Conservation of Crop Plants:  
A Molecular Approach**



Especially for Students (June 25):

**Workshop: Ethnobotanist's Digital Toolkit**

Distinguished Economic Botanist (June 26):

**Professor Sir Ghilleen T. Prance**

For registration, abstract forms, field trips and other information,  
see <http://www.econbot.org> or [www.nybg.org/bsci](http://www.nybg.org/bsci) or contact

David Lentz, Meeting Coordinator

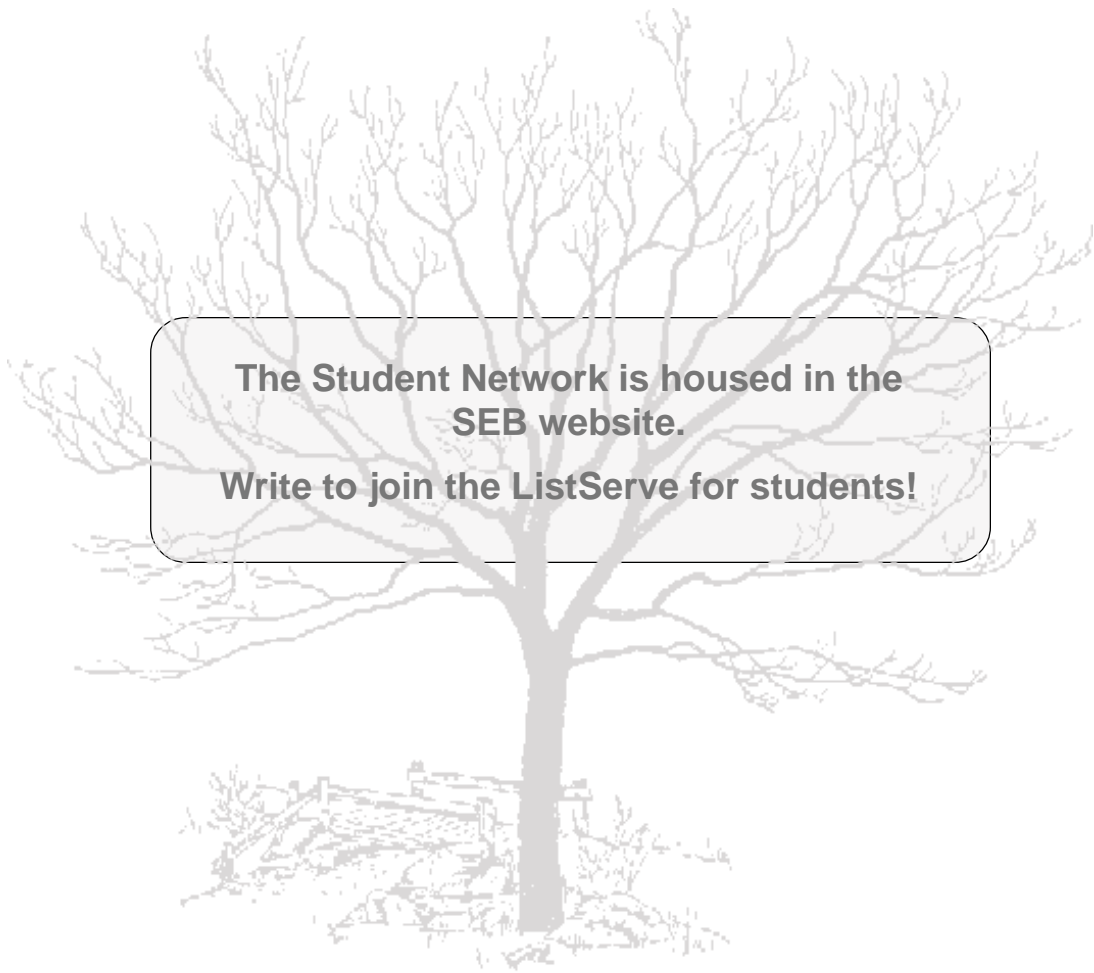
The New York Botanical Garden

Bronx, NY 10458-5126

Tel: 718-817-8171

Fax: 718-817-8101

email: [dlentz@nybg.org](mailto:dlentz@nybg.org)



**The Student Network is housed in the  
SEB website.  
Write to join the ListServe for students!**



**Economic Botany Newsletter**

P.O. Box 368  
Lawrence, KS 66044

*Forwarding and Return Postage Guaranteed*

Nonprofit Org.  
U.S. Postage  
**PAID**  
Permit No. 116  
Lawrence, Kansas  
66044