

SEB 1999 Annual Meeting: August 1–7 in St. Louis

by Gail Wagner, President

Economic Botany 1999 annual meeting will be held in conjunction with the International Botanical Congress (IBC), which meets only once every six years. Because of the special circumstances of meeting with 5,000 other botanists from around the world and dozens of other societies, our Society will not hold its regular sessions, nor will it be possible to present individual oral papers. However, individuals may submit posters, the Society is sponsoring or co-sponsoring three symposia, and we will hold our annual banquet at which we both honor and listen to a lively speech from our Distinguished Economic Botanist. The cost for the meetings is much higher than usual, but then the benefits of interacting with so many other societies and botanists is priceless.

All registration for attendance, events, field trips, and rooms are handled through Conferon, Inc. Registration rates are progressively more expensive after March 31, then after May 31, and then after July 16th, with on-site registration being the highest, so please register as soon as possible. You can register on line at www.ibc99.org or www.signupcenter.com/ibc99. Completed registration forms can be sent electronically, by fax, or by mail. Discounted airfares are available from TWA and Continental.

The location of the IBC is at America's Center, 701 Convention Plaza, in downtown St. Louis just west of LaCledé's Landing and north of the stadium and the Arch. We recommend that you consider reserving rooms at the Regal Riverfront Hotel, where our banquet will be held. The Regal Riverfront Hotel is located south of America's Center, directly west of the St. Louis Arch. The IBC has reserved large blocks of rooms in seven downtown hotels, and limited dorm space (located some distance away) is available.

Friday is our big day, beginning with the business meeting from 8:00–9:00 AM, and including one plenary lecture from Dr. Paul A. Cox (past-President) from 11:45–12:30, two sponsored general symposia from 1:00–3:30 and 4:00–6:30, and then the **SEB banquet** from 7:00–10:00 PM. The Society for Economic Botany banquet, featuring the **Distinguished Economic Botanist S.K. Jain** (Institute of Ethnobiology, National Botanical Research Institute, Lucknow, India), will be on **Friday night, August 6, from 7:00–10:00 PM** at the Regal Riverfront Hotel. The provisional title of his talk is "**Human Aspects of Plant Diversity**," which promises to be of interest to all of our members.

The Society for Economic Botany **Council meeting** will take place at

America's Center from 8:00 AM–1:30 PM on **Sunday, August 1** (if you are not on the Council, but would like to attend, please contact an officer for the exact location, which has not yet been settled). The **Business meeting** (please attend!) will be Friday morning from 8:00–9:00 AM at America's Center in the Washington A room.

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Notes from the Field

Dear Members,

So another season has arrived. This Newsletter is full of information and a brand new column. This new column complements the School Listings, which are updated and included in this issue. The School Listings will be on the website soon, so please review your listing and give us feedback. The new column is a listing of Summer Classes and Internships. I hope you can help with this as I cannot attend all of them and need to have feedback for members. The feedback I need is to know which are good or not and which are not in our listing, but should be. I also need a better title for this list; "Out of the Classroom." Any ideas?

There have been many articles on the Web about biopiracy and ownership of seed. These support David's articles and we include them as a forum for discussion and hope you will write to offer your experiences and opinions in this controversially important area.

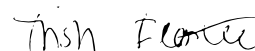
There are many inflammatory articles on the Web, but we have tried to reduce the scares and hoaxes to present some real threats and issues. Opinions of articles reprinted from the web and other sources do not necessarily reflect the position of SEB.

The mid-year meeting was very successful and has filled our palette with clear goals and directions for the next century. Read Gail's President's Letter to find out more.

What's next: The SEB annual meeting in St. Louis. We are meeting with an entirely different professional group than in past years. This is an opportunity to encourage new members and to participate with other professional societies. Gail has done an outstanding job with Beryl and Brian to sponsor relevant symposia coordinated by our members.

I am always interested in your feedback. Please write, sending in comments, relevant articles, meetings, and programs.

Trish



Announcements

The National Agroforestry Center has many teaching tools and publications. These are for public use and are available on a first-come, first-serve basis. Ask them about their Agroforestry Notes. Contact them at www.unl.edu/nac.

A new organization called **The Ethnobotanical Conservation Organization for South East Asia** has formed. Contact: P.O. Drawer 1710, Davis, CA 95617; Phone/Fax: 530-758-1716; Email: ethnobotcons@aol.com; or Website: www.ecosea.org.

"SEB Meeting 1996: Plants for Food and Medicine"

Those delegates at the 1996 London meeting who paid the full registration fee should have received a copy of the proceedings by now from Kew. If you have not, please contact John Harris, Information Services Department, Royal Botanic Gardens, Kew, Richmond, Surrey TW9 3AE, UK; Email: j.harris@rbgkew.org.uk.

SEB 1999 Annual Meeting in St. Louis

(continued from page 1)

We wish to invite interested people to join together for **topic lunches** at nearby restaurants from 11:45 AM–12:45 PM on Monday, Tuesday, Thursday, and Saturday. The topics will depend on members' interests, but we hope that by meeting for lunch, we can achieve some Societal cohesion and enjoy some Economic Botany interaction at these huge meetings. Barring other instructions on the SEB web site, if you are interested in lunching together, meet at the Building Bridges for Traditional Knowledge booth in the Exhibit Hall.

The IBC meetings are set up as follows: early each morning are individual Society business and other meetings; Keynote Symposia run from 9:00–11:30 AM; Plenary talks from 11:45–12:30 PM; General Symposia from 1:00–3:30 PM and 4:00–6:30 PM; and in the evening there are individual Society banquets and receptions. There are scientific field trips before and after the Congress, leaving as early as July 25 and ending as late as August 14, and extending geographically from California to Mexico and Kentucky to Oregon. There are local field trips before, during, and after the Congress. The Congress banquet is Wednesday evening from 7:00–10:00 PM. The Opening Ceremonies are Sunday, August 1, from 2:00–5:00 PM, and the Closing Ceremonies are Saturday, August 7, from 1:00–4:00 PM. There is an opening reception on Sunday, August 1, from 5:00–8:00 PM. The Millennium Symposium will be on Wednesday, August 4, from 10:45 AM–12:30 PM.

One of the themes for the IBC that is of particular interest to us is Discipline VI. Human Uses of Plants: Economic Botany and Biotechnology. Every day there are one or more General Symposia addressing this theme. The following sessions and talks may be of special interest to members of this Society (SEB-sponsored symposia are highlighted):

Feeding the World: Past, Present, Future (Keynote Symposium), Monday 9:00–11:30 AM.

Use of Genetical Maps for Crop Improvement (General Symposium), Monday 1:00–3:30 PM.

Plant Cell Biotechnology for the Production of Biochemical Products (General Symposium), Monday 4:00–6:30 PM.

Systematics, Evolution, and Ethnobotany of the Flora of Mount Kinabalu (Borneo): Biodiversity Research and Conservation in Action (General Symposium), Tuesday 1:00–3:30 PM.

South American Plants and Their Chemistry and Pharmacology Interactive with Human Activities (General Symposium co-sponsored by SEB), Tuesday 1:00–3:30 PM.

Indigenous Plant Tending and Domestication in the New World Outside the Major Centers (General Symposium), Tuesday 4:00–6:30 PM.

Engineering Crop Plants for Improved Quality (General Symposium), Wednesday 1:00–3:30 PM.

Ethics and Risks in Plant Biotechnology (General Symposium), Wednesday 4:00–6:30 PM.

Future Prospects for Biotechnological Use of Plants that Produce Alkaloids (Plenary Lecture) by Toni M. Kutchan, Thursday 11:45–12:30 PM.

The Origins and Development of Agriculture in the Tropics (General Symposium), Thursday 1:00–3:30 PM.

Economically Important Plants: Use and Conservation Issues (General Symposium), Thursday 4:00–6:30 PM.

Unfinished Journey: Carl Linnaeus, Travels in Lapland and the Creation of Ethnobotany (Plenary Lecture) by Paul A. Cox (former SEB President), Friday 11:45–12:30 PM.

Ecological Ethnobotany: Multi-Level Plant/People Interactions (General Symposium sponsored by the SEB), Friday 1:00–3:30 PM.

New Seeds: Innovations in Production, Biotechnology, and Performance (General Symposium), Friday 1:00–3:30 PM.

Anthropogenic Plant Migrations: Habitat Transformations by Overt and Inadvertent Introductions (General Symposium co-sponsored by the Economic Botany Section of the BSA and the SEB), Friday 4:00–6:30 PM.

Plant Genetic Resources and Intellectual Property Rights in the 21st Century (General Symposium), Friday 4:00–6:30 PM.

Managing Fungal Culture Collections for Biodiversity Prospecting (General Symposium), Saturday 9:00–11:30 AM.

Ethnobotany and Conservation of Biocultural Diversity (General Symposium), Saturday 9:00–11:30 AM.

President's Letter

The Society is Moving Forward and Planning for the Next Millenium

by Gail E. Wagner, President

The Society for Economic Botany has expanded its international participation in recent years by holding meetings outside of the United States and encouraging the formation of international chapters as modeled by the highly successful UK Chapter. This summer we will not be holding our regular meeting, but instead will be meeting in conjunction with the International Botanical Congress (IBC) at the America's Center in St. Louis, Missouri, during August 1-7. For more details about the meetings, please see pages 1 & 3. While on the one hand we look forward to interactions with many scientists from around the world at the Congress, we will miss our informal and personal meetings where everyone hears every paper and where we heartily support student presentations. We hope to retain some cohesiveness at the Congress by inviting anyone interested to join together in informal round table discussions during lunch on Monday, Tuesday, Thursday, and Saturday during the Congress. We encourage you to submit a poster since individual oral presentations cannot be given. Finally, we encourage you to attend the SEB-sponsored symposia, where you should encounter other members of the Society. To save money, we suggest you share a hotel room with another member of the Society!

Plans are already underway for our next regular meetings to be held at the University of South Carolina in Columbia, South Carolina, from June 21-23, 2000. There will be field trips on June 20 and 24-25. The theme of the invited symposium will be "Roots in the Past, Seeds of Tomorrow: Sowing the Future of Economic Botany." Our emphasis at these inexpensive meetings will be on students, and plans are being made to include some innovative components to the program, such as workshops and economic botany demonstrations.

The Society for Economic Botany has undergone many changes in the past decade: we initiated this twice-yearly Newsletter under the very able leadership of Trish Flaster (thank you for all your hard work, Trish!), we began a web page, we've made it easier for non-U.S.A. members to pay dues through a credit card, and we've expanded our mem-

**SEB 2000 Annual Meeting:
"Roots in the Past, Seeds of
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University of South Carolina in
Columbia, SC,
June 21-23, 2000.**

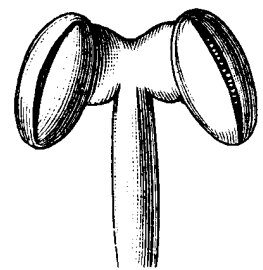
bership. We've had some growing pains in setting up and maintaining our web page, and we appreciate your patience! Certainly, a web page and other virtual communications can help maintain our international connections. We had hoped to pub-

lish an updated Membership List this year, but without subvention now feel the need to publish it next year when we will have income generated by the South Carolina meetings.

A recent mid-year Council meeting at the end of January, held at the Montgomery Botanical Center in Miami, FL, included discussions on what should be the priorities of the Society. We felt that the Society could be the prime society for a core of people, and should become the main second society for many others. We look to target students, members of other related societies, governmental employees, NGOs, and business folk to expand the current membership. Active involvement by the members (YOU) is vital to the health of the Society. The names and contact information for officers, council members, and committee members are up on the web page, and we encourage you to contact us with comments, suggestions, and offers of participation.

I hope to see you all at the IBC in St. Louis!

Gail E. Wagner, President
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In the Classroom

by Will McClatchey

Suggested Elements of Economic and Ethnobotany Courses and Programs of Study

A little over two years ago, Alexandra Paul, Trish Flaster, Valerie McClatchey, and I conducted a survey of colleges and universities in order to determine locations of courses in economic botany and ethnobotany. The survey was in part sponsored by the Society for Economic Botany. Many of the survey respondents included discussions of their programs, course information, etc. Below is a composite of the course work information modified by our own experiences as recommendations for (1) faculty seeking to develop courses in economic or ethnobotany, and (2) students seeking to develop their own course of study.

Course content recommendations are divided into five areas: core topics, other topics, laboratory and field experiences, texts, and prerequisites. Core topics include course elements that seem to be commonly taught in courses of the type described. Other topics include specific discussions encountered in courses that may be of interest to select groups of students or may represent individual faculty interests. Laboratory and field experiences vary quite widely between existing courses, but their importance was emphasized by almost all of our survey respondents. Texts are currently changing with more and more options appearing. The lists of texts below are not intended to be complete, but rather representative of currently used texts. In general, there are no prerequisites required for introductory courses, but some advanced courses may

have specific preparatory work required.

Two types of courses and programs could be differentiated from the survey responses: those focusing on applied economic, agricultural, western, or commercial aspects of human uses of plants [hereafter called economic botany (Tables 1 and 3)]; and those focusing on theoretical and applied non-western, non-commercial aspects of human uses of plants [hereafter called ethnobotany (Tables 2 and 4)]. All existing courses discuss elements of each, but there are clearly differences in emphasis and interest.

Actual programs of study are rare. (A listing of these programs is included in this issue and can also be obtained from the Editor of *Plants & People*.) Because of this situation, many students are choosing to develop their own multi-disciplinary programs of study in order to meet their own goals. I recommend that students seek out quality mentors rather than developing their own programs, but for some this is not a possibility. The loosely outlined programs below are extrapolations of our survey results and my professional recommendation as an educator. Under each program are listed four categories of course work and/or experiences: background courses, tool courses, core courses, and re-

search courses/experiences. *Background courses* are generally the elements that will enable a student to have a firm foundation in science before attempting to understand cultural or economic aspects of plants. *Tool courses* are important for development of more in-depth understandings of botanical and cultural processes. Background and tool courses are critical to the effectiveness of the programs described. For students developing their own programs, the core courses are unlikely to be offered. This is one area where the student will need to travel elsewhere to receive appropriate training. Each year an array of summer courses are offered around the United States and Latin America. Students developing their own programs should watch for listings of these courses in *Plants & People* or request a current list. Finally, no program of study is complete without practical, applied research experiences. As with the core courses, these may need to be obtained elsewhere. Students should consult with instructors of core courses or with institutions such

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as the Missouri Botanical Garden or the New York Botanical Garden, Institute for Economic Botany. Suggested programs in Economic Botany are listed below in Tables 5 and 7. Suggested programs in Ethnobotany are listed below in Tables 6 and 8.

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In the Classroom

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Table 1. Proposed Elements of a Lower Division Economic Botany Course.

Core topics: Origins of Agriculture; Survey of Important Crop Plants; Survey of Spices and Condiments; Survey of Herbal Medicines; Ethics; Important Plant Resources: Wood, Bark, Latex, Tannins, Dyes, Fibers, Resins, Oils, Waxes.

Other topics of possible inclusion: Ornamental; New Crops; Plant Poisons; Plants used in Specialty Areas: Construction, Clothing, Paper, Shipping, Food Processing, etc.

Laboratory and Field experiences: Laboratory work should include demonstrations and practical experiments about useful plants. Field Experiences should include trips to local industries, farms, and stores that feature economically important plants.

Current texts:

Heiser, C. B. Jr. 1985. *Of Plants and People*. University of Oklahoma Press, Norman, OK.

Levetin, E. & K. McMahon. 1996. *Plants and Society*. Times Mirror Higher Education, Dubuque, IA

Lewington, A. 1990. *Plants for People*. The Natural History Museum, London.

Simpson, B. B. & M. Conner-Ogorzaly. 1995. *Economic Botany: Plants in Our World*, 2nd Edition. McGraw-Hill, NY.

Prerequisite courses: None.

Table 2. Proposed Elements of a Lower Division Ethnobotany Course.

Core topics: Material Culture of Hunter & Gatherers, Agriculturalist, and Pastoralists; Ethics; Cultural Significance of Clothing, Shelter, and Transportation; Cordage; Traditional Medicine; Traditional Taxonomies; Ethnoecology; Cultural, Botanical, and Intellectual Conservation; Wild Plant Resources; Ethnobotany Field Methods.

Other topics of possible inclusion: Studies of Specific Local Cultures; Palaeoethnobotany; Phytochemistry; Intellectual Property Rights; Sustainable Agricultural Systems; Linguistic Ethnobotany; Plant Folklore.

Laboratory and Field experiences: Laboratory work should include demonstrations and participatory experiences that demonstrate elements of human interactions with plants. Field Experiences should include trips to local cultural groups, farms, and stores that feature ethnically important plants.

Current texts:

Balick, M. J. & P. A. Cox. 1996. *Plants, People, and Culture: The Science of Ethnobotany*, Scientific American, NY.

Martin, G. J. 1995. *Ethnobotany: A Methods Manual*, Chapman & Hall, London, UK.

Prerequisite courses: None.

Table 3. Proposed Elements of an Upper Division Economic Botany Course (Advanced Economic Botany).

Core topics: Regional and Crop Specific Origins of Agriculture; Phylogenetic and Anatomical Relationships of Important Crop Plants; History of the Spice Industry; The Chemical and Botanical Basis of Allopathic and Naturopathic Medicines; Ethics; The Physiological and Anatomical Basis for Plant Products Derived from: Wood, Bark, Latex, Tannins, Dyes, Fibers, Resins, Oils, Waxes.

Other topics of possible inclusion: New Crops; New Medicinal Plants; Local Industrial Plant Uses; Economic Forecasting of Plant Product Values; Agricultural Economics.

Laboratory and Field experiences: Laboratory work should include practical experiments involving useful plants. Field Experiences should include trips to local industries, farms, and stores that feature economically important plants.

Current texts:

None were suggested by this survey, but the following would serve as good supporting texts along with a selection of recent articles from *Economic Botany*:

Cook, F. E. M. 1995. *Economic Botany Data Collection Standard*, Edited by H. D. V. Prendergast. Royal Botanic Gardens, Kew, United Kingdom.

Lewis, W. H. and Elvin-Lewis, M. P. F. 1977. *Medical Botany: Plants Affecting Man's Health*. John Wiley & Sons, NY.

Prerequisite courses: General botany, systematics, plant anatomy or morphology.

In the Classroom

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Table 4. Proposed Elements of an Upper Division Ethnobotany Course (Advanced Ethnobotany).

Core topics: Mythology and Plant Origins; The Cultural and Botanical Environments of Herbal Medicine; Foods as Medicines; Wild Foods; Ethics; Intellectual Property Rights, Studies of Specific Local Cultures; Intellectual Property Rights; Linguistic Ethnobotany; Ethnic Taxonomies; Applied Ethnobotany; Conservation and Cultural Identity.

Other topics of possible inclusion: Palaeoethnobotany; Phytochemistry; Sustainable Agricultural Systems; Plants and Human Rights.

Laboratory and Field experiences: Practical experiences in ethnographic interviewing of cultural plant experts; Development of plant collection and identification skills in a cultural setting; Discussion of ethical issues and dilemmas faced by ethnobotanical field researchers.

Current texts:

Given, D. R. & W. Harris. 1994. *Techniques and Methods of Ethnobotany*, Lincoln University Printery, Lincoln, New Zealand.

Schultes, R.E. & S. von Reis, editors. 1995. *Ethnobotany: Evolution of a Discipline*, Dioscorides Press, Portland, OR.

Prerequisite courses: General botany, cultural anthropology, biogeography.

Table 5. Proposed Elements of an Undergraduate Economic Botany Program.

Background courses: Organic Chemistry; Economics; History of Agriculture; and General Forestry or Horticulture.

Tool courses: Plant Anatomy or Morphology; Systematic Botany; Biogeography; Agricultural Economics or Resource Economics.

Core courses: Economic Botany; Advanced Economic Botany.

Research: Applied research study(s) of (local?) economically important plants possibly including analyses of ways to implement, increase, or otherwise change patterns of plant usage.

Table 6. Proposed Elements of an Undergraduate Ethnobotany Program.

Background courses: Cultural Anthropology; Plant Anatomy or Morphology; Sociology; and Geography.

Tool courses: Systematic Botany; Ecology; Anthropological Field Methods; Language training; Biogeography.

Core courses: Ethnobotany; Advanced Ethnobotany; Ethnoecology.

Research: Applied or theoretical study(s) of (local?) cultural interactions with plants, including analysis of impacts of plant usage on cultural development patterns, trajectories, and possibilities.

Table 7. Proposed Elements of a Graduate Economic Botany Program.

Background courses: Organic Chemistry; Macro and Micro Economics; Agricultural Systems; History of Agriculture; General Forestry; Business Economics.

Tool courses: Plant Anatomy and Morphology; Systematic Botany; Biogeography; Agricultural Economics; Resource Economics.

Core courses: Economic Botany; Advanced Economic Botany.

Research: Applied research study(s) of economically important plants possibly including analyses of ways to implement, increase, or otherwise change patterns of plant usage.

Table 8. Proposed Elements of a Graduate Ethnobotany Program.

Background courses: Cultural Anthropology; Plant Anatomy and Morphology; Sociology; Human Physiology; Geography.

Tool courses: Systematic Botany; Ecology; Ethnography; Anthropological Field Methods; Linguistics; Biogeography.

Core courses: Ethnobotany Advanced Ethnobotany; Ethnoecology.

Research: Applied or theoretical study(s) of cultural interactions with plants, including analysis of impacts of plant usage on cultural development patterns, trajectories, and possibilities.

Upcoming Meetings

Symposium on Novel and Non-Conventional Plants

The Third International Symposium: Novel and Non-Conventional Plants: Prospects of Their Practical Use. The symposium will be held at Puschino, Moscow region, Russia, from June 21–25, 1999, and is sponsored by the Russian Academy of Agricultural Sciences, Russian Academy of Sciences, The Institute of Fundamental Problems of Biology, Russian Research Institute of Vegetable Breeding and Seed Production, The Ministry of Science and Technologies of Russia, and Phytocologia Company.

Contact: Dr V. K. Gins, Symposium Secretary, s. 265, A. N. Bakh Inst. of Biochem., Leninskii Prospect, 33, Moscow 117071, Russia. Phone: 095-954-31-26; Fax: 095-954-27-32; Email: INBIO@GLAS.APC.ORG.

AAIC Annual Meeting

The Association for the Advancement of Industrial Crops meets annually. The 1999 meeting will be in Eugene, Oregon, October 10–17, 1999, and will consider topics relevant to new crop agronomics, breeding, marketing, processing, and product development. AAIC has a web page at www.AAIC.org.

History and Folk Tradition of Medicinal Plants

First International Symposium on the History and Folk Tradition of Medicinal Plants, September 14–18, 1999, San Jose, Costa Rica. Organized by Geodata Center, Costa Rica, and Sciences et Lettres, Belgium, under the auspices of Universidad para La Paz, Costa Rica.

The main topics will be the history of medicinal plants from antiquity to present times; folk traditions (past and present); scientific knowledge; and integration of folk tradition into

medicine, ethnobotany, and pharmacology; with a special emphasis in temperate and neo-tropical floras. Comparative, transperiod, and interdisciplinary studies are welcome.

The scientific program will include plenary lectures, papers, posters, round tables, and free discussions. It is designed to be an international forum open to physicians, pharmacists, chemists, botanists, historians, philologists, ethnolinguists, ethnobotanists, anthropologists, and everybody wishing to participate in focussed discussions on the current state of research in medicinal plants. Many geographic areas will be covered, including North America, Europe, Mesoamerica, South America, Africa, China, Australia, and India.

Contact: Prof. Ronald Chaves/Prof. Alain Touwaide, SIMPOSIO, P.O. Box 6131, 1000 San Jose, Costa Rica; Fax: 506-283-02-63; Email: simposio@nexos.co.cr; Website: www.cieer.org/symposia/.

Herbal Medicine into the New Millennium

Some of the world's most eminent medicinal plant experts will speak at a major international forum on the global future of herbal medicine to be hosted by Southern Cross University at its Lismore campus, from June 16–18, 1999.

With invited speakers coming from Australia, Asia, Europe, USA, Africa, and the Pacific, this symposium will feature presentations by 27 key industry figures, including Dr. James Duke, Professor Varro Tyler, and Professor Hildebert Wagner. An invitation has also been extended to award-winning plant scientist, Her Royal Highness Princess Chulabhorn of Thailand.

Coinciding with Australia's inaugural National Herbal Medicine Week

(June 12–18), the event promises to be one of the largest gatherings of national and international herbal medicine professionals and specialists. It will include the industry's leading manufacturers, plant scientists, practitioners, primary producers, and regulators.

Appropriately, "Herbal Medicine into the New Millennium" will be hosted by Southern Cross University in an area famous for growing and manufacturing natural plant products such as Tea Tree and Echinacea—the Northern Rivers region of New South Wales.

Proudly sponsored by the New South Wales Department of State and Regional Development, Indena, and Pathway International, the conference will also celebrate the official launch of the Cellulose Valley Technology Park in Lismore, Australia's first quality-assured centre for research, manufacturing, and production of herbal medicines and related products. The Technology Park will focus on research and commercial development of natural products, particularly for therapeutic agents, and will support compatible business activities.

For further information about "Herbal Medicine into the New Millennium," please contact Karen Hanna, Southern Cross University; Phone: 02-6620-3932; Email: mlewis@scu.edu.au or cvconf@scu.edu.au; or visit the conference website at www.scu.edu.au/herbconf.

United Plants Savers

The United Plants Savers has several meetings during the summer months. Some are "Medicines from the Heart of the Earth," "Organic Cultivation," "Uses, Cultivation, and Conservation of Native Medicinal Plants". Contact them at P.O. Box 98, E Barre, VT 05649; or Email: info@plantsavers.org.

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1998 New Crops and New Uses Conference

by Susan Verhoeck

"Biodiversity and Agricultural Sustainability" was held in early November in Phoenix, Arizona. Under the major sponsorship of the Association for the Advancement of Industrial Crops, Purdue University Center for New Crops and Plant Products, the New Uses Council, and a number of other sponsors including The Society for Economic Botany, 230 attendees enjoyed four days of tours, presented papers, poster sessions, panel discussions, and a dinner on the patio at the Desert Botanical Garden. Some Society for Economic Botany members who were represented on the program were Steve MacLaughlin, who was one of the program committee members and moderator of the evening panel discussion, as well as Charles Heiser and Varro Tyler, who presented invited papers on solanums and herbal CNS remedies,

respectively; and Peter Bretting, along with Gary Nabhan, was among the evening panel members.

The meeting sessions for the first day focused on opportunities, processes, and strategies for commercializing new crops and new uses. One of the representative talks in this session was "New Uses from Existing Crops" by Paul Caswell from Archer Daniels Midland, and another was "Supplementary Cash Crops in a Tobacco Area" by Barclay Poling from the Specialty Crops Program in North Carolina. Concurrent sessions on Tuesday were about specific groups of crops: fruits and nuts, fiber, nutraceuticals, oilseeds, medicinals, florals. In the Fruit and Nut crop meeting, Yosef Mizrahi spoke on cactus fruit production in the Negev, Chad Finn covered new or forgotten temperate berry crops,

and Ross Ferguson from New Zealand explained the kiwi fruit industry and its new (better tasting) yellow-fleshed kiwi fruit. Frieda Caplan, the popularizer of kiwi fruit in the U.S., when asked to comment, reported that the yellow kiwi is selling well here. Symposium participants also discussed canola, kenaf, alliums, and echinacea.

The majority of the speakers were from the United States, but half of the posters were international, coming from Chile, Argentina, Brazil, United Kingdom, Germany, South Africa, Israel and points in between. Poster subjects under Industrial Crops were guayule, jojoba, meadowfoam, kenaf, oilseeds such as chia and lesquerella, and resins. Among the non-industrial crops in the food, herb, and medicinal divisions were legumes, amaranths, stevia, yacon and pawpaw, lippia, agave, and aloe. The ornamentals section contained posters on safflower, marigold, and a terrestrial orchid.

Upcoming Meetings

(continued from page 8)

Cucurbitaceae Conferences

Submitted by Deena Decker-Walters

Cucurbit researchers come together every other year for the Cucurbitaceae Conference. The 1998 conference was held in November in Pacific Grove, California, and featured talks and posters on cucurbit germplasm resources, pests, diseases, breeding, genetics, and molecular mapping. The proceedings are available in a 377-page paperback entitled "Cucurbitaceae '98: Evaluation and Enhancement of Cucurbit Germplasm." To obtain a copy (\$45 plus shipping) from the American Society for Horticultural Science Press, contact: ASHS Press, 600

Cameron Street, Alexandria, VA 22314-2562; Phone: 703-836-2418; Fax: 703-836-2024; Email: ashspres@ashs.org.

The next Cucurbitaceae conference will be held in Israel on March 19-23, 2000. To get on the meeting's mailing list, send your name and address to: Eucarpia Cucurbitaceae 2000, c/o International Travel & Congresses Ltd., P.O. Box 29313, Tel Aviv 61292, Israel; Phone: 972-3-7951444; Fax: 972-3-5107716; Email: 100264.2432@compuserve.com.

If you can't make the meetings, but would still like to interact with other cucurbitologists, check out the chat site: clubs.yahoo.com/clubs/cucurbits.

The liveliest general discussion at the meeting came during the after-dinner panel at DBG, and centered around the use of terminator genes in seeds and the associated intellectual property rights of corporations and the rights of farmers to save seed. To judge from the applause, murmurs, and comments, the assembled group felt strongly about both sides of the issue. The conference proceedings and additional information will be available from Jules Janick at Purdue University.

The next New Crops meeting, which is not an annual event, is in the planning stages. For future information on the book and the meeting, contact the Purdue University Center for New Crops and Plant Products website at www.hort.purdue.edu/newcrop/.

Jobs and Fellowships

A few of the fellowships below are dated, but I hope that they will still be informative for many of you to write now and for next year. -Trish, ED.

Small Grant Opportunities for Asian-based NGOs

Earth Island Institute, along with four other environmental organizations (IRN, RAN, PAN and FOE), will once again be helping a foundation identify small grassroots environmental organizations in developing countries that might make good use of a small grant. Tibetan Plateau Project (TPP) has been asked to develop recommendations for consideration by the funder and we are seeking your assistance. Grant amounts are typically modest, ranging from \$500-2,000, but the entire amount is passed on to the recipient organization—neither TPP nor Earth Island receives a percentage.

You can assist by recommending organizations or forwarding this message to your colleagues, but please do not re-post it to any listservs, news groups, or websites.

There will be two grant making cycles in 1999—spring and autumn. The deadlines for TPP to submit completed applications and documentation are April 16 and October 15.

In addition, TPP requires that recommended organizations be based in one of the following Tibetan Plateau region countries: Bhutan, China, India, Nepal, or Pakistan, and must be accessible by fax or email. For the Foundation's specific application guidelines contact: Justin Lowe, Director, Tibetan Plateau Project, 300 Broadway, Suite 28, San Francisco, CA 94133; Phone: 415-788-3666, extension 132; Fax: 415-788-7324 Email: tppei@earthisland.org.

Kleinhans Fellowship

The deadline for the Kleinhans Fellowship for Research in Tropical Non-Timber Forest Products (Rainforest Alliance) has passed for 1999, but please contact them now for 2000. Research involving any tropical forest type, wet or dry, in Latin America is eligible. Anyone with a master's degree in forestry, ecology, environmental science, or appropriate related fields may apply; doctoral candidates or post-doctoral researchers preferred. Applicants may substitute relevant experience for degrees.

This fellowship aims to promote research into the practical means of managing and using tropical forest resources without destroying the integrity of the forest ecosystem. The research will synthesize elements of conservation and business and must lead to the development of a product or marketing technique that can provide incomes for community-based groups living in or near tropical forest areas. At the end of the project, a thoroughly documented paper suitable for publication is required. The grant is \$15,000 per year for two years. For more information, contact: Rainforest Alliance, c/o, Ina F. Chaudhury, Kleinhans Fellowship, 65 Bleeker St., New York, NY 10012.

recent postdoctoral candidates. Annual deadline for applications is February. Applications from international scientists, women, and minorities are encouraged.

Bullard Fellowships

Each year Harvard University awards a limited number of Bullard Fellowships to individuals in biological, social, physical, and political sciences to promote advanced study, research, or integration of subjects pertaining to forested ecosystems. The Fellowships, which include stipends of up to \$30,000, are intended to provide individuals in mid-career with an opportunity to utilize the resources of and to interact with personnel in any department within Harvard University in order to develop their own scientific and professional growth.

Fellowships are available for periods ranging from four months to one year and can begin at any time in the year. Fellowships are not intended for graduate students or

Harvard University
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to individuals in
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and political sciences
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forested ecosystems.

Contact: Committee on the Charles Bullard Fund for Forest Research, Harvard University, Harvard Forest, P.O. Box 68, Petersham, MA 01366.

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Jobs and Fellowships

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POSITIONS AVAILABLE:

DIRECTOR/SCIENTISTS—Phytera

Phytera is looking for a Director of Natural Products Chemistry as well as Junior and Senior Scientists. Responsibilities include direction of a large Natural Products chemistry staff, overseeing the production of extracts and chemical libraries from microbial, marine and plant cell cultures, development of proprietary cell lines, dereplication strategies, development of library and compound databases, etc.

The Director of Natural Products Chemistry reports to the VP of Chemistry. Prior industry experience in the field is one of the desired qualifications. Contact: Richard J. McCarthy at J. Robert Scott (a recruiting firm); Phone: 617-563-2770; or Email: richard.mccarthy@fmr.com.

SCIENTIST—International Centre for Research in Agroforestry

The International Centre for Research in Agroforestry is recruiting a Scientist to develop the programme's activities in Zimbabwe in collaboration with the Project Leader and the Head of the Agronomy Institute of the Department of Research and Specialist Services in Zimbabwe. The incumbent will work in a multidisciplinary team with other scientists, and will be expected to develop and strengthen collaborative links with national agricultural research and extension systems, government and non-government organizations, the private sector and other international agricultural research centres in the region. Specific duties will include the development and participatory evaluation of agroforestry innovations which ameliorate declining soil fertility and seasonal shortages of fodder. The incumbent will also be expected to provide technical support and training to ICRAF's partners in the region in the fields of experimental design and approaches to participatory research in agroforestry.

All correspondence should be addressed to the Head of Human Resources, International Centre for Research in Agroforestry, P.O. Box 30677, Nairobi, Kenya; Phone: 254-2-521450 ext. 2348; Fax: 254-2-521001; Email: r.lecuyer@cgnet.com; Website: www.cgiar.org/icraf.

CHIEF SCIENTIST—CIFOR

(Bogor, Indonesia) The Center for International Forestry Research (CIFOR) seeks an outstanding scientist to provide leadership to an interdisciplinary team developing policies and technologies to improve the management, utilisation, and conservation of tropical forests. The Chief Scientist will serve as principal mentor and coach for the teams and will ensure that our research meets international standards of quality and scientific rigour and contributes directly to the achievement of CIFOR's mission and objectives. The Chief Scientist will travel extensively throughout the tropics to accompany scientists to the field, giving special emphasis to CIFOR's ecoregional focus sites in Africa, Asia, and Latin America. The Chief Scientist will also lead the process of setting research priorities and assessing impacts of CIFOR's research. The post will be based at CIFOR's head office in Bogor, Indonesia. Contact: Human Resources Manager, CIFOR, P.O. Box 6596 JKPWB, Jakarta 10065, Indonesia; Fax: 62-251-622100; Email: m.paiement@cgnet.com; Website: www.cgiar.org/cifor.

PROGRAM COORDINATOR — Maya ICBG

Program administration of a major NIH-NSF multidisciplinary / multinational project on drug discovery, medical ethnobiology, biodiversity inventory, and sustained economic development among the Maya of Highland Chiapas, Mexico (the Maya ICBG). Provide sustained support of ICBG Group Leader in performing all non-scientific administrative activities associated with a large research program. Duties include administering \$2.5 million funding over 5 year period, setting up or supervise set-up of networking for 25 international participants, conference development and arrangements, skilled report writing, desktop publishing, database design and management (preference given to applicants with good knowledge of BIOTA and familiarity with Macintosh and Windows-based programs), web-page development and maintenance, knowledge of basic accounting and fiscal monitoring regulations. Special skills include near-fluency in Spanish (speaking and writing), excellent organizational capacities, and quality performance under varied and unpredictable conditions. Good interpersonal skills a significant advantage. Annual travel to field site in Mexico as part of ICBG scheduled meetings. Advanced degree (MA, MS, or Ph.D.) in anthropology, botany, ecology, biological sciences, natural resources, or related fields, or demonstrated experience in program management in field oriented, biodiversity / conservation / development-focused research.

Send two-page cover letter, resume and names, addresses (including email) and phone numbers of three references to: Brent Berlin, Group Leader, Maya ICBG, Laboratories of Ethnobiology, Department of Anthropology, University of Georgia, Athens, GA 30602. EEO/AEE.

Publications

Recently, CRC published 2 books, both of which I personally have been anxiously awaiting. However, I am thoroughly disappointed in both of these books. Their titles lead us to believe that they would be valuable for economic botanists and ethnobotanists, but I find them to stray from their topics, have little applicable value, and limited and inappropriate references. Here are the reviews. –Trish, Ed.

CRC Ethnobotany Desk Reference

by Timothy Johnson

Review Submitted by Trish Flaster

This incredibly huge book, 1200 pages, is full of information, but I am not sure how to utilize it. Like many of the older or preliminary ethnobotanical references, this book lists the 12 items in the following order: plant name, common name, the family name (not capitalized), range, action, used to treat, contains, indigenous use, use, body, habitat, and comments. Not all of these topics are covered for each plant and there are no references cited with the listings. The few references that are listed in the end of the encyclopedia are mostly anecdotal, at best. Schultes is the only ethnobotanical author and it references only his book on hallucinogens. I was grateful to see Dan Moerman's database, (his book was reviewed in the last Newsletter), and Jim Duke's data base listed under Internet references. I am surprised that CRC would publish a text with such little scholarly support. Certainly no ethnobotanist reviewed this text before print. This book is titled such that people will buy it, will use it to pass on non-substantial data, but I think it will mostly sit on the shelf and that is where it belongs holding up more worthy texts. This is just another nonscientific Internet site.

Botanicals: A Phytocosmetic Desk Reference

by Frank S. D'Amelio, Sr.

361 pages, published by CRC

Review submitted by Mindy Green

It was with much anticipation that I awaited the arrival of this most promising book since few botanical references dealt specifically with any scientific explanation for the cosmetic uses of herbs. To my disappointment, neither does this. The materia medica lists approximately 140 herbs, including Latin names, part used, descriptions, properties and constituents. In most cases lengthy botanical descriptions are paragraphs long and I can't imagine how knowing about how a technical taxonomical dissertation would help in cosmetic formulations. The cosmetic uses are merely touched upon with

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folkloric and anecdotal claims reminiscent of Maude Grieve's Modern Herbal. Some of the most well known herbs for the skin such as neem are surprisingly short, though the section on Echinacea and gotu kola are adequate.

The two-page aromatherapy section lists a number of oils used in skin care, but without mention of those specific attributes. Some herbs, such as black cohosh, are listed with no reference to their cosmetic uses at all. I suppose one could extrapolate that an herb with estrogenic activity may be useful in revitalizing the skin, but no connection is made.

The book lists a number of examples of cosmetic formulas, and though it suggests the use of botanicals and vegetable oils, it also uses ingredients known to have adverse reactions and negative connotations by consumers: D & C colors, mineral oil, DEA's, triethanolamine, and parabens.



A lengthy glossary relates mostly to the botanical descriptions, but the index is thorough and the cross-reference table for botanical names is very helpful. This reference book may be useful for those trying to identify plant material by microscopy, since structural descriptions are thorough. If diagrams of chemical structures excite you, so may this book, but with a few exceptions, it is quite lacking in the scientific validation, rationale, or references for the cosmetic uses of herbs.

Science Publishers on Forestry

Science Publishers, Inc. have several publications on agroforestry and forestry topics. Contact them at P.O. Box 699, Enfield, NH 03748; Email: sales@scipub.net.

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Publications

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Review of Aromatic and Medicinal Plants on the Internet

The Review of Aromatic and Medicinal Plants (RAMP) is one of six key horticultural and seed science titles set to join the growing list of CABI Publishing titles which are available to print subscribers at no extra cost over the Internet.

Beginning January 1999, the new Internet service HORT CABWeb will provide desktop access to the world's published scientific research literature on all aspects of horticulture, including medicinal and aromatic plants. Titles covered alongside RAMP will include: Horticultural Abstracts, Ornamental Horticulture, Seed Abstracts, Seed Science Research, and Postharvest News and Information.

The CAB ABSTRACTS database scans 130 countries. Each volume of RAMP includes abstracts from more than 500 serial titles, as well as abstracts of books, reports, and conferences. Subscribers to RAMP or any of the other aforementioned journal titles should register for access to their subscribed titles in HORT CABWeb. A registration form and further information is available at the website: hort.cabweb.org/register.htm.

Contact: Jenny Howatson, Publishing Editor; Phone: 44-0-1491-829-304; Email: j.howatson@cabi.org

Enquiries about the content, coverage and editorial policy of Review of Aromatic and Medicinal Plants, and details of new books and forthcoming conferences should be directed to: Debbie Cousins, Editor; Phone: 44-0-1491-829-357; Email: d.cousins@cabi.org.

Cucurbit Mania

Economic botany pursuits take place in a variety of venues. The commercial importance of some plant families is such that entire organizations are devoted to them. This is the case with the Cucurbitaceae, which boasts cucumber, melon, squash, pumpkin, watermelon, bottle gourd, and loofah as some of its economically valuable members. Organizations that track current cucurbit news include the Cucurbit Genetics Cooperative, which produces an annual report of research briefs submitted by scientists, and The Cucurbit Network, which publishes a semi-annual newsletter with timely information of interest to both scientists and enthusiasts.

For details on CGC membership, contact: Cucurbit Genetics Cooperative, c/o Tim Ng, 2118 Plant Sciences Building, College Park, MD 20742-4452; Phone: 301-405-4345; Fax: 301-314-9308; Email: tn5@umail.umd.edu.

Yearly membership for The Cucurbit Network is \$10 (checks only in U.S. funds). Send to: The Cucurbit Network, P.O. Box 560483, Miami, FL 33256; Email: CucurbitNetwork@netscape.net; Website: www.cucurbit.org.

Wild Food Adventures

Want to start seriously investigating edible wild plants? Then the Wild Food Primer is made for you. Contact: Wild Food Adventures, 5036 SE Mitchell St, Portland, OR 97206-4814; \$4 (US), \$5 (Canada), \$6 (Elsewhere). All foreign paper currency must be issued in US dollars from American Express or US banks.

Wild Food Adventures provides outdoor education, training, and recreation using edible wild plants through workshops, expeditions, presentations, and contracted training anywhere in North America. Technical advising, curriculum development, and custom research services are also available. Emphasis is on the uses of edible wild plants and other forageables. They also produce the Wild Food Adventurer, a regionally and nationally focused newsletter on wild foods.

The cost is \$12/Year (4 issues) U.S., \$16 (US dollars) to Canada, \$18 (US dollars) Overseas. Sample Issues U.S.: \$3, Canada: \$4, Elsewhere: \$5; Email: wildfood@teleport.com; Website: www.teleport.com/~wildfood/newsletter.html.

[In the Fall issue I will try to include excerpts of the Wild Foods Newsletter. -Trish, Ed.]

Other New Books of Interest:

The Scientific Publishers in India have a catalogue of books on ethnobotany and Medicinal Plants. Their newest book is entitled, Ethnobotany of Rajasthan, India by V. Singh and R. P. Pandey. Contact them at Scientific Publishers, 5-A New Pali Road, P.O. Box 91, Jodhpur-342 001 India; Phone: 91-291-33323; Fax: 91-291-613480.

Cornucopia II, A Source Book Of Edible Plants by Stephen Facciola is now available from Kampong Publications, 1870 Vista Drive, Vista, CA 92084; Phone: 760-726-0990.

Soil Chemistry and Ecosystem Health, P. M. Huang, D. C. Adriano, T. J. Logan, and R. T. Checkai. Published by the Soil Society of America; Contact: SSSA Headquarters, 677 South Swgoe Road, Madison, WI 53711; Fax: 608-273-2021; Email: books@soils.org; Website: www.soils.org.

Summer Classes & Internships

The list of classes offering economic botany and ethnobotany has been an important tool for anyone wanting to further their education. The updated version is within this issue. We are also trying to place it on the SEB Website. Please, if you are listed, verify the data and respond to me.

However, there are those who only have a few months or want to spend their summer in the field. Brad Bennett has initiated a column that I hope will encourage others to submit information, articles, and opportunities for internships and summer programs. Then this, too, may be a list provided by SEB and on our website. At this time it is only an article and I hope many will submit contacts of summer programs. Let me know if this is something you cannot live without and want to see more. –Trish, ED.

Field Course Profile: Tropical Plant Ecology and Ethnobotany

Bocas Del Toro Biological Station, Panama (July 1-27, 1999)

Interest in ethnobotany has never been greater, yet universities have not kept up with demand for training in the discipline. Students need not despair. This summer, several ethnobotanical field courses will be offered. Richard Ford will teach his popular ethnobotany course at the Michigan Biological Station (www.umich.edu/~umbs/sprcl.html) and Will McClatchey, Nina Etkin, and Paul Cox are offering a new course in Hawaii (www.ntbg.org). Those interested in the Neotropics, might consider "Tropical Plant Ecology and Ethnobotany," a course that I will teach at the Bocas Del Toro Biological Station, on Panama's Caribbean coast.

Originally proposed as a course in tropical plant ecology, I suggested taking a broader perspective. It is not possible to understand the dynamics of tropical forests without understanding the people who occupy them. Likewise, it is impossible to understand human-plant interaction without taking an ecological approach. A more accurate title for the Bocas Del Toro course might be "Neotropical ethnobotany: An ecological approach" or perhaps "Human ecology of



Neotropical forests." Regardless of the name, this course will acquaint students with the diverse world of tropical vegetation and show how humans utilize and modify their plant world. I have three objectives: to introduce students to tropical plant ecology, systematics of tropical plants, and the principles of ethnobotany.

The course begins with a review of abiotic factors that influence tropical plants and people, including climate and soils. The focus then turns to the diversity, taxonomy, and adaptations of tropical vegetation. Next, the emphasis shifts to ecological processes in the tropics. The remainder of the course examines the relationship between people and tropical forests, particularly human use and management of tropical vegetation. Lectures will provide an introduction to each topic but much of the time will be devoted to field exercises. In a series of group projects, students will formulate research questions and design experiments to answer them. Each student will also design an individual research project that will be completed by the end of the course.

The Bocas Del Toro Field Station is located on the northwest end of Isla Colón, the northernmost of the four large islands that form the Archipelago de Bocas Del Toro.

Isla Colón has the highest human population in the region and most individuals live in the town of Bocas del Toro. The culture is primarily Afro-Caribbean but Chinese and mestizo people also live in the region and the indigenous Guaymie culture is centered in the region.

The Station is located on the beach between tropical rain forest and coral reefs. Terrestrial habitats include primary and secondary forests, marshes, swamps, streams, pastures and beach strand. Marine habitats include coral reefs, turtle grass beds, mangrove swamps, and estuaries. Facilities at the station are rustic, but comfortable. Five cabins can house up to 40 students. All meals are provided in a thatched-roofed dining area which seats 50. The lecture hall, with a seating capacity of 30, has concrete floors and screen walls. Other amenities include a 25-passenger bus, a 4X4 field vehicle, 4 boats and motors and bicycles, and a small laboratory.

If you would like more information about this course, please contact me (bennet@fiu.edu) or the ITEC website (home.earthlink.net/~itec).

Bradley C. Bennett
Dept. of Biological Sciences
Florida International University
Miami, FL 33199
Phone: 305-348-3586

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Summer Classes & Internships

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Summer Field Schools

RAINFOREST and MARINE BIOLOGY WORKSHOPS are field oriented and focus on natural history, rainforest and marine ecology, conservation, land management, medicinal uses of native plants, local cultures, archaeology, and geology. Instruction features local biologists and naturalist guides. Proceeds go to sponsoring organizations in each country and help support valuable education/conservation projects. Three Undergraduate or Graduate credits in the Natural Sciences or Education are available for attending through Aquinas College of Grand Rapids, Michigan (www.aquinas.edu). A brochure and detailed itineraries are available upon request. Contact: Mike Nolan; Email: mnolan01@sprynet.com.

BELIZE—Length: 14 Days/13 Nights; Cost: \$980.00 per person; Topics Covered: Tropical Moist Forest Ecology, Marine Ecology, Mayan Archaeology Garifuna Culture

COSTA RICA—Length: 12 Days/11 Nights; Cost: \$850.00 per person; Topics Covered: Tropical Rainforest and Dry Forest Ecology, Conservation and Land Management, Geology/Volcanoes

HONDURAS—Length: 14 Days/13 Nights; Cost: \$765.00 per person; Topics Covered: Tropical Rainforest and Marine Ecology, Conservation and Land Management, Mayan Archaeology, Garifuna Culture

PANAMA—Length: 14 Days/13 Nights; Cost: \$1100.00 per person; Topics Covered: Tropical Rainforest and Marine Ecology, Conservation and Land Management, Geology/Volcanoes, Indian Cultures, R.O.P.E.

ECUADOR—Length: 14 Days/13 Nights; Cost: \$1050.00 per person; Topics Covered: Tropical Rainforest Ecology, Biodiversity Conservation, and Land Management, Quichua Indian Culture

PERU—Length: 15 Days/14 Nights; Cost: \$1145.00 per person; Topics Covered: Tropical Rainforest Ecology, Biodiversity, Conservation and Land Management, Indian Culture

SOUTHEAST ALASKA—Length: 14 Days/13 Nights; Cost: \$995.00; Topics Covered: Temperate Rainforest & Marine Ecology, Conservation & Land Management, Marine Mammals, Geology/Glaciers/Volcanoes, Indian Cultures, Russian History

ETHNOBOTANY (Biology B 455; 5 credits), Professor Richard I. Ford, University of Michigan Biological Station, May 16–June 11, 1999.

In this course we will consider all traditional issues in ethnobotany, including cultural beliefs about plants, their names, plants as cultural symbols, as well as their uses for food, medicine, crafts, fiber, fuel, construction, and ritual. We will draw examples in lecture world-wide but will concentrate on native American cultures for our field trip exercises. The course will emphasize ecological and plant management strategies. Tuition fee \$1450 (resident) and \$2350 (non-resident). Meals and housing \$550. For applications and further information, contact: Biological Station, 1111 Natural Science Bldg., University of Michigan, Ann Arbor, MI 48109-1048; Phone: 313-763-4461; Email: umbs@umich.edu; Website: www.umch.edu/~umbs.

FIELD STUDIES IN ETHNOBOTANY, The Baca Institute of Ethnobotany, 5 credits, Dr. Enrique Salmon, instructor. June 21–July 23, 1999.

This course provides an introduction to ethnobotanical field studies. Students will learn the basics of ethnobotanical methods, theory, interviewing, and plant collecting and will spend 18 days in the field learning and assembling plant-related stories and traditions.

The first two weeks will be in a classroom on the mountain campus of Ft. Lewis College, Durango, CO. The field activities will involve a road trip visiting various parts of the American Southwest. Tuition undergraduate \$1660; graduate \$1795 includes dorms, meals, and field fee. To register: Phone Ft. Lewis College 970-247-7385. For more information contact Dr. Salmon, FLC Box 7195, 1000 Rim Dr., Durango, CO 81301-3908; Phone 970-247-7030; Email: Salmon_E@Grumpy.Fortlewis.edu

TROPICAL ETHNOBOTANY
The National Tropical Botanical Garden in Kauai'i will be offering a short course on August 9–21, 1999. The course will overview tropical ethnobotany and botany. The focus is on practical techniques for ethnobotanical research, the role of plants in indigenous societies, interview techniques, and basic tropical botany. The faculty includes Paul Cox, Diane Ragone, David Lorence, Sandra Banack, and Will McClatchey. Contact: NTBG, PO Box 340, Lawai, Kauai, HI 96765; Phone: 808-332-7324; Fax: 808-332-9765.

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ICBG Awards Announced

A consortium of Federal agencies, including the National Institutes of Health (NIH), the National Science Foundation (NSF), and the U.S. Department of Agriculture (USDA), announces new awards under the second review cycle of the International Cooperative Biodiversity Groups (ICBG) program. The first awards under this innovative program were made in 1993.

Six groups consisting of diverse private and public institutions, including universities, pharmaceutical companies, and environmental organizations, will collaborate on projects in ten countries that

address biodiversity conservation and the promotion of sustained economic activity through drug discovery from natural products. Support for this program will total approximately \$3.5 million per year over the next five years, shared among the NIH, NSF, and USDA. The Fogarty International Center, the international arm of the NIH, both administers the program on behalf of the sponsoring agencies and contributes to it along with NIH's National Cancer Institute, National Institute of Allergy and Infectious Diseases, National Institute of Mental Health, National Institute on Drug Abuse, and National Heart, Lung, and Blood Institute.

These investments, in part, represent the U.S. government's commitment to uncover new knowledge that will lead to better health for everyone, enhance scientific capacity in developing nations, and promote conservation of biodiversity through sustainable development.

Projects include the selection and acquisition of natural products derived from biological diversity as potential therapeutic agents for diseases such as cancer, AIDS, parasitic diseases, drug addiction, Alzheimer's disease, and heart disease, all of which are of concern to both developed and developing countries. Other important

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Summer Classes & Internships

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Additional Summer Opportunities

The Student Conservation Association has many programs. From these programs the majority of the students graduate and easily find jobs within environmental fields. Phone: 703-524-2441, 510-832-1966, 206-324-4649; Website: www.sca-inc.org.

The Siskiyou Field Institute will offer one-day workshops, including ethnobotanical topics, in June. Phone: 541-592-4459; Email: institute@siskiyou.org.

The Seva Organization has summer internships that focus on international health policies. Contact: Seva, 1786 Fifth Street, Berkeley, CA 94710; Phone: 510-845-7382; Email: admin@seva.org; Website: www.seva.org.

University Research Expeditions Programs from the University of California, UREP. There are many locations and trips planned for Summer 1999. Contact: One Shield Ave., Davis, CA 95616; Phone: 530-752-0692; Fax: 530-752-0681; Email: urep@ucdavis.edu; Website: www.urep.ucdavis.edu.

The United Plant Savers, a professional group of ethnobotanists, healers, and growers, has established the first Botanical Sanctuary in the U.S. for Medicinal Plants. They now have an internship program that runs from March through June and July through October. You can contact them at P.O. Box 98, E. Barre, VT 05649; Email: ups@ilhawaii.net.

Other possible leads for programs :

Earth Work JobNet, P.O. Box 550, Charlestown, NH 03603; Website: www.sca-inc.org.

Center for Global Education at Ausburg College, 2211 Riverside Ave., Minneapolis, MN 55454; Phone: 800-299-8889.

The School for Field Studies, 16 Broadway, Beverly, MA 01915; Phone: 800-989-4435; www.fieldstudies.org

World Forestry and Forest Products: A Tropical Program in Nicaragua. Contact: Dr. A.L. Hammett, Phone: 540-231-2716; email: himal@vt.edu; Website: www.vt.edu:10021/international.

Rainforest and Reef Conservation, 29 Prospect NE Suite #8, Grand Rapids, Michigan 49503; Phone: 616-776-5928; Fax: 616-776-5931; Email: rainforest@mail.org.

ICBG Awards Announced

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components include discovery of safe new agents for crop protection and veterinary medicines, examination of traditional medicine practices, development of long-term strategies to ensure sustainable harvesting, biodiversity surveys and inventories, training and infrastructure support for host-country scientific institutions, and establishing a market valuation system for non-timber forest products.

Intellectual property agreements are negotiated among participating institutions so that economic and other benefits from these discoveries are equitably shared and accrue to local institutions and communities involved in the discovery of the natural product. Contributions from pharmaceutical and agrosience companies include screening for therapeutic potential, training opportunities, equipment donations, financial support, and royalties from the sale of any product developed as a result of ICBG research.

AWARD HIGHLIGHTS

Dr. Brent O. Berlin and colleagues at the University of Georgia in Athens are collaborating with scientists at the College of the Southern Frontier in Chiapas, Mexico, and Xenova Discovery to evaluate pharmacologically important tropical plants and fungi utilized by the Maya-speaking peoples of southern Mexico.

Dr. Phyllis D. Coley and colleagues at the Smithsonian Tropical Research Institute are using ecological insight to build a sustainable bioprospecting program in Panama for discovery of both pharmaceutical and agricultural products from plants, fungi, and insects in collaboration with the University of Panama, the Gorgas Memorial

Institute of Health Research in Panama, G.W. Hansen's Disease Center in Louisiana, Stanford University, Walter Reed Army Medical Institute of Research, the Nature Foundation of Panama, Monsanto Company, and Conservation International.

Dr. David G.I. Kingston of the Virginia Polytechnic Institute and State University in Blacksburg, Virginia, is collaborating in a second five-year ICBG to study tropical plants in Madagascar and Suriname. The group includes Missouri Botanical Garden, Conservation International, the National Center for Pharmaceutical Research in Madagascar, the Suriname Medicine Distribution Company, Bristol-Myers Squibb Pharmaceutical Research Institute, and DowElanco Agrosiences.

Dr. Brian G. Schuster and colleagues of the Walter Reed Army Institute of Research in Washington, D.C. are working on a second five-year ICBG program to evaluate tropical plants in Cameroon and Nigeria for potential pharmaceutical agents and phytomedicines. Collaborators are the Smithsonian Institution, the Bioresources Development and Conservation Programme, Pace University of New York, the University of Utah, the University of Minnesota, the University of Jos and the International Centre for Ethnomedicine and Drug Development in Nigeria, and the University of Dschang, Cameroon.

Dr. Djaja "Doel" Soejarto and colleagues from the University of Illinois at Chicago are leading a

program to describe biodiversity and discover pharmacological agents from tropical forest plants from Laos and Vietnam. Collaborating institutions include the National Center for Natural Sciences and Technology and Cuc Phuong National Park in Vietnam, the Research Institute for Medicinal Plants in Laos, and Glaxo-Wellcome Research and Development.

Dr. Barbara N. Timmermann of the University of Arizona is leading her second five-year ICBG aimed at discovering biologically active agents for pharmaceutical and agricultural uses from arid and semi-arid land plants in Argentina, Chile, and Mexico. Collaborating in this effort are the G.W. Hansen's Disease Center in Louisiana, the National Institute of Agricultural Technology of Argentina, the National University of Patagonia, Argentina, the Pontifical Catholic University of Chile, the National Autonomous University of Mexico, and Wyeth-Ayerst

**Six groups
will collaborate on projects
that address biodiversity,
conservation, and the promotion
of sustained economic activity
through drug discovery
from natural products.**

Research Laboratories and American Cyanamid Company, both of American Home Products Corporation.

Additional information may be obtained by contacting: Dr. Joshua Rosenthal, Biodiversity Program Director, Fogarty International Center, National Institutes of Health, 31 Center Drive, Bethesda, MD 20892-2220; Phone: 301-496-1653; Fax: 301-402-2056; Email: joshua_rosenthal@nih.gov; Website: www.nih.gov/fic/opportunities/icbg.html.

Botanizing the Web

[I have received website information from many people and from on-line groups. Please let me know if any of these are great or should be deleted from our files. –Trish, ED.]

Intellectual Property Rights

Here is a website listing current **Intellectual Property Rights (IPR) treaties**; www.sedac.ciesin.org/pidb/pidb-home.html.

People and Plants Online

We have now completed the new design of **People and Plants Online**, the website of the People and Plants Initiative (www.kew.org.uk/peopleplants). Please spread the word about this new Internet service dedicated to ethnobotany, conservation, and community development. And let us know of any websites to which we should link People and Plants Online.

Global Diversity of Vascular Plants Global Diversity–Species Numbers of Vascular Plants is the name of a website at www.botanik.uni-bonn.de/biodiv/phytodiv.htm.

Site includes information in both English & German and is a great resource for those researching biodiversity.

Cultural Ecology Specialty Group

The Web site and Newsletter of the **Cultural Ecology Specialty Group of the Association of American Geographers Group** has recently moved to www.brunel.ac.uk/depts/geo (then follow the link). The Cultural Ecology Specialty Group promotes scholarship and acts as a network for work in cultural and political ecology. Although the group has its intellectual origins in North American geography and anthropology (and a major focus is on rural, developing-country peoples and environmental relations), the membership and the range of topics covered are global. Contemporary work in cultural and political ecology includes studies of agrarian change, livelihood systems, the impacts of political and economic change on

rural societies, prehistory and historical evolution of civilizations, access to resources and gender, development impacts, institutions, land degradation, and human impacts on the environment. The latest Newsletter on the site contains a request from Profs. Zimmerer and Bassett to supply reprints of relevant material for their "Geography in America" chapter. The Newsletter welcomes contributions and announcements.

SEB UK Chapter

The SEB UK Chapter has their website at www.rbgkew.org.uk/SEB-UK/ and included on this site is "Ethnobiology Education in the UK–A Survey." At the **People and Plants** site (www.rbgkew.org.uk/peopleplants/) there exists a link to the ethnobotanical curricula associated with the education survey. Incidentally, if you are trying to locate the Gary Martin Methods Manual, you can find out how to order at www.rbgkew.org.uk/peopleplants/manual/index.html.



SEB Mid-Year Council Meeting

In late January, SEB Council Members came together at the Montgomery Botanical Center in Miami, Florida to discuss the society's future plans and goals. From left to right: Brad Bennett, Will McClatchey, Trish Flaster, Beryl Simpson, and Deena Decker-Walters. Photo by famed photographer and SEB President, Gail Wagner.

Small Farmers' Seed Rights Up For Grabs?

Condensed from a web-published article by Nana Rosine Ngangoue and B. Oeudraogo

CONTONOU, March 5, 1999 (IPS) – Francophone members of the African Organisation of Intellectual Property (OAPI) put their signatures to the 1991 Union for the Protection of New Varieties of Plants Convention (UPOV 91) in the Central African capital of Bangui. Inventors of new crops now have their discoveries protected in the OAPI countries as per the terms of UPOV 91.

Adopted in Paris in 1961, this Convention has been amended several times, but most members follow its 1978 Convention which is widely interpreted by governments to allow farmers to save and exchange seed. But UPOV's 1991 Convention assumes that farmers cannot save seed

unless governments permit specific exceptions, and up until the signing last week by the OAPI countries, only 11 developed countries had adopted the 1991 Convention.

The Francophone members of the OAPI are Benin, Burkina Faso, Cameroon, Central Africa Republic, Chad, Congo, Djibouti, Gabon, Guinea, Cote d'Ivoire, Niger, Mali, Mauritania, Senegal and Togo.

Hien Mathieu, head of the intellectual property services in Burkina Faso, says that while African nations must be cautious in negotiations on intellectual property rights, globalization requires trade-offs., Hein says, "Our countries must

make the necessary arrangements and adjustments, because globalisation is here. We cannot afford to marginalise ourselves," Hien adds. "We need a rational policy on research. If the Europeans come to do research, you have to be a partner to them so they do not take and protect everything over there."

Hien adds that the protection does not mean that no one else can use "your product," but that whoever has developed a crop can use it or permit others to use it.

Bassane Jean Toe in Burkina Faso's Ministry of Agriculture says that adding the Francophone African nation's signatures to UPOV 91 is like adding a "voice of reason." "It's a necessity. African nations have ample knowledge of UPOV, so they have nothing to worry about," Toe says.

David Fairchild Medal Presented to Dr. John Dransfield of Royal Botanic Gardens, Kew, England

Plant Explorer Honored By Scientific Peers and Supporters at The Kampong

Miami, FL (February 22, 1999)–An elite crowd of more than 200 of Miami's civic, business, and community leaders, as well as scientists and supporters of plant conservation, gathered together Friday and Saturday, February 19th and 20th, at The Kampong of the National Tropical Botanical Garden (NTBG) in Coconut Grove to witness history in the making with the presentation of the first annual David Fairchild Medal for Plant Exploration. The Medal, considered to be the world's most prestigious award for plant exploration, was presented to Dr. John Dransfield, senior principal scientific officer of the Royal Botanic Gardens in Kew, England. The Fairchild Medal honors distinguished service to humanity by continuing the legacy of Dr. David Fairchild,

world-renowned botanist, horticulturist, and plant collector, who made his home at The Kampong in Coconut Grove, Florida. Fairchild medalists receive a bronze medal, cash award, and a citation lauding their courageous exploration of remote parts of the world in the hunt for exotic plant species that may hold the secret of new medicines, innovative crops, or horticultural beauty.

Dr. Dransfield humbly accepted the award and then entertained the crowd with a slide show of one of his amazing treks into the jungles of Madagascar.

"With one plant species dying out a week, it is urgent to discover these plants and preserve them for our future. Scientists, like Dr. Dransfield, who take great personal risks to go into remote regions to find these species, need to be honored for their tremendous service to humanity," states Dr. Paul Cox. "With every plant that disappears, we may be los-

ing a cure for Parkinson's disease, cancer, AIDS or a host of other now incurable diseases."

The Kampong, named by Dr. Fairchild after the Indonesian word for "village", is part of the Congressionally chartered National Tropical Botanical Garden, a system of five gardens and three preserves in Hawaii and Florida dedicated to conservation, research, and education relating to the world's rare and endangered tropical plants. The unique tropical plant species Dr. Fairchild gathered during his trips to Southeast Asia in the 1930s and 1940s are maintained at The Kampong. NTBG is the only Congressionally chartered tropical botanical garden in the United States and is a privately funded, non-profit organization.

For more information on the NTBG, call 808-332-7324 or visit its website at www.ntbg.org.

Ethnobotanews

Alternative Medicine in JAMA

The Journal of the American Medical Association (JAMA) devoted an entire issue (Vol. 280, No. 18, Nov. 11, 1998) to alternative medicines and published another 60 papers on related topics in nine of its other journals. Significantly, four of seven JAMA research studies showed alternative medicines to be effective. For example, Wilt et al. 1998 reviewed the use of saw palmetto (Serenoa repens) extracts to treat benign prostatic hyperplasia (BPH). The researchers analyzed data from 18 randomized, controlled trials that were published between 1983 and 1997. From their meta-analysis, they concluded, "... the available evidence suggests that extracts from the saw palmetto plant, S. repens, improves urinary tract symptoms and flow measures in men with BPH. Compared with finasteride, S. repens produces similar improvements in urinary tract symptoms and flow measures, has fewer adverse treatment effects, and costs less." Considering that U.S. BPH treatment costs exceed \$2 billion per year and that BPH afflicts 50% of men over age 40, the conclusions of Wilt and his colleagues are significant.

Another article in the November 11th issue of JAMA estimated that, in 1997, 42.1% (83 million people) used at least one of 16 alternative therapies the authors examined. They also noted a 380% increase in use of herbal remedies between 1990 and 1997 (Eisenberg et al. 1998). In an earlier issue of JAMA, Astin examined why people use alternative medicines. The author considered three popular hypotheses: 1) dissatisfaction with current health care, 2) the need for personal control, and 3) individual philosophical congruence with alternatives. Interviewees offered a simpler explanation—they used alternative medicines because they relieved their symptoms (Astin 1998). In other words, alternative medicines work!

Literature Cited:

- Astin, J.A. 1998. Why patients use alternative medicine. *JAMA* 279:1548-1553.
 Eisenberg, D.M., R.B. Davis, S.L. Ettner, S. Appel, S. Wilkey, M. Van Rampay, and R.C. Kessler. 1998. Trends in alternative medicine use in the United States, 1990-1997. *JAMA* 280:1569-1575.
 Wilt, T.J., A. Ishani, G. Stark, R. MacDonald, J. Lau, and C. Mulrow. 1998. Saw palmetto extracts for treatment of benign prostatic hyperplasia. *JAMA* 280:1604-1609.

—Submitted by Brad Bennett

The UK Chapter publishes its own newsletter. Recent topics include "The use of vernacular names in Central Kalimantan," "Flora Celtica," "Ethnoflora of Socotra," and "Domestication of Irvingia gabonensis and Dacryodes edulis in West Africa," and meeting reviews.



Inner Voice is the newsletter of **Forest Service Employees For Environmental Ethics**. The articles include discussions on budgets, skiing and conservation issues, the vanishing California wilderness, can the message in Leopold's Sand County Almanac continue, and more. Contact: P.O. Box 11615, Eugene, OR 97440.

Alternative Therapies In Women's Health, Premiere Issue, Volume 1, Number 1. This is an easy to read, very informative, well documented newsletter. A series article on the use of "Phytoestrogens: Natural Hormone Replacement Therapy" reviews clinical trials of soy and flax for hot flashes, vagina epithelial cells, serum hormone levels, cardiovascular disease, and osteoporosis. Not all the data were conclusive for each therapeutic area, but there is evidence that soy can reduce flashes. \$189/year. To subscribe: Phone: 800-688-2421; Fax: 800-850-1232.

As reported in HortIdeas, Penn State biologist Dr. Rod Heisey has isolated an herbicidal chemical from the root bark of tree-of-heaven (Ailanthus altissima). The chemical has both pre- and post-emergence herbicidal activity. The chemical, ailanthone, breaks down in the soil within a short time, so it appears that long-term residue problems are negligible. Commercial support is now being sought to develop the product as a natural alternative to products like "Roundup™".

Journal of Herbs, Spices & Medicinal Plants, Vol. 5, No 4. Investigation of the alkylamides in Echinacea purpurea cultivated in Egypt indicated the alkylamide content of the vegetative tissue decreased as the plant matured, but progressively accumulated in the roots, reaching a maximum at the plant fruiting stage. Treatment with relatively high levels of nitrogen and low potassium produced the highest yields and increased the alkylamide content in the plant tissues. The observed, proportional composition of the alkylamide mixture was characteristic for the plant part and was essentially stable with growth and fertilizer treatments.

Grazing in the Field

A request from Cath Cotton:

I have recently landed myself a job at Greenpeace International where we are interested in the activities of companies who are logging indiscriminately in what Greenpeace describe as "ancient forests" (essentially forests which, to date, have been largely undisturbed by human activities). These include tropical, boreal, and what remains of the temperate forests. I know that many members of the SEB work in forests in one capacity or another, and would be very grateful to hear from anyone who is involved in, knows about, or has contacts involved in any of the following:



Mapping of ancient, frontier or pristine forests; Economics and/or ecology of non-timber forest product harvesting; Current threats to ancient (etc.) forests; Activities (legal and illegal) of specific logging companies; Environmental or social records of logging companies; Products flow from logging sites to markets; Development of sustainable logging alternatives (incl FSC); Overall importance of forests (economic, climate, socio-cultural, environmental etc.), and anything else that you think might be relevant.

I can be contacted at: Cath Cotton, Greenpeace International, Keizersgracht 176, 1016 DW Amsterdam, Netherlands; Fax: 0031-523-6200; Email: Catherine.Cotton@ams.nli.gl3

Ramón Zulueta Rodríguez submitted the following:

I came across a reference for the following book and would be grateful if anyone can send me the full citation. Flora of Trikuta Hills: With Special Reference to the Distribution Pattern of Minor Forest Products, by Y. K. Sarin.

I visited the WWW Society for Conservation Biology page, and my question is about a Caricaceae plant, Jacaratia mexicana A. DC. Do you or any fellow member have/know some references related to this dry deciduous forest species? I'm doing my protocol thesis, and there is no mention of it in a lot of scientific magazines consulted.

Thanks a lot for your time and contacts: Ramón Zulueta Rodríguez, Universidad Veracruzana, Xalapa, Veracruz, México; Email: rzt@speedy.coacade.uv.mx.

New Era of Scientific Testing for Herbals Achieved; Based on 25 Years of Research, Scientists Reveal the Bioactive Ingredients in St. John's Wort

[Perhaps you have seen the ads for Centrum's new herbal line—here is the background. —Trish, Ed.]

(Raleigh, NC — September 23, 1998) PharmaPrint scientists today revealed a combination of bioactive ingredients in St. John's Wort that the Company believes must be present to maximize the benefit of the herb for people with mild to moderate depression. This marks the first time that a known bioactive profile, as determined by bioassays, has ever been used to manufacture herbal products.

The Company used a combination of chemical analysis and 45 disease specific bioassays to test 34 different compounds present in St. John's Wort.

The data were presented today at the National Institute of Environmental Health Sciences conference to Evaluate Research Needs on the Use and Safety of Medicinal Herbs, in Raleigh, North Carolina.

"The PharmaPrint™ Process scientifically identifies key components of each herb that appear to contribute to its beneficial effects, guaranteeing the appropriate bioactives in each dose every time," said Michael Tempesta, Ph.D., Senior Vice President of Research and Development for PharmaPrint. Using its sophisticated bioassays, PharmaPrint tested over 30 compounds present in St. John's Wort for disease-related bioactivity. Those found to have activity, in addition

to the historical standard of hypericin, are: hyperforin, quercetin, amentoflavone, and GABA. The Company believes the bioactivity profile specific to each herbal product, the "PharmaPrint", is essential to produce consistent results.

PharmaPrint entered an exclusive agreement with American Home Products Corporation in October 1997 to develop a line of high quality herbal supplements that are marketed under its CENTRUM® brand. This will be the first line of supplements ever produced that has consistent and scientifically-assured bioactivity. PharmaPrint is currently in Phase II clinical trials of a pharmaceutical candidate derived from saw palmetto.

Germplasm News & Views

By David Theodoropoulos

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"I don't even like asking people about medicinal plants anymore. Everyone is suspicious. I'd rather ask about house construction methods. People will still smile and be happy to talk about it." —Will McClatchey, 1997.

"You'd have to have a lawyer at your shoulder while in the field. I don't even want a lawyer anywhere near me!" —Brad Bennett, 1997.

BIOPIRACY: Part III— A Modest Proposal

In the past two columns, I have examined "biopiracy" and the problems arising from attempts to redress the exploitation of peoples' knowledge and plants. Some place the entire burden of redressing centuries of colonialism on the shoulders of botanic gardens and ethnobotanists. Now permission must be obtained from national governments to do research, an unprecedented restriction of free inquiry. Moratoria on collecting have been initiated.

The distinction between theft and exchange seems to rest on intellectual property (IP). In all of the clearly exploitative examples I have mentioned, such as the patenting of human cell lines or male-sterile quinoa, a nation or corporation seeks monopoly control over materials obtained without compensation from the less powerful. Beneficial examples, such as Native Seeds/SEARCH, freely exchange, buy, and sell, without attempting patent monopolization. Cases in which patents are obtained with consent and just compensation are clearly not piracy, but represent good-faith efforts.

However, if I recall the brutal history of the nutmeg, cinchona and other monopolies, I am reminded that in the final analysis, monopolies rest on coercion and violence. The assertion that intellectual property is necessary to promote

innovation is an untested hypothesis. Food and medicine are basic needs and fundamentally different from other inventions, such as CD players. Living organisms replicate—if you steal my coat, I am denied the use of it; if you steal a cutting, some seeds, or an idea, my own use of them is not diminished, unless you then obtain monopoly.

I believe that we need to support a diversity of approaches while sorting out these new issues. I believe we should support the good-faith efforts of our colleagues who use IP in a sincere effort to achieve justice while "working within the system." Can we also find ways to continue our traditions of free exchange and support researchers and indigenous peoples who oppose IP? Meetings of indigenous groups in South America, Asia, and the Pacific all agreed that the IP systems of the industrialized world were alien to them. Can sensible restrictions on IP and sovereignty claims be implemented, instead of the current free-for-all of their exponential expansion?

Three proposals merit consideration: 1) establishing time limits on sovereignty over biota, 2) exempting individual researchers from collecting and research restrictions, and 3) limiting bio-sovereignty claims to intellectual property. Should permission be needed to travel and swap stories, remedies, ideas, seeds, or to carry our plants and culture

with us when emigrating? These are fundamental human rights. Further, it is more realistic to limit bio-sovereignty claims to intellectual property cases only. If a farmer brings his crop or remedy to another country, what harm is there? Only when a bio-patent is applied for should sovereignty provisions be triggered. If royalties are paid to indigenous peoples or nations, why not to the plants? A certain percentage assigned to protecting wild populations—a "conservation royalty"? To administer this, part of the bio-patent search would include determination of the current free-living species range, and a conservation royalty, fixed by international law, be distributed on an equal-area basis to all nations "possessing" the species. This would encourage nations to support, rather than hinder



biological surveys, circumvent black markets and smuggling, prevent bidding-down competition, and protect sovereignty over ex situ material. To benefit indigenous peoples, the bio-patent search should include a literature search of all published material on plant uses, and fixed royalties distributed to all peoples with published uses. This may encourage people to document their botanical heritage—ethnobotanists would be welcomed (!) rather than greeted with suspicion—and prevent low-bidding competition. Limiting

(continued on page 23)

Concerns over Health Claims on Supplement Labels

Here is a summary of label concerns for current herbal products. Many may wonder why I have included it. I think that urban ethnobotany is expanding and that the dietary supplement field is the place where we will see more activity in our field. I hope this is helpful. –Trish, Ed.

WASHINGTON (AP) — The Supreme Court today rejected a challenge to the government's practice of barring health claims on labels of dietary supplements unless the Food and Drug Administration determines there is "significant scientific agreement" they are valid. The court, without comment, turned away an appeal that argued the FDA regulations violate free-speech rights. A 1990 federal law, the Nutrition Labeling and Education Act, gives the FDA authority over health claims by dietary supplement products such as medicinal herbs and vitamins sold over the counter.

The agency has since issued regulations imposing significant scientific agreement as the standard for deciding whether asserted health claims are valid. Anyone may petition the FDA to authorize a health claim on a dietary supplement's label, and the agency must respond within a certain period, although a

final rule can be put off for up to 18 months. The Nutritional Health Alliance, a group of manufacturers, retailers, and consumers of dietary supplements sued over the FDA regulations along with a health food store, New Nutrisserie. They contended that the labeling restriction amounts to an unlawful prior restraint of truthful commercial speech. A federal judge in New York and the 2nd U.S. Circuit Court of Appeals ruled against the challengers. It grants a limited, but reasonable, time within which the FDA can evaluate the evidence in support of the labeling claims."

In the appeal acted on today, lawyers for the health alliance and the health food store argued that the 2nd Circuit court used a too-deferential standard in judging the government's restriction. Justice Department lawyers defended the regulations' constitutionality and urged the court to reject the appeal. They also contended that the

appeal is premature because the challengers have not asked the FDA to authorize any particular health claim. The appeal did mention, however, that a claim of Vitamin E aiding the prevention of heart attacks is currently banned from dietary supplement labels "even though the claim is supported by several reputable research studies published in recent years." The case is *Nutritional Health Alliance vs. Shalala*, 98-235.

**NLEA gives the FDA
authority over
health claims by dietary
supplement products.**

The following comments were submitted by Charlotte Gyllenhaal:

Readers please take note that the 1990 Nutritional Labeling and Education Act (NLEA) is **not** the same as the Dietary Supplements and Health Education Act (DSHEA), under which most claims about the properties of herbal medicines and other dietary supplements are now being made. Under this act, dietary supplements (including herbs) can make what are called "structure-function" claims, or claims that products offer nutritional support to normal body structures or functions. These claims do **not** need to be submitted to the FDA prior to marketing, but are submitted once a product is on the market. Unlike NLEA health claims, DSHEA claims may make no explicit reference to prevention or treatment of diseases—but supplement manufacturers are getting ever more creative about the wording on their packaging and related advertising, and are able to make strong implications about the usefulness of their products for disease treatment.

Germplasm News & Views

(continued from page 22)

this to only uses published before a patent application would encourage quick ethnobotanical documentation. Those of us who have watched this knowledge vanish before our eyes with acculturation and the failing memories of the elderly will appreciate this.

If the genetic commons are to be privatized, this must be licensed only in the public interest, just as the public airwaves are licensed to

broadcasters, with responsibility linked with privilege. These proposals would simplify current systems, ensure fair distribution of benefits, retain traditional free exchange, and enforce sovereignty only where it counts—biopatient cases.

[Recently, in February 1999, a parallel article was published in *Conservation Biology* 13(1):6–10 by Alejandro Grajal. –Trish, Ed.]

SEB Annual Meeting 2000 Preview

Announcing the Annual Meeting of the Society for Economic Botany, "Roots in the Past, Seeds of Tomorrow: Sowing the Future of Economic Botany". The 2000 annual meeting will be held on the campus of the University of South Carolina from Wednesday, June 21 through Friday, June 23, 2000. The Council Meeting will take place on Tuesday afternoon, June 20, at which time a half-day field trip will also be offered. Following the meetings we hope to hold field trips on Saturday and Sunday, June 24–25.

The 2000 meeting proposes to emphasize the future of Economic Botany by targeting students. We hope to have several special events of interest to new professionals in the field of economic botany (your suggestions are more than welcome).

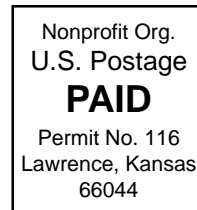
We intend to keep the costs very low so that many members may attend.

The University of South Carolina is located in Columbia, the capital of the state. Columbia is located in the center of South Carolina, at the intersection of I-20, I-26, and I-77, and near I-85 and I-95. It can be accessed by plane, car, bus, or train. Housing will be provided in a residence hall on campus for the approximate cost of \$19.25–\$28.50 per night. There are also several nearby hotels.

The local arrangements chair is Gail E. Wagner, Department of Anthropology, University of South Carolina, Columbia, SC 29208; Phone: 803-777-6548; Fax: 803-777-0259; Email: wagnerG@garnet.cla.sc.edu.

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