

ASP NEWS



Spring 2011

vol. 40(2)

Letter from the President



Dear ASP Colleagues,

I hope that 2011 has gone well so far for you. I wanted to update you on ASP activities since the last issue of *ASP Newsletter*. A number of new committee chairs have been appointed and they have formed committees with broad representation. The current chairs and committee members are provided on page 6 of this issue and on our web site. This is an ongoing process, so please volunteer to serve on any of committee to which you would like to contribute.

A major focus of the Executive Committee as a whole and **David Mitchell** and myself in particular, has been planning the 36th ASP meeting in Montreal. Many thanks to those of you who have volunteered to help with the organization and have already made suggestions for the meeting. Photobiology is a rich and diverse discipline and we hope to cover both traditional and new topics. Some of the many topics being considered are optogenetics, nanotechnology, environmental photobiology, UV effects, PDT, immunology, cell signaling, imaging, spectroscopy, and several educational initiatives

IN THIS ISSUE

President's Message.....	1
Tale from the Archives.....	2
Letter from the Editor.....	2
ASP & Social Networking.....	3
New ASP Council Members.....	4
ASP 2012.....	4
EYIC Conference.....	4
Research by ASP Members.....	5
The Analemma.....	5
ASP Councilors and Committees.....	6
Upcoming Photobiology Events.....	7

including grant writing (with possible NIH involvement). A hallmark of the ASP meetings in the past has been sessions on plant photobiology and photosynthesis. Sadly we have not yet been able recruit investigators who would be willing to coordinate such a session. We will be contacting some of you to join the Program Committee.

Please feel free to volunteer to participate if you have specific ideas that could become part of the program. You are always welcome to provide ideas for the meeting and the ASP in general at any time. We also encourage all members to join us in Montreal and to introduce non-members to the ASP. We are particularly keen on participation by junior scientists and are working hard on raising funds to enable broad attendance.

ASP-2012
June 23-28, 2012, Montreal (Canada)

Happy spring, which some of you have already been enjoying, while for others the hope of “no more snow”, blooming crocuses, daffodils, and tulips is just starting!

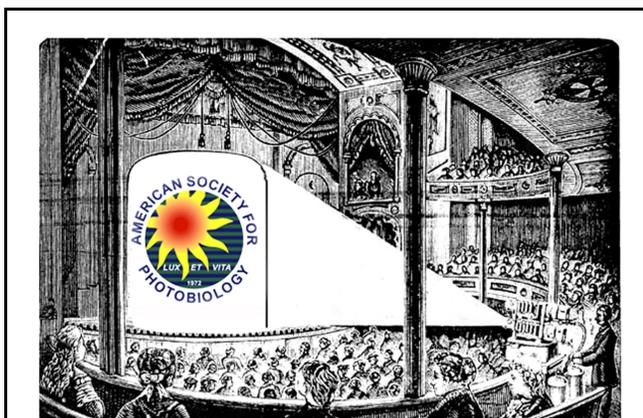
-Tayyaba Hasan

Tale from the Archives

Quite frequently, during a scientific presentation, we hear the speaker refer his PowerPoint images as 'slides'. Where did this phrase come from? Where are the slides?

During the early days, once the chalk and blackboard had been retired, scientific meetings involved the projection of images contained on 3x4 pieces of glass that were slid into the beam of a projector, produced by a 1000-watt arc lamp system with a cooling fan that often precluded hearing the lecture for those in its immediate vicinity. In even earlier days, a lime-light was used, with a gas-oxygen or hydrogen-oxygen flame was directed toward a bit of calcium oxide that gave off an exceptionally bright glow.

Lecturers were obliged to carry a set of these 'lantern slides', weighing about 50 grams each. The tendency of some speakers to bring 100 slides (5 kg!!) for a 10-min talk was thereby precluded by the weight involved.



Representation of a slide shown at the first ASP meeting. Those with keen eyesight will be able to spot many illustrious participants in the audience

I recall my first 'slide' presentation with the 3x4 glass slides at a FASEB meeting in one of those moldy old Atlantic City hotels, long since replaced by casinos. All speakers were toting around bundles of lantern slides, hoping not to drop any. In the 1000-watt projector beam, some slides were known to melt, with assorted lettering and symbols rapidly migrating to the top of the
(continued on page 3)

Letter from the Editor

Happy spring to all! I hope that you are enjoying the warmer weather and increased sunshine. The change in seasons and the longer days led to me to become interested in the seasonal changes of the Sun's position. These changes can be described as an analemma, a figure-eight-shaped curve that shows the position of the Sun from a fixed geographic position at the same Universal Time every day for a year. Page 5 of this newsletter features a photograph (actually a series of multiple exposures) of an analemma and a description of the methods used to construct this photograph.

ASP Homepage Usage Stats

Dates: Jan 5 to April 11, 2011 (97 days)

Total page views: 3702

Average page views per day: 38.2

Behind the scenes, we have been working very hard on an update of the ASP web site. I hope to have the new version posted online very soon. As webmaster, my name and e-mail will be on the bottom of all web pages, but this effort was led by **Tayyaba Hasan** and we had the participation of **Linda Hardwick, Sarika Verma, Tom Vogelmann**, and many other Councilors and members. As always, we will be tracking visitors to our homepage. The next issue of the newsletter will provide a detailed report of the characteristics of our visitors and a brief explanation of how tracking is accomplished.

As always we look forward to your feedback.

ASP News

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screen (corresponding to the bottom of the slide). Speakers in this situation were obliged to talk fast, hoping to outrace the slide contents. Any coloring on these plates was usually done with a brush and watercolors, because color-film transparencies were very expensive and sensitive to heat.

A major breakthrough occurred in the 1960s when the 2x2 inch slide was introduced. This removed the impediment of weight as a limit to the number of slides that could be carried, to the dismay of audiences. The smaller slides were initially made from glass, but this was soon replaced with positive film. Then Kodachrome and other products provided real color for photographic presentations. Projectors were no longer capable of lighting a small city.

With the advent of PowerPoint and similar programs, the possibilities underwent a seismic shift. Now, countless images could be brought along, including those containing migrating structures, dancing molecules, even brief motion pictures. Sound could even be incorporated, although this is currently not much used. A single USB drive was capable of handling dozens of presentations so that the habitual lecturer could wander the world with only a small device in a convenient pocket.

So the next time you hear someone asking for the 'next slide', remember that there was a time when this was the signal for the projectionist to slide the next 3x4 chunk of glass into the beam of a mini-searchlight, retrieving the prior image with a gloved hand so as to avoid a serious burn.

Today, the using the archaic term 'slide' is about as appropriate as is referring to video as 'footage'. That was relevant when real film was used, but a collection of video images is not measured in feet, the last time I looked.

-David Kessel

Light thinks it travels faster than anything but it is wrong. No matter how fast light travels, it finds the darkness has always got there first, and is waiting for it.

-Sir Terry Pratchett (English novelist)

ASP and Social Networking

Social networking can enable science to advance more rapidly. We all attend scientific meetings as members of professional societies. It is the hope that such conferences will host fruitful interactions, bring our work and ideas to scrutiny, and foster the sparks of new ideas and collaborative efforts.

As we move deeper into the 'Cyber Age', the continuous stream of media proceeding in real-time has begun to pervade all aspects of our lives. Yes, even our home appliances will be online in the near future. Thus, it was not surprising to see that one of our most popular social networking sites has become a tool for biologists.

A team of ichthyologists, lead by **Brian Sidlauskas** of Oregon State University, recently turned to their colleagues on Facebook to hasten the identification of more than 5000 specimens. The specimens were collected during a study sponsored by Smithsonian National Museum of Natural History to survey fish diversity of the Cuyuni River of Guyana.



Hypostomus plecostomus, a species from Guyana identified by use of social networking provided by Facebook (image from the Smithsonian web site).

The team posted photographs of the specimens on Facebook. In less than 24 hours, roughly 90% of the specimens were identified!

Works like this should inspire us to tap into the resource of social networking that we have in the Facebook ASP group. Our Facebook group can help to break down the geographic and temporal boundaries that often reduce the rate of scientific discovery and communication.

You can read more about this Smithsonian

project from the *Smithsonian Science* web site:

<http://www.bit.ly/smithsonian-fish>

Please also feel free to contribute to the ASP Facebook page:

<http://on.fb.me/photobiology>

-Ulysses Sallum

New ASP Council Members



Jarod Finlay

The ASP would like to announce your three newly elected council members, **Jarod Finlay** (University of Pennsylvania), **Anna-Liisa Nieminen** (Medical University of South Carolina), and **Joanna Turner** (University of Southern Queensland).



Anna-Liisa Nieminen

Congratulations to all!

These three ASP members will take office in June 2011 at the ASP summer Council meeting, at which time **Theresa Busch**, **Bruce Branchini**, and **Robert Sayre** will be rotating off Council.



Joanna Turner

We look forward to receiving your nominations for next year's Council election.

ASP 2012

ASPP-2012 will be June 23-28 of 2012. We will also be celebrating the ASP's 40th anniversary! The meeting will be at the Delta Centre-Ville in Montreal, Canada.

The Program Chairs, **David Mitchell** and **Tayyaba Hasan**, are already hard at work putting the program together. If you have any ideas or suggestions for this meeting or for our 40th

Anniversary, please feel free to send them to me at: lhardwick@allenpress.com



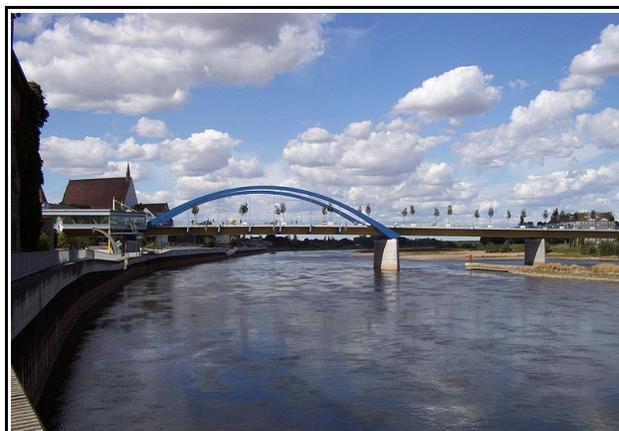
View of Montreal from the Chalet du Mont Royal (image from Wikipedia Commons).

Mark your calendars, you won't want to miss this one!

-Linda Hardwick

European Young Investigator Conference

We are pleased to announce the 5th European Young Investigator Conference (EYIC) to be held on June 22-26, 2011 in Slubice (Poland) and Frankfurt/Oder (Germany). These EYIC conferences specifically aim at the active participation of younger scientists. Active participation means that young investigators, typically consisting of graduate students and postdocs below the age of 35, are specifically invited to present their scientific work in the above mentioned fields (orally and/or on posters).



The bridge connecting Frankfurt/Oder and Slubice (image from Wikipedia Commons).

The scope of these EYIC Conferences is to bring together chemists, physicists and biologists interested in all aspects of the interaction between

radiation (of low and high energy) and matter. All participants should share an interest in free radical chemistry, radiation chemistry and physics, photochemistry, radiobiology, life sciences, and environmentally related topics that cover experimental and theoretical aspects. The conference will be jointly organized by the University of Erlangen-Nuremberg and the Adam Mickiewicz University in Poznań. Please find more information and the registration form on the conference website:

www.chemie.uni-erlangen.de/eyic

-Christian Ehli

Research by ASP Members

PDT of Dermatophytes

Photodynamic therapy (PDT) is a treatment modality in which patients are given a photosensitive agent and then exposed to light. Light activation of the photosensitizer leads to the formation of reactive oxygen species that kill diseased tissues or cells.

Photochemistry and Photobiology (Jan/Feb 2011 issue) features an invited review article on the treatment of dermatophytes by use of PDT written by **Threes Smijs** (The Netherlands) and **Stan Pavel** (Czech Republic). This article is also featured in the cover art of the Jan/Feb issue.

Threes G. M. Smijs and Stan Pavel (2011) The Susceptibility of Dermatophytes to Photodynamic Treatment with Special Focus on *Trichophyton rubrum*. *Photochem Photobiol* 87:2-13.

The authors report that several sessions of red light/5-aminolevulinic acid-mediated PDT is successful in the treatment of onychomycosis (fungal nail infection) and that UVA-1 (340-400 nm) PDT with cationic porphyrins is a safe and effective therapy for dermatophyte infection. They conclude that PDT has good potential as an alternative to antifungal drug therapy for the treatment of dermatophytes, particularly because of the increasing dermatophyte resistance to anti-fungal drugs.

-PAE (modified from ASP web site)

The Earth's Analemma

The earth's analemma is a figure-eight shaped curve that is traced by the Sun when its position is recorded at the same Universal Time over the course of a single year.

Between August 30, 1998 and August 19, 1999 I photographed the sun 36 times on a single frame of 60 mm film. The pictures were taken exactly at 5:45 UT (Universal Time) of every tenth day. Previously, the position of the sun was calculated to determine the optimal time for each exposure. Success was limited by the weather, as there is no guarantee of good weather every tenth day, even for a few minutes!



Analemma, the annual movement of the sun in the sky of Crimea in 1998-99. Photo copyright of Vasily Rumyantsev.

There are approximately 120-170 sunny days per year in Crimea. The camera was fixed for 12 months by attachment to a plug-in platform that was rigidly connected. I used a "Kiev-60" camera with the "Flektogon" 4/50 lens and a neutral filter (N-4). The vertical field of view of the objective was about 50 degrees. Exposures were 1/1000 sec and the diaphragm was 22. When the weather was bad, shooting was postponed for 1-2 days, but no longer. Due to bad weather, there were no photos on Nov 26 and June 20. The background photograph was taken on July 10, 1999 in the evening. For more info, see:

www.analemma.com and www.vrum.chat.ru

-Vasily Rumyantsev

ASP Committees 2011-12

Constitution and Rules: Tayyaba Hasan (chair)
Members: David Mitchell, Beth Gaillard

Executive & Secretariat Liaison: Tayyaba Hasan (chair)
Members: David Mitchell, Beth Gaillard, Linda Hardwick

Finance: John Streicher (chair)
Members: Linda Hardwick, David Mitchell, Tayyaba Hasan, Beth Gaillard

Grants and Awards: Georg Wondrak (chair)
Members: Lanie Hill, Joanna Turner, Carlos Crespo, Thierry Douki, Bin Chen, Imran Rizvi, Theo Theodossiou

Historian: David Kessel

Site Selection (2012): David Mitchell, Tayyaba Hasan (co-chairs)
Members: John Streicher, Linda Hardwick

Membership: Pawel Mroz, Kimberley Samkoe (co-chairs)
Members: Jarrod Finlay, Patrycja Nowak-Sliwinska, Bin Chen, Scott Murphy, Linda Hardwick

Education and Mentoring: Theresa Busch (chair)
Members: Beth Gaillard, Anna-Liisa Nieminen, Julia Sandell, Frank Gasparro, James Shinkle

Publications: David Kessel (chair)
Members: Tayyaba Hasan, Jean Cadet, David Mitchell

Web site: Tom Vogelmann, Sarika Verma (co-chairs)
Members: Peter Ensminger, Linda Hardwick, Tayyaba Hasan

ASP Councilors

Wolfgang Gaertner (2010-13)
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Francesco Lenci (2010-13)
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Tom Vogelmann (2010-13)
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Antony Young (2009-12)
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Theresa Busch (2008-11)*
buschtm@mail.med.upenn.edu

Bruce Branchini (2008-11)*
brbra@conncoll.edu

Robert Sayre (2008-11)*
RPTL@aol.com

Ulysses Sallum (associate councilor, 2010-12)
usallum@partners.org

*In June 2011, **Jarod Finlay**, **Anna-Liisa Nieminen**, and **Joanna Turner** will take office, as Theresa Busch, Bruce Branchini, and Robert Sayre rotate off Council.

Photobiology Events

Interactive Map/Table:
www.pol-us.net/meetings.html

May 10-14, 2011

13th IPA World Congress: International Photodynamic Association
Innsbruck (Austria)
Web site: www.ipa2011.at

May 15-20, 2011

Spin Chemistry Meeting 2011
Noordwijk (Netherlands)
Web site: scm2011.leidenuniv.nl

May 17-20, 2011

21st Inter-American Photochemical Society Conference
Mendoza (Argentina)
Web site: www.inifta.unlp.edu.ar/iaps21/index.html

May 22-26, 2011

SPIE/OSA European Conference on Biomedical Optics
Munich (Germany)
Web site: spie.org/x6140.xml

May 29-June 3, 2011

GRC: CO₂ Assimilation in Plants: Genome to Biome (GRC) Les Diablerets (Switzerland)
Web site: www.grc.org

June 2-4, 2011

First Meeting of the Molecular Argentine Photobiologists"
La Plata, Argentina
Web site:
www.inifta.unlp.edu.ar/eventos/fotobiologos.pdf

Jun 9-11, 2011

6th International Laser Therapy Conference
Toronto (Canada)
Web site: www.internationallaser.org/index_new.html

Jun 11-17, 2011

Photosynthesis, Bioenergy and the Environment (GRC)
Davidson NC (USA)
Web site: www.grc.org

June 22-26, 2011

5th European Young Investigator Conference (EYIC)
Slubice (Poland) and Frankfurt/Oder (Germany)
Web site: www.chemie.uni-erlangen.de/eyic

Jun 26-Jul 1, 2011

Frontiers in Optical Bio-imaging and Microscopy
ICMAT2011

Suntec, Marina Centre (Singapore)
Web site: www.mrs.org.sg/icmat2011/s27.htm

Jul 9-15, 2011

Photochemistry (GRC)
Easton MA (USA)
Web site: www.grc.org

Jul 24-28, 2011

ICTPPO-2011
Berlin (Germany)
Web site: ewww.mpi-muelheim.mpg.de/ictppo2011

Aug 6-10, 2011

Plant Biology 2011
Minneapolis MN (USA)
Web site: my.aspb.org/?page=Meetings_Annual

Aug 7-11, 2011

25th International Conference on Photochemistry
Beijing (China)
Web site:
www.conferencenet.org/conference/ICP2011.htm

Aug 28-Sep 1, 2011

14th International Congress of Radiation Research
Warsaw (Poland)
Web site: www.icrr2011.org/main/article/ptbr

Sep 2-7, 2011

ESP Congress
Geneva (Switzerland)
Web site: www.esp-photobiology.it

June 23-27, 2012

GRC: Photosensory Receptors and Signal Transduction
Galveston TX, USA
Web site: www.grc.org

June 23-28, 2012

ASP-2012: 36th ASP Meeting
Montreal (Canada)
Web site: www.asp2012.org

Aug 20-24, 2012

Plant Biology 2012
Austin TX (USA)
Web site: my.aspb.org/events/event_list.asp

Oct 21-26, 2012

IPMB-2012: 10th International Congress on Plant Molecular Biology
Jeju City, Korea
Web site: www.ipmb2012.org/main.html

All Submissions to:
ensmingr@twcny.rr.com

American Society for Photobiology



Lux et Vita since 1972

The American Society for Photobiology promotes research in photobiology, integration of different photobiology disciplines, dissemination of photobiology knowledge, and provides information on photobiological aspects of national and international issues.

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\$120/yr Member (online access to *Photochem Photobiol*)

\$228/2-yrs Member (online access to *Photochem Photobiol*)

\$160/yr Member (printed version and online access to *Photochem Photobiol*)

\$308/2-yrs Member (printed version and online access to *Photochem Photobiol*)

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\$0/yr Emeritus (online access to *Photochem Photobiol*)

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