

# ISE Newsletter



November 2001, Volume 1, Issue 1

## editorial

Dear reader

This is the first issue of the ISE Newsletter, an information bulletin of the International Society for Ethnopharmacology. This bulletin will be published approximately twice a year. We plan to inform you about upcoming and past activities and events in the field of ethnopharmacology (e.g. conferences, news from the ISE board meetings). We will also include breaking news from the publishing front (e.g. recent publications and interesting web sites). Several columns will always be reserved for a student's view points. Of course, we also want to draw your attention to or remind you of our forthcoming conferences, the next one to be held in Pretoria (Jan. 2003). Unfortunately, this issue also contains the obituary of two very distinguished ethnopharmacologist who passed away during the early months of this year. The Newsletter will only be viable, if all contribute to it and we therefore would like to invite you to submit interesting material to us. Also, please let us know what you think about it (mailing to [bfrehaller@bluewin.ch](mailto:bfrehaller@bluewin.ch)) and we will try to include your advice and wishes in the upcoming issues.

With our best regards,  
Barbara Frei Haller (Editor)  
Michael Heinrich (ISE President)

P.S. In the future this newsletters will be available in a printed and an on-line version, for you to choose (see p. 3)

Conference Report

## ***Building Bridges with Traditional Knowledge II*** ***28 May - 1 June 2001, Honolulu, Hawaii USA*** ***Summary of the Conference***

The second in a series, this conference was conceived as an "International Summit Meeting on Issues Involving Indigenous Peoples, Conservation, Sustainable Development, and Ethnoscience." The Summit Coordinator is Professor *Will McClatchey*, an ethnobotanist in the Department of Botany, University of Hawaii.

Concurrent morning sessions ranged widely across such themes as intellectual property rights, traditional ecological knowledge, applied methods in ethnobiology, ethics, teacher education, and conservation of Hawaiian knowledge. A plenary afternoon session on each conference day was devoted to a major geographical region – Africa, North and South America, Europe and the Mediterranean, Asia, and the Pacific. Cultural representatives of these regions presented their views of traditional knowledge. Evening sessions were organized around key speakers who addressed the relationship of traditional knowledge to health, conservation of cultural and biodiversity, and identity. Hawaiian culture was highlighted throughout the conference through traditional chant, dance (hula), music, and crafts.

As part of the conference the ISE convened an interim meeting, and the Society for Economic Botany its 42nd annual meeting. ISE Past-President *Nina Etkin* organized the symposium "Ethnopharmacology: Building Bridges between Natural Product Chemistry and Traditional Knowledge," which met for two morning sessions and included these presentations:

*Nina Etkin, Paul Ross, Aki Funahashi, Jessica Busch, JD Baker:*

"Ethnopharmacology: Building Bridges to Where?"

*Rudi Bauer:* "Traditional Chinese Drugs: Their Application and Evaluation in Western Medicine"

*Walter Lewis:* "Traditional and Western Medicine: How Bridges Can Lead to New Therapeutic Discoveries"

*Charles Wambebe:* "Bridging Research to the Clinical Use of Plant Medicines"

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*Gamaniel K. Shingu: "Ownership and Sustainability Issues in Botanical Medicine"*

*Michael Heinrich: "Ethnopharmacology or Bioprospecting: Two Sides of the same (Western) Coin?"*

*Barbara Frei Haller and Stefan Mueller: "Probing the Foundations - Reflections on the Actors and Their Environment in the Field of Ethnopharmacology"*

*Patrick Owen: "Graduate Studies in Ethnopharmacology: Building Bridges Between Disciplines"*

*Memory Elvin-Lewis: "Conceptual Similarities in Traditional Treatments for Hepatitis"*

*Daniel Moerman: "Prescription sticks": Indigenous 19th Century Pharmacopoeias*

The symposium was organized around the theme of interdisciplinary inquiry, with a view toward a future in which we craft our diverse objectives and methods into an ethnopharmacology that yields not only collaboration among different researchers but also the application of that knowledge to practical ends for indigenous communities. Participants were encouraged to address research objectives and methodology. We were challenged further to consider how we can reconcile that research conducted during the last two decades has yielded an enormous amount of information on plant constituents and activity, and on traditional uses, with virtually no practical application. Presentations and discussion addressed how the results of sophisticated medical ethnography and rigorous bioassays can be meaningfully integrated, translated, and applied to the populations who use those plants.

Professor Nina L. Etkin, Past President ISE,  
Interim Chair, Department of Anthropology, University of Hawaii, Honolulu, Hawaii USA

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## Conference Report

### ***XVI Simpósio de Plantas Medicinais do Brasil***

The XVI Simpósio de Plantas Medicinais do Brasil (Symposium of Brazilian Medicinal Plants) happened 17<sup>th</sup> to 20<sup>th</sup> October last year, in Recife (Pernambuco State, NE Brazil).



This national biannual meeting is the reference meeting regarding medicinal plant research, development and technology in

Brazil. With a growing number of participants and studies displayed, from less than a 100 in 1978 to more than 700 in 2000, this symposium is unique since congregates pharmacologists, chemists, botanists, agronomists united by the common interest in studying and developing Brazilian medicinal plants.

The last symposium approached subjects of national and international interest related to medicinal plants, like the national politics regarding biodiversity, research & development, technology and public health care.

Moreover, the discussions of issues on the future of medicinal plant research were highlighted, such as the visible loss of diversity in the tropical ecosystems.

The important role of Brazil in the international scenery of biodiversity and medicinal plant studies was discussed during the conference by *Dr. Gordon Cragg* from NCI (USA).

*Dr. Claude Léger*, Université du Montpellier (France) gave a very well attended conference on "Mediterranean alimentation: an example of natural and spontaneous phytotherapy". There

were eight poster sections: Pharmacology and Microbiology (247 works), Chemistry (123), Pharmacognosy (118), and Pharmacotechnic and Quality Control, Agronomy, Botany, Ethnopharmacology and Toxicology.

There were three satellites symposium: Phytotherapy and public health care: social-economic aspects, acceptance and demand; Medicinal plants, biodiversity and the future of tropical ecosystems; Phytotherapies: research, development and technology. Round tables discussed: The Brazilian program of medicinal plants and the perspective of acquirement finish products; Anti-oxidative activity of plants; Clinical pharmacology of phytotherapies; Phytotherapies regulatory issues; Biotechnology claims for phytotherapeutic production.

Eight mini courses were available for undergraduate and graduate students: lichens as therapeutic agents, ethnopharmacology, standardization and botanical control of phytotherapies, isolation and characterization of active principals

from plants, lectines: biological activity, domestication and cultivation of medicinal plants, experimental methodological approaches for studying active principles from medicinal plants.

Unfortunately, conservation issues were overlooked, an area which the Symposium has repeatedly being requested to assign the necessary importance.

Gabriela Coelho de Souza, Ana Paula Schulte Haas and Elaine Elisabetsky  
Ethnopharmacology Laboratory  
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### Conference Report

## **THIRD INTERNATIONAL CONGRESS OF ETHNOBOTANY**

Ethnobotany in the Third Millennium: Expectations and Unresolved Issues

Naples, Italy

September 22-30, 2001

University of Naples Federico II, Botanical Garden and Department of Plant Biology

The city of Naples, located 200 km south of Rome, was founded by the Greek and has been one of the hubs of European civilization for centuries. It continues to be a center of cultural and intellectual activity. The conference was hosted by the Botanical Garden and the Department of Plant Biology of the university. Two of the key-note lectures were given by researchers well known in the field of ethnopharmacology and ethnobotany:

- *N. Alexiades* (U. Kent at Canterbury, UK). Ethnobotany in the Third Millennium: Expectations and Unresolved Issues (Key Note).
- *N. Etkin* (U. Hawai'i, USA and Past President, ISE) The

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Future of Ethnobotany:  
Moving Fast, Going Where?  
(Plenary Lecture).

Another (appropriate) focus was on the Ethnobotany of the Mediterranean Area. This was, among others, highlighted in one of the symposia which covered numerous aspects of this culturally and biologically diverse region. Many of the presentation focused on Spain, for example on plants used as food in Central Spain, ichtiotoxic plants, historical aspects (Al-Andalus) from the 10th to the 15th century), others on Italy, for example on the use of medicinal and food plants in ethnic Albanian communities. On the other hand research on modern Arabic countries were conspicuously absent; *F. Ertug's* study 'An Ethnobotanical Research in Friday Markets of Bodrum (Mugla, Turkey)' was the only and very stimulating exception. A significant percentage of the participants came from Mexico, demonstrating how active the scholarly community of this country is in the field of ethnobotany and ethnoecology.

Another symposium focused on 'Adaptive Ethnobiology'. According the organizers *G. Martin* and *D. Novellino* the term was coined with a dual meaning: 'It refers to how local people rely on their knowledge and prac-

## **Impressum**

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**Deadline for next issue: 01.03.02**

tices to adapt to economic liberalization, climate change, language shift, migration and other global trends. In addition, it describes how ethnobiologists are adopting innovative concepts, methods and applications in their quest to design long-term research and training programs on bicultural diversity. These developments are situated in the current politicized context in which questions of traditional resource rights, national laws and international conventions are having an increasing impact on field programs. Adaptive ethnobiology is producing results useful to communities as local people and ethnobiologists form partnerships with representatives of government agencies, non-governmental organizations, universities and research institutes to promote sustainable habitat and resource management and appropriate economic development.'

*Hew Prendergast, Andrea Pieroni and Christan Vogl* had organized an informal meeting of scholars interested in ethnobotanical research in Europe. During this meeting vivid discussion on possibilities for joint projects and on European funding opportunities were addressed.

This was an exciting and stimulating conference. The next

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one is to be held in about three years in Turkey (organized by F. Ertug and colleagues) and hopefully it will attract researchers from Arabic countries as well as from Africa and Asia, parts of the world conspicuously absent from the conference.

Michael Heinrich, ISE Newsletter

### ***A Selection of Ethnopharmacology Related Web Pages***

(Some from the editor's favorite list:)

- International Society of Ethnopharmacology (ISE): <http://www.ethnopharmacology.org/>
- Royal Botanic Garden, Kew: Economic Botany Links <http://www.rbgekew.org.uk/scihort/eblinks/>
- People and Plants Online: <http://www.rbgekew.org.uk/peopleplants/index.html>
- Society for Economic Botany (SEB): <http://www.econbot.org>
- National Tropical Botanical Garden, Kalaheo, Hawaii: <http://ntbg.org/>



### ***Upcoming ISE-conference. 08 - 11 January 2003 in Pretoria.***

All members should have received the first circular and we hope to see many of you in Pretoria. For this conference we will draw the attention of the scholarly community to the important role that Africa has played in the development of modern medicine, as well as to the specific needs of African nations to further develop their phytomedical systems. The scientific program will also highlight important African plants widely used as phytomedicines, e.g. Devil's Claw (*Harpagophytum procumbens*) and *Prunus africana*. Similarly, we will address the role ethnopharmacology can play in AIDS prevention and treatment as well as in (re-) emergent diseases, such as malaria and dysentery. Much will be learned about phytomedicines in primary health care in Africa and the continent's cultural and biological diversity. The planning for the conference is well under way. However, we still are trying to get funding for this venue. Please contact us with any suggestions and ideas for this conference.

Contact and further information:

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Right after the conference several tours to interesting regions in South Africa will be held. The following regions will presumably be visited (see webpage):

- Eastern Cape
- Richtersveld
- Northern Province
- Kruger Park
- Little Karoo
- North/South Namibia



Michael Heinrich, ISE Newsletter

## Darrell Addison Posey

This spring, the North American ethnobiologist Darrell Addison Posey died in Oxford at the age of 39 (properly celebrated for the last 14 years), victim of a melanoma. Born and raised in Henderson County, Kentucky, he earned the B.S. in Entomology at Louisiana State University in 1970, the M.A. in geography and anthropology at Louisiana State University in 1974, and the Ph.D. in anthropology at the University of Georgia in 1979. His fieldwork among the Kayapó Indians in the State of Pará (Amazonia, Brazil) began at 1977. It started a prodigious professional career and a profound involvement with Brazil. His sensibility and absolute lack of prejudice, associated with the peculiar blend of his education, contributed to render him acutely conscious of the complexity of Kayapó lore regarding natural resources, including an integrated management of plants, animals, soils, all orchestrated by cosmology. Darrell was one of the very first scientists to value and put in practice interdisciplinary research, highlighting its importance in the field of Ethnobiology. Posey left a definitive mark on ethnobiology in a truly global manner. He authored or co-authored three books, edited or co-edited four books, wrote 154 articles and chapters, and produced 22 book reviews. In Brazil, Posey is considered the father of Ethnobiology. The data from the Kayapó project, and the well succeeded efforts to make it known by a broader audience than just readers of scientific journals, which included museum exhibits and

videos, stimulated ethnobiological studies in the country, the formation of research groups in the various ethno-disciplines and have influenced the national view of Amazonian Indians and the area resources. Many young researchers were inspired by his passion in becoming dedicated to Ethnobiology. Many Amerindian leaders, as well as leaders from other traditional communities, benefited from his generosity in putting into context, discussing and clarifying relevant questions regarding their rights and resources, as well as from the doors that Posey's influence opened for them. Among the numerous awards Darrell Posey received for his work and activism were the "Chico Mendes Award" for Extraordinary Courage in the Defense of Nature, given by the International Sierra Club in 1989 and the United Nations "Global 500 Award" for Outstanding Achievement in Service to the Environment, bestowed on him by the U.N. Environmental Program in 1993.

A particularly noticeable moment in his political combat took place in 1987 when Darrell accompanied two Kayapó Indians to the World Bank in Washington DC, where they denounced the unbelievable consequences of the planned Xingú hydroelectric dam to indigenous peoples inhabiting the area to be flooded. As a result of this visit and associated negative publicity the World Bank cancelled the US\$ 1 billion loan required. Upon their return Posey and the two Kayapó leaders were indicted based on Brazilian law that prohibits foreigners with permanent visas to engage in local political affairs, as well as for harming the Brazilian reputation abroad. Despite the pressure, Posey organized and hosted in Belém

(Pará, Brazil) the First International Congress of Ethnobiology. It attracted hundreds of researchers from 35 countries as well as several indigenous groups from various countries. The Congress resulted in the founding of the International Society of Ethnobiology and the Declaration of Belém, which called for protection of native knowledge, use, and management of biological resources as well as human rights of native peoples. The international support and activism in these areas were crucial for the quiet dropping of the charges against Posey and the two Kayapó leaders.

Darrell Posey rarely passed unnoticed. He generated vast appreciation and resentment. Politically, he had passionate defenders and the ferocious opposition of adversaries. Controversy and constant questioning, either political or scientific, were his allies as sources of research, learning and teaching strategy. Darrell was known for his good humor, and even in the worst moments he would always come up with a proper joke, funny exquisite saying learned from different cultures and never lacked stamina for good conversation, food and booze. His absence will be as marked as his presence, since he leaves us an intellectual legacy, an ethical and moral example and much, much, much *saudades*\*

*Saudades* is a Portuguese word, apparently with no counterpart in other languages, expressing the feeling associated with missing someone or something. *Saudades* is a feeling often sad but that in time fulfills the soul with the warmth of memories of a great affection.

Prof. Dr. Elaine Elisabetsky  
Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil

## Richard E. Schultes

Adaptation of an article by Jonathan Kandell, The New York Times, April 13, 2001

Richard Evans Schultes, a swashbuckling scientist and influential Harvard University educator who was widely considered the preeminent authority on hallucinogenic and medicinal plants, died on April 10 in Boston at the age of 86. Dr. Schultes was rightly called the father of ethnobotany. Over decades of research, mainly in Colombia's Amazon region, he documented the use of more than 2,000 medicinal plants among Indians of a tribes, many of whom had never seen a white man before. Tall, muscular, wearing a pith helmet, he hiked and paddled through Amazonia for months at a time. He collected more than 24,000 plant specimens. More than 120 species bear his name, as does a 2.2 million-acre tract of protected rain forest in Colombia, Sector Schultes, which the government there set aside in 1986.

Dr. Schultes was a pioneering conservationist who raised alarms in the 1960's — long before environmentalism became a world-wide concern — that the rain forests and their native cultures were in danger of disappearing under the onslaught of modern industry and agriculture. He reminded his Harvard students that more than 90 tribes had become extinct in Brazil alone over the first three-quarters of the 20th century. Dr. Schultes's research into plants that produced hallucinogens like *peyote* and *ayahuasca* made some of his books cult favorites among youthful drug experimenters in the 1960's. His findings also influenced cultural icons like *Aldous Huxley*, *Wil-*

*liam Burroughs* and *Carlos Castaneda*, writers who considered hallucinogens as the gateways to self-discovery. Dr. Schultes may have contributed to the psychedelic era with his ethnobotanical discoveries, but to him these were the sacred plants of Indians that should be studied for their medicinal value. He was in many ways a throwback to an earlier epoch of scientific research. He had no interest in publicity or self-promotion. Rather than confine himself to a narrow specialty, he was a generalist who criss-crossed several scientific disciplines. Dr. Schultes taught more by personal example than by the use of forceful intellect. His lecture room resembled an ethnographic museum, with huge maps of Amazonia, native dance costumes, demon masks, opium pipes, dried specimens of medicinal and hallucinogenic plants, and a blowgun for poison-tipped darts, whose use he sometimes gingerly demonstrated in class. His former student, *Dr. Plotkin*, recalled a lecture in which the professor showed slides of masked dancers in the Amazon under the influence of a hallucinogenic potion. Referring to himself, Dr. Schultes told the class: "The one on the left has a Harvard degree. Next slide please."

Richard Evans Schultes traced his fascination with the South American rain forests to the fantasies evoked while he was bedridden as a child. He was born on Jan. 12, 1915, in Boston, where his father was a plumber and his mother was a homemaker. Confined to his room for months with a stomach ailment when he was about 5 years old, he listened enraptured to excerpts read to him by his parents from "Notes of a Botanist on the Amazon and the Andes," a travel diary kept by the

19<sup>th</sup> century British naturalist *Richard Spruce*. The impression left by those passages was so powerful that the boy decided to follow in Spruce's footsteps. Receiving a full scholarship to Harvard, Mr. Schultes wrote an undergraduate paper on the mind-altering properties of peyote, based on research he undertook with Kiowa Indians in Oklahoma who ingested the hallucinogen in ceremonies to commune with their ancestors. For his doctoral thesis, also at Harvard, he chose the plants used by the Indians of Oaxaca, a southern state of Mexico. In his research there, he came across a species of morning glory seeds that contained a natural form of LSD.

In 1941, Dr. Schultes traveled to the Colombian Amazon, where he would spend most of his field, and an area Spruce had studied. At first, Dr. Schultes concentrated on plants that produced curare. This substance, used by Indians as a fast-dissipating poison to hunt prey, also proved to be vital as a muscle-relaxant during major surgery in hospitals. The professor identified more than 70 plant species from which the Indians extracted curare. Dr. Schultes was deep in the Colombian rain forest when news of Pearl Harbor reached him more than a week after the Japanese attack. He immediately made his way back to Bogotá, the Colombian capital, and visited the United States Embassy to enlist in the armed forces. But the United States government decided his World War II services would be much more valuable as a botanist doing research on natural rubber, particularly since the Japanese occupied the Malayan plantations that accounted for much of the world's rubber supplies. Dr. Schultes soon became the leading expert in the field,

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collecting and studying more than 3,500 specimens of *Hevea*, the tree family that produces the latex from which rubber is made.

Throughout the 1940's and until the early 1950's, Dr. Schultes lived almost continuously in the South American rain forests, with only brief visits to the United States. On his journeys through the tropics, he traveled lightly. He navigated scores of tributaries of the Amazon River, using an aluminum canoe that he could handle himself, though he usually hired Indians as paddlers and guides. His supplies included a single change of clothing, a camera and film, a hammock and blanket and a machete and clippers for plant collecting. For food, he carried only cans of instant coffee and Boston baked beans, preferring to rely on food offered by his Indian hosts. This included the ground manioc roots that were their staple, fish, wild game, insect grubs, fruit and *chicha*, a drink made from fruits chewed and fermented by spittle. His medicine kit consisted of vitamins, antibiotics and morphine — in case he broke a limb and had to be

transported for days before he could receive proper treatment. To collect and preserve plant specimens, Dr. Schultes devised a method field researchers still use today. He soaked his plants in formaldehyde diluted with water and then pressed them between newspaper sheets. On a good day, out in the forest, Schultes would collect 20 or 30 specimens that he thought merited further attention. Along a riverbank, where foraging was easier, he sometimes bagged 80 or 90. Often Dr. Schultes would consult local Indian shamans about the properties of these species. A number of these medicinal plants now carry his name, including, among many others, *Pouroma schultesii*, a bark whose ashes are used to treat ulcers, *Piper schultesii*, a stem brewed as a tea to relieve tubercular coughs, and *Hiraea schultesii*, leaves whose soakings are used to cure conjunctivitis.

Dr. Schultes asserted that contrary to popular conceptions, Indian shamans were eager to share their medical secrets with outsiders. But "time is running out," he warned in a 1994 article

in the journal *The Sciences*, asserting, "The Indians' botanical knowledge is disappearing even faster than the plants themselves." In 1953, Dr. Schultes moved back to the United States as a professor and botanical researcher and curator at Harvard. Six years later, he married *Dorothy Crawford McNeil*, an opera soprano who performed in Europe and the United States. His wife survives him, as do their three children.

Dr. Schultes, who retired from Harvard in 1985, published 10 books and more than 450 scientific articles. For 18 years, beginning in 1962, he edited the scientific journal *Economic Botany*. He served as an active member of the editorial boards of *Horticulture*, *Social Pharmacology*, the *Journal of Latin American Folklore*, *Journal of Ethnopharmacology* and other publications. Among numerous awards, he received the 1992 gold medal of the Linnean Society of London, which is often equated to a Nobel Prize for botany.

Barbara Frei Haller, ISE Newsletter

### ***A Selection of More Upcoming Conferences***

3rd International Conference of Anthropology and the History of Health and Disease: "Living and healing old age in the world (Ethnogeriatrics - Ethnogerontology)", March 13-16, 2002, Genova (Italy)

First International Conference and Exhibition of the Modernization of the Chinese Medicine (ICMCM 2002), March 14 - 17, 2002, Hong Kong, (China) <http://www.icc.com.hk/ICMCM>

International Conference on Medicinal Plants, Indigenous Knowledge and Benefit Sharing, April 16-19, 2002, The Hague, (The Netherlands), [Slikkerveer@fsw.leidenuniv.nl](mailto:Slikkerveer@fsw.leidenuniv.nl)

PSE Symposium on: "Dietary Phytochemicals and Human Health" April 18-20, 2002, Salamanca (Spain) <http://www.usal.es/phytochem/netsymposium.html>

2002 Annual Meeting of the Society for Economic Botany, "Origin, Evolution, and Conservation of Crop Plants: A Molecular Approach", June 22-27, 2002, New York Botanical Garden, Bronx, New York (USA) <http://www.econbot.org/>

WORLD CONFERENCE ETHNOTHERAPIES, October 11-13, 2002, University of Munich, Germany <http://www.institut-ethnomed.de>

## Student's Viewpoint

### ***Graduate Studies in Ethnopharmacology: Bridging the Intellectual Chasm between the Natural and Social Sciences***

Ask any graduate student conducting ethnopharmacological research about their experiences in practicing interdisciplinarity in their program and each will have a different response. Some will attest that it is virtually impossible, while others will maintain that it is readily feasible. The principal challenge entails bridging the academic gap that exists between the social and natural sciences, thereby incorporating sufficient "ethno" in a pharmacological investigation in order to properly position the work as ethnopharmacology.

There is substantial agreement among researchers in ethnopharmacology that not enough pharmacological data is contextualized with adequate ethnographic data, as illustrated in a recent analysis of the contents of the *Journal of Ethnopharmacology (JEP)* (Etkin, 2000; Etkin & Ross, 1997). Since graduate students are significant contributors to journals, deficiencies in the interdisciplinarity of a manuscript may reflect the type of training provided by their graduate programs. Ethnopharmacology rarely achieves the status of a degree-granting academic department, which means that students must configure their thesis through specialization of pre-existing disciplines. Although the university provides the tools and instruction to obtain adequate interdisciplinary training, it is up to the student and their supervisor(s) to insure

that the necessary instructions and training are acquired in order to obtain a more holistic perspective of their project. This usually means that natural science students are encouraged to become familiar with anthropological field techniques, and for those in social science to become familiar with laboratory procedures. Ultimately, both the natural and the social science student should be able to produce a well integrated thesis which adequately reflects the interdisciplinary nature of ethnopharmacology.

However, the natural science student does not have the same academic conditions and advantages as their social science counterpart. Fieldwork is considered a fundamental process for the anthropology student, and may comprise as much as eighteen or twenty-odd months of the degree. As a result, anthropology, and social science students in general, are recognized as having a longer completion time to obtain a doctorate than those in the natural sciences. According to the National Research Council, between 1987-1992, the median years of graduate studies to obtain a doctorate in anthropology was 11.57, while that in chemistry was 6.85 (NRC, 1995). Funding bodies also recognize this difference and support students accordingly. The Social Science and Humanities research Council of Canada (SSHRC) supports a doctoral candidate for up to 48 months, which is twice as long as that offered by the Natural Science and Engineering Research Council (NSERC). The natural science student is therefore compelled to complete their degree before relatively shorter departmental deadlines and before funding is exhausted. Because laboratory analyses are degree requirements, and quali-

tative data are not, the most expendable aspect of an ethnopharmacological inquiry is the collection of ethnographic data. As a result, projects which were originally positioned as ethnopharmacology become straight forward pharmacological investigations using plant (or other) material as a lead. These develop into manuscripts submitted to journals such as *JEP*, and contribute to the increasing number of acontextual pharmacological reports which continue to threaten the interdisciplinary objectives with which the journal was originally conceived. In order to encourage more interdisciplinary research which encompasses the social science domain, it is suggested that natural science departments and policy-makers allow additional time for any project that entail extended field studies and/or anthropological work. Funding agencies can also provide monetary supplements which can be applied for. By alleviating some temporal and financial pressure from natural science students, the likelihood of submitting reports which integrate bioscientific data with traditional empirical knowledge would increase, thereby maintaining the interdisciplinary standards of ethnopharmacology.

Etkin, N.L., 2001. Perspectives in ethnopharmacology: forging a closer link between bioscience and traditional empirical knowledge. *Journal of Ethnopharmacology* 76, 177-182.

Etkin, N.L., Ross, P.J., 1997. A discipline maturing: past trends and future direction in ethnopharmacology. In: Guerci, A. *Salute e Malattia: Indirizzi e Prosettive*. Erga Edizioni, Genova, pp. 85-95.

NRC. 1995. *Research B Doctorate Programs in the United States: Continuity and Change*. National Academy Press, Washington D.C.

***Journal of Ethnopharmacology:***  
***An interdisciplinary journal devoted to indigenous drugs***

The editorial statement of the Journal of Ethnopharmacology has remained practically unchanged since the Journal was first published in 1979. Since then numerous studies in the Journal dealing with medicinal and other useful plants as well as their bioactive compounds have used a multitude of concepts and methodologies. In many cases these were interdisciplinary or multidisciplinary studies combining such diverse fields as anthropology, pharmacology, pharmacognosy / pharmaceutical biology, natural product chemistry, toxicology, clinical research, plant physiology and others (see Soejarto, DD, 2001, Journal of Ethnopharmacology 74: iii). However, many studies still only pay lip services to such interdisciplinary research and there still remains an urgent need to further strengthen the contributions made by anthropology and other social and cultural sciences as well as to explore the political and social implication of our research.

Since 1996 the Journal has been the official journal of the International Society for Ethnopharmacology – ISE. After recent discussions of the membership during the meeting of the Society in Zurich (CH) in September of 2000, the board took the initiative and we proposed a revised statement to the editors and the publisher. We are happy to inform you today about the outcome of this discussion. With this new statement we want to draw attention to the importance of nature-derived products (*plant extracts* and *pure compounds*) in the healthcare of the original keepers of such ethnopharmacological knowledge. This needs to be a main goal of truly interdisciplinary ethnopharmacological research. Ethnopharmacology will also contribute to the development of new pharmaceutical products for the markets of the North. Also, truly anthropologically oriented research on medicinal plants requires not only a detailed understanding of these medicines, but also the scientific support to autochthonous developments in order to make better use of these products. The revised statement can be found on the inside cover of the Journal and reads as follows:

The Journal of Ethnopharmacology is dedicated to the exchange of information and understandings about people's use of plants, fungi, animals, microorganisms and minerals and their biological and pharmacological effects based on the principles established through international conventions. Early people confronted with illness and disease, discovered a wealth of useful therapeutic agents in the plant and animal kingdoms. The empirical knowledge of these medicinal substances and their toxic potential was passed on by oral tradition and sometimes recorded in herbals and other texts on *materia medica*. Many valuable drugs of today (e.g., atropine, ephedrine, tubocurarine, digoxin, reserpine) came into use through the study of indigenous remedies. Chemists continue to use plant-derived drugs (e.g., morphine, taxol, physostigmine, quinidine, emetine) as prototypes in their attempts to develop more effective and less toxic medicinals.

In recent years the preservation of local knowledge, the promotion of indigenous medical systems in primary health care, and the conservation of biodiversity have become even more of a concern to all scientists working at the interface of social and natural sciences but especially to ethnopharmacologists. Recognizing the sovereign rights of States over their natural resources, ethnopharmacologists are particularly concerned with local people's rights to further use and develop their autochthonous resources. Accordingly, today's ethnopharmacological research embraces the multidisciplinary effort in the:

- Documentation of indigenous medical knowledge,
- Scientific study of indigenous medicines in order to contribute in the
- Long-run to improved health care in the regions of study, as well as
- Search for pharmacologically unique principles from existing indigenous remedies.

The Journal of Ethnopharmacology publishes original articles concerned with the observation and experimental investigation of the biological activities of plant and animal substances used in the traditional medicine of past and present cultures. The journal will particularly welcome interdisciplinary papers with an ethnopharmacological, an ethnobotanical or an ethnochemical approach to the study of indigenous drugs. Reports of anthropological and ethnobotanical field studies fall within the journal's scope. Studies involving pharmacological and toxicological mechanisms of action are especially welcome. Clinical studies on efficacy will be considered if contributing to the understanding of specific ethnopharmacological problems.

We hope this will further encourage the scholarly community to submit exciting manuscripts, especially ones, which broaden our theoretical understanding in this exciting and rapidly developing discipline.

On behalf of the editors we also would like to encourage the submission of reviews especially ones focusing on recent methodological developments in the field.

Michael Heinrich, President, ISE, Book Review Editor, JEP

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