

# ISCE NEWSLETTER

Vol. 7, No. 2, June, 1990

International Society of Chemical Ecology

## President's Message

Chemical ecology continues to be a rapidly growing field which is receiving increased recognition from people who are not directly working in the area. During the last year, several conferences were devoted to topics concerning chemical ecology and there are more to come this summer. I am happy to announce that recently two distinguished members of ISCE, T. Eisner and J. Meinwald, who are particularly active in promoting chemical ecology, were awarded the highly prestigious Tyler Prize. Another ISCE life member, W. S. Bowers, has been awarded the Alexander von Humboldt Award. Our congratulations are extended to them.

Our Society is now firmly established and represents a true interdisciplinary forum—(note that borderlines between disciplines are artificial and that nature actually never is “interdisciplinary”!)—and in this regard, our annual meeting is one of our most important events. In addition to this, I encourage small local gatherings. These can provide intense exchange of recent results in research and direct know-how-transfer. The German National Science Foundation (Deutsche Forschungsgemeinschaft) has established a program on “Chemical Ecology: Natural Products Influencing Animal Life” which holds annual meetings and finan-

cially supports 16 research groups. ISCE members are urged to encourage their respective national grant-givers by applying jointly for common research projects.

After having debated “What is chemical ecology?”, we can then ask “What is a chemical ecologist?”. Most of us joined the field from various directions, and it is now our duty not only to promote chemical ecology as a research area but also to try to establish it as a discipline to be taught as part of a curriculum. In this regard, chemists are far behind biologists! When defining the ISCE Statement of Purpose and Areas of Research, we exclusively focused on natural products as target compounds in chemical ecology. However, we must be aware that another rapidly growing area is “ecological chemistry” which environmental chemists are defining as the ecological impact of xenobiotics. Here there is an overlap of definitions. We need to be open to such developments and act to avoid unfortunate competition both for grants and students—(note that actually all synthetic compounds become part of nature as soon as they are produced and released).

On a business note, the executive committee of ISCE has decided that we need to cultivate new members. To that end, I am happy to announce that Dr. M. Rowell-Rahier has agreed to serve as

membership secretary, a position that will function in support of the Society secretary. As I come to the conclusion of my term of office, I would like to thank all who have supported me at the helm of our Society. I am deeply indebted to our past president Dr. J. Meinwald, to our treasurer, Dr. J. Nation, and in particular to our secretary, Dr. N. Targett.

During our next annual meeting, which certainly will represent another highlight in our young history, we will have a lot to discuss. I am very much looking forward to seeing you this August. A bientôt à Québec!

*Wittko Francke*

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## From the Editor

My term of office as ISCE secretary expires in August, and so this is the last ISCE Newsletter that I will edit. I would like to take this opportunity to thank everyone who has sent me information for the newsletter over the last three years. Your interest in the society facilitated my job as editor and enhanced our breadth of communication with members. I'd also like to thank Pam Donnelly and David Barczak, the Marine Communications Office, University of Delaware and Mark Killinger Graphic Communications Center, University of Delaware for the production of the ISCE Newsletter. Finally, I would like to thank my graduate students who spanned the years 1987-1990. It is they who assisted me in an assembly line fashion with the newsletter mailings. I look forward to seeing many of you in Québec!

*Nancy M. Targett*

## ISCE/PSNA Meeting, Québec, 1990

A tentative schedule for the meeting is as follows:

<b>Saturday</b>	
13:30–17:00	Registration (Pavillon Lacerte)
18:00–19:30	Opening Reception
<b>Sunday</b>	
09:00–12:00	ISCE Symposium (part 1)
14:00–17:00	PSNA Symposium (part 1)
17:30–19:30	PSNA Student Paper Competition
<b>Monday</b>	
09:00–12:00	PSNA Symposium (part 2)
14:00–17:00	ISCE Symposium (part 2)
17:30–19:30	ISCE/PSNA General Business Meetings
<b>Tuesday</b>	
09:00–12:00	Submitted papers and posters
14:00–17:00	Submitted papers and posters
18:30–22:30	Banquet at the Chateau Frontenac
<b>Wednesday</b>	
08:30–12:00	Submitted papers and posters

### Information for Participants

**Oral Presentations.** Participants giving oral presentations will have 15 minutes for presentation and discussion. A 35mm slide projector and an overhead projector will be available in the rooms. If you have any other requirements, please contact Dr. McNeil.

**Poster Presentations.** Participants presenting posters will have an area 70 cm x 100 cm for display. Additional information regarding the poster session(s) will be available at the meeting.

**Registration and Accommodations.** The meeting will take place at the Université Laval campus.\* It will begin with registration at 13:00 on 11 August. Three-hundred-fifty single rooms have been reserved in the student residences. They are available on a first-come, first-serve basis for \$27 U.S./night. This includes breakfast and on-campus parking. The registration fee is \$100 U.S. for regular members, and \$40 U.S. for student members. Non-members pay a slightly higher registration fee. The registration fee includes the opening reception on Saturday evening and the banquet at the Chateau Frontenac on Tuesday, August 14. The deadline for advance registration and University housing was June 1. Contact **Dr. Jeremy McNeil, Département de biologie, Université Laval,**

Ste-Foy, Qué., Canada G1K 7P4 to determine University housing availability after June 1.

**Alternatives to Residence Living.** The hotels listed below are all <15 minute walk from campus. If you choose to utilize any of these alternatives, please be sure to mention that you are a participant at the ISCE/PSNA Congress when you make your reservations. Since there are many tourists in Québec City during August, we advise you to make your reservations as soon as possible.

#### Hotel Classique

\$68 CAN for single or double occupancy  
\$78 CAN for two double beds  
(in adjoining rooms)  
Rooms have a kitchenette  
Telephone: 1-800-463-1885  
Fax: 418-658-6816

#### Hotel Germain des Prés

\$82 CAN for single or double occupancy  
Telephone: 1-800-463-5253  
Fax: 418-658-1224

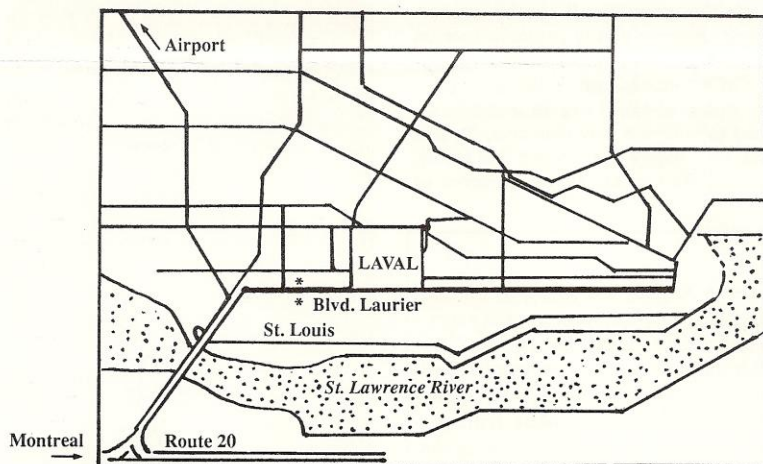
#### Auberge des Gouverneurs

\$88 CAN single/\$108 CAN double  
Telephone: 1-800-463-2802

**Parking.** Parking is free if you are staying in residence. If you are staying elsewhere, you may acquire a permit at the time of registration. Parking is free on the weekend.

**Travel from Airport.** The only means of transport is by taxi, which costs about \$15 CAN. Ask for Pavillon Lacerte on the Laval University campus. Dr. McNeil has a minibus and possibly could arrange for shuttle service. People are encouraged to let him know their arrival times.

**Activities in Québec City.** Bus tours of the old city and the surrounding area are available. These trips vary in length from 1.5 to 7 hours (\$15.00–\$34.00 CAN for adults, \$7.50–\$17.00 CAN for children under 13). Boat rides on the St. Lawrence can also be arranged. A 1.5 hour trip is \$16.00 CAN for adults, \$8.00 CAN for children 5–13 years of age and free for children under 5. Bus tours and boat rides run daily. Reservations may be made when you register.



\*Hotel Classique & Germain Des Prés

## Gerald Norman Lanier

December 9, 1937—January 28, 1990



Entomologist, Chemical Ecologist, Scolytid Ecologist, Systematist, all concisely apply to Gerald Lanier our friend and colleague, Gerald Lanier. "Gerry" died after more than a year's bout with cancer, terminating an extraordinary career of accomplishment in each of his varied activities. He is best known to us as a charter member of the ISCE, a frequent participant with his students at its annual meetings and a member of the Editorial Board of the *Journal of Chemical Ecology* since its inception sixteen years ago.

Dr. Lanier received his B.S. in Forestry at the University of California at Berkeley and, after three years with the U.S. Forest Service as a forester in Stanislaus National Forest, he returned to Berkeley where he earned his M.S. and Ph.D. degrees in entomology. While there, he developed a keen interest in the Scolytidae, collaborating with Drs. David L. Wood and Ronald W. Stark in ongoing studies of several species. Following four years of employment in the Canadian Forestry Service in Calgary, Alberta, where he studied the biosystematics of the genus *Ips*, he joined the Department of Forest Entomology at the SUNY College of Environmental Science and Forestry in Syracuse in 1970.

When Gerry arrived in Syracuse, he immediately became involved in teaching, research and public service. His courses included Forest Shade Tree Entomology, Advanced Taxonomy, Chemical Ecology, Field Aquatic and Forest Entomology (at Cranberry Lake) and Cytogenetics. His broader interests in Biosystematics and Genetics were focused in his basic research in forest and shade tree insects, the chemical ecology of Scolytidae (*Scolytus multistriatus*, *Ips* spp., *Orthotomicus* spp., *Dendroctonus* spp., *Hylurgopinus rufipes*), *Curculionidae* (*Pissodes* spp.) *Cerambycidae* (*Monochamus scutellatus-oregonensis*), Lepidoptera (*Lymantria dispar*, *Choristoneura* spp.) and Homoptera (*Matsucoccus* spp., and *Chermes cooleyi*). On these and other subjects, he has published more than 100 papers, including book chapters and reviews leading to new insights in forest entomology and chemical ecology.

Gerry did not stop once he left the classroom or once his papers appeared in print. He was truly a master in extending his knowledge and information to the general public and to professional practitioners. He was equally at ease discussing insect control with a forester or a tree-care specialist as he was exploring insect tissues and cells to learn of their gene makeup or to probe a single receptor cell in a small bark beetle. He spent considerable energy educating community leaders and convincing them of his multi-step management plan that would result in reduced incidence of Dutch elm disease in American elm. He was active not only in the greater Syracuse area, but was instrumental in saving large numbers of elms in Detroit, Michigan, Washington, DC, parts of Minnesota, and Williamstown, Massachusetts. His expert advice in mass-trapping bark beetles with pheromones was sought as far afield as Sweden and Norway by responsible authorities seeking solutions to protect their spruce and pine forests.

To appreciate fully the significance of these contributions, one must recall that in the '40s and '50s the most reliable control for the European elm bark beetle was 5 lbs of actual DDT mist-blown into the crown of each large American elm! In contrast, this component of an integrated management plan can now be accomplished with a few milligrams of a species-specific pheromone. For this legacy, we are grateful!

His accomplishments have been recognized widely: Sigma Xi Research Prize, Greater Syracuse Chapter; Minnesota Freshwater Biology Foundation Research Award, Award of Merit, International Society of Arboriculture; Medal of the Royal Swedish Academy of Agriculture; and, one that brought him the greatest pleasure, The President's Special Award, Eastern Branch of the Entomological Society of America, at its 1988 annual meeting in Syracuse. Most recently, in appreciation for his intense input in the District of Columbia, The National Park Service, U.S. Department of the Interior, have planted a memorial Dutch-elm-disease resistant Liberty American elm on the southwest side of the Jefferson Memorial, bearing the tag "V-100."

It was easy, during these past twenty years, to develop a deep personal friendship with Gerry. He was hard-working, knowledgeable, capable, unassuming, generous with his time, kind and gentle. For pleasant associations, for his contributions to our science, for improving our environment, and for enriching our lives, we shall

always remember him. Therein we experience a form of immortality, for those we remember will never die; they will walk and talk with us, and their influence will be with us always.

Surviving Gerry are his wife, Carol Katryn Lanier, 1709 Euclid Avenue, Syracuse, NY 13224; a daughter, Lorene, a research technical assistant at the Massachusetts Institute of Technology; and a son, Jason, a student at Alfred University. His parents and two brothers live in California.

A Gerald N. Lanier Memorial Fund has been established, for the support of graduate study in Forest and Shade Tree Entomology/Chemical Ecology at SUNY-ESF. Contributions may be forwarded to the ESF College Foundation, Bray Hall, Syracuse, NY 13210-2778.

John B. Simeone and  
Robert M. Silverstein

## ISCE NewsNotes

Next year's ISCE meeting will be held in Dijon, France. Our meeting host, Dr. Rémy Brossut is planning the meeting for the first week in July. Watch for more information about this meeting in upcoming newsletters.

## Upcoming Meetings

**August 12-18, 1990. Conference on Insect Chemical Ecology, Tabor Czechoslovakia.** Contact Dr. Zdenek Wimmer, Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Flemingovo nám. 2, 166 10 Prague 6, Czechoslovakia.

**September 2-6, 1990. 4th Brazilian Meeting on Organic Synthesis, State of Rio de Janeiro, Brazil.** Main Themes: Fine Chemical Synthesis, Natural Products Synthesis, Strategies in Organic Synthesis, Synthetic Methodologies, Organometallic Chemistry. Contact Dr. Vitor Francisco Ferreira, Universidade Federal Do Rio de Janeiro, Núcleo de Pesquisas de Produtos Naturals, Centro de Ciências da Saúde—Bloco H, Rio De Janeiro Brasil—CEP 21941.

**September 9-15, 1990. Pheromones in Mediterranean Pest Management, Granada, Spain.** Contact OILB Pheromone Meeting, Estación Experimental del Zaidín, c/ Professor Albareda s/n, Apdo. 419, E-18008 Granada, Spain

## W. S. Bowers Receives Alexander von Humboldt Prize



Dr. William S. Bowers, Professor of Entomology and Chemical Ecology at the University of Arizona has received the Alexander

von Humboldt prize for pioneering research leading to the first biorational methods for controlling insects. His discoveries utilize analogs of insect's own hormones to control insect vectors of disease and stored products pests. This innovative technology has worldwide impact in public health protection as well as agriculture.

Established in 1975, the Alexander von Humboldt prize is the most prestigious award given in the United States in recognition of scholarly research applied to agriculture. Emphasizing the safety and selectivity of the new, environmentally pacific insect control measure, the Foundation cited Professor Bowers' "innovative basic research into insect physiology; his discoveries identifying

hormonal mechanisms controlling biological systems; and his development of a biorational approach to controlling insects, which will have widespread application in agriculture within our nation and throughout the world."

A native of Indiana, Dr. Bowers received the AB degree in zoology and chemistry from Indiana University and M.S. and Ph.D. degrees in entomology from Purdue University. His career includes ten years as Senior Scientist with the U.S.D.A.'s Insect Physiology Pioneering Research Laboratory in Beltsville, Maryland. Subsequently, recruited to the faculty of Cornell University, he served as professor for twelve years and simultaneously as Visiting Director of Research for the International Centre of Insect Physiology and Ecology at the University of Arizona in Tucson where he continues his research and teaching as Professor of Chemical Ecology. Dr. Bowers is a life member of ISCE.

*P. H. Evans*

## Eisner, Meinwald Awarded Tyler Prize for Environmental Achievement

The Tyler Prize has been awarded jointly to entomologist Dr. Thomas Eisner and chemist Dr. Jerrold Meinwald of Cornell University for their discoveries on how insects use chemistry to aid in survival and reproduction. In honoring the two men the Tyler committee noted that their work paves the way for the development of new drugs and advances in pest control as well as identifying elements of the biochemical ecosystem before it disappears.

Dr. Meinwald, a life member and past president of ISCE, was identified by the committee as one of the world's leading chemists who has broken new ground in identifying a variety of pharmacologically active substances from unexpected sources. Dr. Eisner, also an ISCE life member, has been actively seeking foundation support for institutes around the world that would supplement conservation activities "chemical prospecting". Both Eisner and Meinwald were instrumental in the passage of the ISCE Gothenburg resolution which noted that conservation of species is important not only for their biological value but also for their potential chemical value.

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## Profile: Jacques M. Pasteels Candidate for Vice-President/President-Elect



Jacques M. Pasteels is presently Professor of Animal Behaviour and Insect Physiology and Head of the Department of Agricultural Sciences at the Free University of Brussels, where he has been since 1962. His interest in the field of chemical ecology began during his Ph.D. on the biology of termitophilous beetles and the role of their exocrine secretions in interactions with their hosts. This work was done in part in Gabon under the supervision of Professor P.P. Grassé (Paris). In 1968–69 he spent a post doctoral year in the U.S. working with Professor D. Kistner on termitophilous beetles and with Professor M.S. Blum on chemical defense of insects. Since then, his main interest follows two principal directions: Social insect behaviour and chemical defense in insects. The most recent development in his work on social insects concerns the behavioral ecology of ants, especially chemical communication during foraging. In close collaboration with Drs. J. L. Deneubourg and S. Goss from Professor I. Prigogine's laboratory, J. Pasteels and his group developed the concept of self-organ-

ization in social behavior using both an experimental and a theoretical approach. During field work in Papua, New Guinea, working with his student Dr. Y. Roisin, his interest was centered on the biology and taxonomy of termites.

J. Pasteels work on chemical defense is the result of a long collaboration (more than 15 years) with chemist colleagues, Drs. D. Dalozé and J.C. Braekman, from Brussels' University. This productive and friendly collaboration lead to the identification of numerous defensive compounds in ants and termites, and also in sawfly larvae, staphylinids, coccinellids and leaf beetle adults and larvae. A special emphasis is given to the evolution of chemical defense as suggested by the taxonomical distribution of chemical compounds, their biosynthesis, biological activity and the ecology of the insects. The most intensively studied group in this respect are the Chrysomelids. More recently, a special emphasis has been given to the influence of host-plant on the chemical defense of leaf beetles. This work is done in close cooperation with his former student Dr. M. Rowell-Rahier, now in Basel. Research on the chemical ecology and biological control of bark beetles is also done in his laboratory,

mainly under the supervision of his former student Dr. J.C. Grégoire.

Professor Pasteels is the author or co-author of more than 150 papers on social insect behaviour and chemical ecology. He is a member of several biological societies, a member of the editorial boards of the *Journal of Chemical Ecology*; *Chemoecology*; *Journal of Insect Behavior*; *Entomologia Experimentalis et Applicata*; *Biochemical Systematics and Ecology*; *Ethology, Ecology and Evolution*; *Insectes Sociaux*; *Annales de la Société Entomologique de France*. He has been a member of the Advisory Board of Foreign Correspondents of the annual *Review of Entomology* between 1984–1986.

His research is financially supported by the Fonds National de la Recherche Scientifique de Belgique, the E.E.C., and various governmental or private foundations. In 1986 he was elected member of the Royal Academy of Sciences of Belgium and in 1987–1988 served as President of the Royal Zoological Society of Belgium. He is a life member of the ISCE and served as Councilor from 1985–1988. He is currently a member of the ISCE Student Travel Award Committee.

## Profile: John T. Romeo Candidate for Secretary



John T. Romeo is a Professor of Biology at the University of South Florida in Tampa where he has been since 1977. His principal research interest is the role of nonprotein amino acids in biological interactions. The isolation and characterization of new compounds from tropical mimosoid legumes and their testing in experimental bioassays is a major focus. Additionally, he has

ongoing projects involving: plant/insect interactions in Florida salt marshes; allelopathy in the Florida scrub community and chemosystematics of the legume genera *Calliandra* and *Inga*. He has travelled and collected extensively in Latin America, collaborates with workers in Brazil, Colombia, and Mexico. His research has been funded by both the Ecology and Systematics sections of NSF, by the International Cooperative Programs of NSF, and by Partners for the Americas.

Dr. Romeo was raised in northern New York. He graduated from Hamilton College

with a B.A. in Biology. While studying for a M.S. degree at the University of Idaho he developed an interest in natural products. At the University of Texas he became a phytochemist, earning his Ph.D. in Botany under E. Arthur Bell. He is a Past-Treasurer and Past-President of the Phytochemical Society of North America, and has been supportive of the ISCE since its inception. Dr. Romeo is married to Trudie, has one son and three cats. In addition to plants, he collects beer cans, barf bags, and baseball cards.

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### INTERNATIONAL SOCIETY OF CHEMICAL ECOLOGY 1990 BALLOT

Please register your vote by marking the boxes and returning the ballot by 1 August 1990 to Dr. Nancy M. Targett, University of Delaware, College of Marine Studies, Lewes, Delaware 19958, U.S.A.

#### Vice President/President-Elect

- Jacques M. Pasteels  
 Other \_\_\_\_\_

#### Secretary

- John T. Romeo  
 Other \_\_\_\_\_