ISCE NEWSLETTER

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President's Message

ISCE, as a working and functioning society dedicated to the "understanding of interactions between organisms and their environment that are mediated by naturally occurring chemicals" is now over 40 years old. A group of scientists working in the relatively new (at that time) multidisciplinary field of chemical ecology decided to establish an international society in 1983, with the eventual ISCE being recognized as a Tax Exempt Scientific and Educational Society in 1984. Over the last decade or so, many of the founders and early members of the society have become less frequent contributors to its activities and meetings. These people not only helped establish and grow the society but also served as scientific and personal mentors to many of us. While we may be familiar with the many scientific accomplishments of these people, especially through the various honors of the society and their



associated lectures, few, I suspect, are so familiar with the commitment of these people to ensuring the wellbeing of the society. As well as organizing meetings, many of them were proactive in nominating fellow members for awards and positions of responsibility within the society. They were engaged and reliable voters in Executive and Council elections, they spoke up at business meetings, and encouraged activities and expenditures that allowed new generations of researchers and students to attend and contribute to annual meetings, so that these people would, in turn become their replacements in the field of chemical ecology.

Unlike larger professional societies, which employ fulltime professional administrative staff, ISCE is dependent for its administration on volunteers from the membership. Much of this

administration is carried out by the Executive Committee and the Webmaster, with contributions by councilors, all complemented each year by the enormous and exhausting contribution made by an annual meeting organizer(s). In the formative years of ISCE, these responsibilities tended to be taken up by many of the founding and original members of the society, but, over time, others have stepped in to help with these duties, so that the society can continue functioning smoothly for all its members. Overall, though, I think it is fair to say that the population occupying these various positions has been somewhat limited in diversity, especially given the relatively diverse membership of the society (e.g., we have members from 45 different countries, and a large percentage of the membership is female). As a colleague pointed out to me the other day, we have had only three women presidents of the society. Whatever the reasons for this lack of diverse representation, it is clear that the society is missing out on the benefits of having a diverse group, representing a multitude of different opinions and ways of seeing problems, speak up and help determine its current and future activities. Whatever the perception is, I can assure you that active participation in the affairs of the society, by all members, from whatever region, seniority (student to retired) or sex, is totally supported and welcomed. This is how the society will remain healthy as the field and demographics of membership change through the next forty years.

So, what as a member of ISCE can one do to make a contribution to the running and future directions of the society? First, make sure you recognize and acknowledge the abilities and accomplishments of your colleagues and nominate them for awards and positions within the society. Second, make sure you vote in the elections (see this newsletter), even if it is only to acknowledge your interest and strong support for a sole candidate standing. Third, let people know that you are willing to volunteer for positions on council/executive or to help out with general operations during the year or at annual meetings – for example, annual meetings always need moderators or judges for student competitions. Fourth, attend and speak up at business meetings; send emails to the secretary, president, treasurer, etc., to ensure your views are heard and taken into account by the Executive. And, finally, remember the (paraphrased) words of John F. Kennedy "Ask not what your society can do for you, ask what you can do for your society".

Stephen Foster

Secretary's Message

As new secretary, I would like to thank the past secretary Anna-Karin Borg Karlson for nominating me as well as for introducing me to the secretary's duties, tricks, and diplomacy. I will do my best to serve the president(s) and you, the ISCE members, to keep you informed about society life. To do so, I would appreciate if you sent me information and news related to chemical ecology, received awards and important achievements. You will then have a worldwide distribution in the next newsletter.

When sending the mass information to members, I noticed that many e-mail addresses are no longer active. Please take a minute and check your information in the membership database http://www.chemecol.org/search.html. If you find out-of-date information about yourself, please send me an update (secretary@chemecol.org). Only in this way, can we maintain contact as a real living society.

I hope you noticed that when you visit the ISCE website, you see wonderful photos on the top banner. These photos change every time you click on another tab in the menu. We would like to have more photos for this purpose, especially from those of you who work in chemical ecology of vertebrates. If you have photos you would like to share with ISCE members, please send them to the webmaster (webmaster@chemecol.org).

Looking forward to seeing you at the ISCE Meeting in Stockholm,

Irena Valterová

ISCE Meeting 2015 in Stockholm – Invitation

Dear members, the schedule for the upcoming conference in Stockholm is continuously developing (<u>www.isce2015.com</u>). Please register as soon as possible and send in your abstract before April 1. We also recommend to book a hotel at your earliest convenience since July is a vacation time in Sweden and hotels may be booked up soon.

To those of you that select to present a poster and those of you that are recommended to give a poster instead of a talk, the posters will have excellent visibility: they will be on display throughout the whole conference easily visible from where the coffee and tea will be served. We also recommend that participants with oral presentations present a poster of the same or other topic.

We, in the organizing committee, look very much forward to seeing you all here in Stockholm. We have ordered nice weather around 20-25 degrees, sunny and no rain; we will find out if we receive this order on time. The worst scenario is 16-20 degrees, rain and windy... Anyway, we will have a nice time together and we recommend you to stay longer in Sweden, before or after the conference, to have time to visit the archipelago on boat or traveling to the midnight sun in the north.

Looking forward to meeting you all at the conference!

Anna-Karin and Christer

2015-16 ISCE Elections

All members are invited to vote in the 2015-16 ISCE Elections. This year, the membership will vote to select a vice president and four councilors. The **vice-president** serves one year in this position and then serves as president in the following year. **Councilors** serve a three-year term and act in an advisory capacity to the Executive Committee. For additional information, please consult the ISCE bylaws, available online at the society website.

Elections are conducted via the ISCE website and a ballot is available through the following link:

• <u>http://chemecol.org/election.shtml</u>

After reviewing the biographies below, please vote for your candidates: **ONE** (1) for Vice President and **FOUR** (4) candidates for Councilors. Please submit this information via the electronic ballot. Voting will close at midnight (EDT) on April 1, 2015.

2015-16 ISCE Elections: Candidate for Vice President

Christer Löfstedt is a Professor in Ecology in the Department of Biology at Lund University, Sweden. He obtained his Ph.D. in Animal Ecology in 1984, became Associate Professor in 1988, Full Professor in 1997 and serves as Head of the Biology Department at Lund since 2010. Christer grew up with an interest in natural history and environmental issues. Merging these interests with a keen interest in chemistry he obtained his PhD with Professor Jan Löfqvist, working within the large-scale research program *Odour signals for control of pest insects*, which involved 4 different Swedish universities. Spending one semester in the laboratory of Professor Wendell Roelofs



at Cornell University's New York State Agricultural Experiment Station in Geneva in the early 1980's strongly influenced his research program. He combines research on the evolutionary biology of chemical communication with applied aspects, usually with a focus on moths. His current research includes evolutionary analyses of pheromone communication, pheromone biosynthesis and pheromone receptors, as well as biological production of pheromones in cell and plant factories using a synthetic biology approach.

Christer has been a member of ISCE since the mid 1980's and attends the ISCE annual meetings regularly. He is also a member of ALAEQ, teaches regularly on international courses on chemical ecology and has a large international network. He has served on the editorial boards of the *Journal of Chemical Ecology* and *Entomologia Experimentalis et Applicata*. He has published more than 170 original scientific papers on various aspects of insect chemical ecology, supervised 20 PhD students and hosted a large number of international post docs.

2015-16 ISCE Elections: Candidates for Councilors

Jan Edgar Bello is a postdoctoral researcher at the Max Planck Institute for Chemical Ecology in Jena, Germany, working under the supervision of Prof. Bill S. Hansson in the Department of Evolutionary Neuroethology. He completed an undergraduate degree in Chemistry at Pepperdine University in Malibu, CA. He then went on to Master's studies in Chemistry at San Jose State University in San Jose, CA, studying the synthesis of carbohydrate based selective anti-cancer compounds. He earned his PhD in Organic Chemistry at the University of California, Riverside under the tutelage of Prof. Jocelyn G. Millar, where his research focused on the isolation, determination of absolute configuration, and



asymmetric synthesis of insect methyl-branched hydrocarbons. Jan's current research continues

to focus on insect cuticular hydrocarbons and their role in mate selection in *Drosophila*. As a PhD student Jan won several prizes, including the presentation award at the ISCE/ICEC conference in 2013. He enjoys chemical ecology because of its multidisciplinary nature, which allows him to apply his love of chemistry to in-depth biological questions.

Renee Maria Borges is currently a Professor and Chairperson of the Centre for Ecological Sciences, Indian Institute of Science, Bangalore, India. She obtained a Masters Degree in Animal Physiology from the University of Bombay, and was awarded a PhD in Biology in 1989 by the University of Miami, Florida, USA, for her work on the role of nutrients and secondary metabolites in forest trees and lianas on the feeding ecology of the endangered, herbivorous Indian giant squirrel in the Western Ghats of India. She focuses on the sensory ecology of plant–animal and insect– fungus interactions. She is particularly interested in how chemicals and host location mediated by chemicals govern mutualistic and parasitic interactions in the following systems: fig–fig wasp associations that also include phoretic nematodes, ant-plants,



fungus-growing termites, and pollination networks. She is currently on the editorial board of *PLoS ONE*, *Acta Oecologica*, *Journal of Biosciences*, and *Journal of the Indian Institute of Science* which, in its centenary year (2015), produced a special issue on Plant Volatiles: Chemistry, Ecology and Evolution that she edited. She has served on the editorial board of *Biotropica* and was a councilor of the Association of Tropical Biology (2001–2003). She has published over 100 research papers including in the Journal of Chemical Ecology.

Consuelo De Moraes is a Full Professor at The Swiss Federal Institute of Technology (ETH) in Zürich, Switzerland. She received her B.Sc. from the Universidade Federal de Minas Gerais (Brazil) and earned her doctorate in Entomology at the University of Georgia (USA). Between 2001 and 2013 she was a faculty member in the Department of Entomology at Pennsylvania State University (USA). Her research explores the role of chemical signaling in interactions among plants, insects, and other organisms, with a particular focus on the role of olfactory cues and signals in inter-specific ecological interactions. Professor De Moraes's findings have been published in leading scientific journals including *Nature, Science,* and *Proceedings of the National Academy of Sciences* and frequently receive coverage from popular press outlets around the world. She is a Fellow of the American Association for the Advancement of Science and of the



Entomological Society of America. Her work has also been recognized via a number of awards and honors, including the David and Lucile Packard Foundation Award, the Beckman Young Investigator Award, the International Chemical Ecology Society's Silverstein-Simeone Lecture Award, and a CAREER award from the US National Science Foundation. Andrés González Ritzel is Associate Professor at the Chemistry Department of Universidad de la República in Montevideo, Uruguay. He has been involved in Chemical Ecology since his days as a graduate student at Cornell University, where he obtained his PhD with Thomas Eisner working on insect defensive chemistry (1999). Later on, his research has focused on basic and applied aspects of insect pheromones and insect plant-interactions, with emphasis on applied systems in Latin America. He has published more than forty papers in the areas of chemical ecology and natural product chemistry, including publications in the Journal of Chemical Ecology, where he also serves as member of the Editorial Board, Chemoecology, PNAS, Journal of Natural Products, Journal of Insect Physiology and The Journal of Experimental Biology, among others. He is a founding member of



ALAEQ (Latin American Association of Chemical Ecologists) and was co-Chair of the first Congress of ALAEQ in Uruguay (2010). He has also served as Vice-President (2009-2012) and President (2012-2014) of ALAEQ, and has been actively involved in the promotion of Chemical Ecology in Latin America, in particular among young students.

N. Kirk Hillier completed a Ph.D. in biology at Memorial University of Newfoundland (Canada), where he studied the use of semiochemicals for pest monitoring of the lingonberry fruitworm, Grapholita libertina. In 2002, he took a postdoctoral position in Neil Vickers lab at the University of Utah and examined the role of courtship odors and olfactory physiology in Heliothine moths. He was recruited as Assistant Professor by Acadia in 2007 and promoted to Associate Professor in 2010, and also has been a Visiting Scientist at the Theodor Boveri Institut (Würzburg, Germany), the Arizona Research Laboratories Division of Neurobiology, Tucson, AZ, and has been an active collaborator with the Max Planck Institut für Chemische Ökologie (Jena, Germany). At Acadia, Dr. Hillier developed a research program comparative evolution olfactory based upon the of neurophysiology and behaviour within insects, particularly



Heliothine moths. His research program has expanded to include an examination of large-scale host-acquisition strategies (field-based), and gene-expression, to include studies of the brain and behaviour from the molecular to ecosystem level. Ultimately this work is being integrated with industrial collaborations for development and commercialization of new pheromone-based control technologies. He has garnered over \$9M in research support since 2007. He is presently PI on a \$7.1M collaborative grant from the Atlantic Canada Opportunity Agency, awarded for applied work on the use of pheromones for insect pest management. Furthermore, Dr. Hillier is director of the Chemical Analysis and Bioimaging Laboratory (CABL), which is one of the most comprehensive laboratories in Canada for analysis of insect olfactory neurobiology in Canada. He has authored or co-authored 27 peer-reviewed publications. Dr. Hillier has supervised 65 graduate, honors and summer students, and in 2012 was awarded the C. Gordon Hewitt Medal

from the Entomological Society of Canada – a peer nominated, National award for outstanding achievement in Canadian Entomology by a scientist under 40.

Johannes Stökl is Assistant Professor at the Institute for Zoology at the University of Regensburg. He received his MSc in Vienna in 2002 and his PhD with Prof. Manfred Ayasse at the University of Ulm in 2007. He then spent two years as postdoc with Prof. Bill Hansson at the Max-Planck-Institute for Chemical Ecology in Jena. In 2009 he moved to Regensburg to the lab of Prof. Joachim Ruther, where he established his own group to study hymenopteran parasitoids of *Drosophila*. His research focuses on the chemical mimicry in deceptive pollination systems and the evolution of chemical communication. Johannes has published numerous papers in international journals (e.g. Current Biology, Nature Communications, Proceedings Royal Society B, and of course the Journal of Chemical Ecology) and is currently guest editor for a special issue on the "Chemical Ecology of Parasitic Hymenoptera" in BioMed Research International.

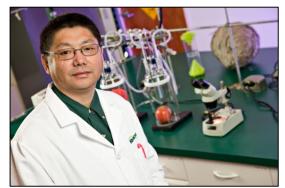
Jeff Weidenhamer is Trustees' Distinguished Professor of Chemistry at Ashland University, an undergraduate institution in north central Ohio, USA where he has taught for 25 years. He studied chemical ecology with Prof. John Romeo at the University of South Florida, where he received his Ph.D. in 1987 for studies of allelopathic interactions in the Florida scrub. He served two years as a post-doctoral researcher for Prof. Nikolaus Fischer at Louisiana State. His research has focused on both the Florida scrub and on methodological issues in allelopathy, and has shown that density-dependent phytotoxicity effects can be used to distinguish allelopathy and resource competition. He has developed new methods for soil analysis based on silicone materials to measure allelochemical dynamics in the rhizosphere. This technique has been used to show transport of biologically active concentrations of root-exuded allelochemicals through the





mycorrhizal network in soil. His research in chemical ecology has been funded by the US National Science Foundation, and he has served as a Fulbright Senior Science Specialist in Agriculture. In 2014, he received an Australian Endeavour Research Fellowship for work at Charles Sturt University in New South Wales. Jeff has received the Molisch Award for his research contributions from the International Allelopathy Society. He has 44 published papers in allelopathy and chemical ecology. He also has published 11 papers documenting heavy metal contamination of consumer products such as toys and jewelry, which has resulted in numerous recalls in the USA for lead and cadmium contamination, and has been cited in a US Congressional resolution calling for a ban on the export of electronic waste.

Qing-He Zhang has been working as the director of research at Sterling International, Inc. since 2004, in charge of research and development for the company. He received his B. Sc. and M. Sc. in Agricultural Sciences from Northeast Forestry University, Harbin, China and Ph.D. in insect chemical ecology - plant protection biology from Swedish University of Agricultural Science. As a postdoctoral research fellow, he worked at USDA/ARS Chemical Affecting Insect Behavior Lab (CAIBL) at Beltsville,



MD and at the Department of Entomology, University of Maryland between 2002-2003. Since 1986, Dr. Zhang has been working on various national and international research projects in the area of insect chemical ecology and application of semiochemicals as insect control strategies at several research institutes and universities in China, Portugal, Germany, Sweden and the USA. Dr. Zhang's expertise in electrophysiology, insect behavior and chemical ecology has led him to identify pheromones, kairomones, synomones and other semiochemicals from many economically important pest/beneficial insects (filth flies, mosquitoes, yellowjackets, paper wasps, stink bugs, bark beetles, plant bugs, green lacewings, antlions, pine sawflies, pine moth and longhorned beetles etc); many of them have been used in operational pest management practices, such as monitoring and mass-trapping. Dr. Zhang was the PI for a DoD-SBIR-Phase I/II project (2008-2010) and a NSF-SBIR-Phase I project (2010). Dr. Zhang has published more than 120 peer-reviewed papers in leading scientific journals (including Annual Review of Entomology, Current Biology, PLoS ONE, Okios and Journal of Applied Ecology, Journal of Chemical Ecology). Dr. Zhang owns 21 patents (19 U.S., 1 Chinese, and 1 Australia), and has >10 pending patent applications on insect traps, attractants and repellents. He is currently a councilor of APACE, an associate editor for Frontiers in Ecology and Evolution (Chemical ecology), an editorial board member for Chinese Journal of Ecology, Journal of Environmental Entomology; and a guest editor for a special issue on "Ecological Interactions of Bark Beetles with Host Trees" for Psyche. Dr. Zhang has been honored with over 10 national and international academic awards and prizes including the recent U.S. Federal Laboratory Consortium (FLC) Mid-Atlantic Regional Award for Excellence in Technology Transfer (2010). He was the Vice president and President for Overseas Chinese Entomologists Association (OCEA, 2006/2007).

Other News and Positions Available

Positions available, conferences in related areas and other news are continuously posted at the society website: <u>www.chemecol.org</u>.