

The Tallahassee Scientist

THE NEWSLETTER/JOURNAL OF THE TALLAHASSEE SCIENTIFIC SOCIETY

Eighteenth Annual General Meeting a Gala Event

On Monday, September 10, 2007, the beautifully-appointed Werkmeister Reading Room at Dodd Hall on the Florida State University (FSU) campus was transformed into a banquet hall for the Tallahassee Scientific Society’s Eighteenth Annual General Meeting. Although dinner was an optional item on the evening’s program, most attendees (71 in all) opted for it, and enjoyed a delightful meal served in style by the efficient university caterers.

A handful of participants joined the meeting after dinner for the evening’s agenda, the first item of which was the presentation of the Society’s 2007 Gold Medal of Honor. This year’s recipient was Professor Joseph Travis, Dean of the College of Arts and Sciences at FSU, whose work in modeling links between Ecology and Evolution was highlighted. Professor Travis was the special Guest Speaker for the Annual General Meeting, which attracted a cross section of the FSU scientific community. His theme was, *Exploring Where Evolutionary Biology Meets Ecology*.

The Business Meeting that followed the presentation by Dr. Travis indicated that the event attracted more guests than members of the Society - an unusual statistic. Business transacted was according to the Articles of Association, the Bylaws and the State of Florida Law, and resulted in twelve Directors and four Officers being installed, to serve the Society for the year 2007/8.

The Board met on October 1, 2007, to appoint the Operating Committees for the year, and a report of this meeting appears elsewhere in the *Tallahassee Scientist*.

From Our President. . .

Science Education: A Wake-Up Call

The saga of the state of K-12 education in the United States continues.

Recently, the October issue of *Discover* (a special anniversary issue) had as its theme “The State of Science in America.” I continue to see editorials in the trade journals decrying the lack of qualified applicants in their specific areas of interest (“Back to School (Again)” in the September, 2007, issue of *Government Technology*, where we are asked, “Are schools doing a good job preparing students to compete for the jobs and careers of the 21st century?” “H-1B Visa Debate Resumes,” in the September 24, 2007, issue of *eWeek*; and in the 27 September, 2007, issue of *Nature* we find a column on “Passing the Test”), and I have friends who are teachers who are tired of dealing with students whose primary aim while at school are social contacts and disruption - not education.

Despite all the interest in the topic, evidence for anything of significance happening is slim. I still see internet-spread e-mailings about Mars appearing to be as large as the Moon, folks denying the existence of global warming (or at least denying any significant role of mankind in influencing it in any manner), and articles in national news maga-

zines (such as the one in the *Tallahassee Democrat* recently) which had superscript instead of subscripts in their chemical formulas (H²O instead of H₂O). If a simple convention such as this is incorrect, how could I possibly have any faith that the complex technical issues were covered properly?

While the media continue to provide us with information about these issues, and federal and state initiatives work their way through the system, little of significance seems to be happening. I quote Jim Rapoza from the *Government Technology* article, “...when it comes to keeping America competitive, the key battle isn’t over letting in more smart people from other countries. It’s about making sure that the future smart people don’t end up getting left behind.” It seems that our principal local print medium, the *Tallahassee Democrat*, gives lengthy and detailed coverage (to the point of absurdity) to local football games (which are discussed at length in the sports section, covered again in the Game Day magazine section, and then analyzed to death the day after the game while gleefully roasting the coaches and players with 20/20 hindsight). If critical technical issues (such as the coal-fired electric generation plant, or global warming) get any coverage, it tends to be superficial, with limited background information being provided. The major concern is that we seem to know what is wrong (teachers aren’t really trained in the subjects that they teach), but because there is no central authority, each state and local group has different problems with no coherent plan or mechanism to solve that problem.

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Board Appoints New Operating Committees for 2007/8

At its first meeting after the Society's 2007 Annual General Meeting, the Board of Directors took steps to appoint the operating committees for the year 2007/8. The required attention to detail resulted in only a half of the committees being appointed by the time the October 1 meeting ended, and the remainder will be confirmed at the October Executive Committee meeting.

TSS operating committees are responsible for carrying out the several activities which together comprise the Society's objectives. Committees appointed so far are:

- **Awards Committee:** Dr. Ray Bellamy and Mr. Richie Schwerdt, Co-chairs, Dr. Bob Rowland.
- **Gorrie Traveling Lecture:** Mrs. Yvonne Salfinger, Chair, Dr. Claudius Mundoma, Mr. Tawainga Katsvairo; Dr. Martin Balinsky.
- **Lannutti Memorial Lecture:** Dr. Susan Blessing, Chair, Dr. Penny Gilmer, Dr. Bill Green, Mr. Al Hall.
- **Leon Association for Science Teaching:** Mr. Carlos Villa, Chair, Mrs. Sheila Boylan, Mr. Stan Rosenthal, Mrs. Robin Will.
- **Program:** Dr. Barry Boerner, Chair, Dr. Steve Blumsack, Dr. James Brooks, Mr. Al Hall, Mr. Frank Stephenson.
- **Public Affairs:** Dr. Joe Cain, Chair, Dr. Ray Bellamy, Dr. Ben Fusaro, Mr. Tom Greenhalgh, Mr. Helge Swanson.

Each of these committees needs additional members, and the Board is requesting TSS members to volunteer for service as they are able. Please send an E-Mail to halla@talgov.com to indicate the committee on which you wish to serve.

The remaining appointments will be announced in the next issue of the *Tallahassee Scientist*.

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I attended the global warming forum on Thursday, 4 October 2007, and while participants received a handout with some good ideas on what we can do personally to reduce the problem, most of the presentations were from local government folks letting us know that things are being done (some significant, some not). One session that tried to give us some science behind this problem was led by a person from our local IFAS group. It's not clear exactly why he was chosen for this, as nothing was provided that gave a list of the speakers (who were pretty much from Leon County government offices, with some Tallahassee folks included) or their credentials.

We were allowed to speak to those in attendance at the end of the program, which was helpful, but it's not clear if anything will be done as a direct result of that feedback. I personally suggested that we are hampered by the lack of scientific knowledge of the general public, and suggested that we become much more serious about improving science education, and the head nodding indicated to me that there was agreement with that idea. We must be ready to present a united front for science education to be sure that those with the power to do something will respond. We have the power to persuade if we will take time to let others know that this is a critical and important issue. Let's get it done!!

Editor's Note - It is in recognition of this problem that the Tallahassee Scientific Society was established - with the specific task, inter alia, of solving it. That solution lies in our hands!

On the Horizon . . .

On the Horizon is a monthly listing of upcoming scientific events being presented by our associates and

ourselves. The information is furnished by our correspondents in the respective organizations.

THE TALLAHASSEE MUSEUM is celebrating its fiftieth anniversary this year, an event that is being marked by special activities. Their annual *Zoobilee* takes on a Caribbean vacation flavor, and will be held on Friday, October 12, from 7 to 10 p.m. The program is for Adults only, and includes food and drink served up by local participating restaurants. The event is also one of their fund-raising activities, and tickets will run \$35 in advance or \$40 at the door. [Please see additional item on page 3].

Third Thursdays, such as October 18, are special at THE BROGAN MUSEUM OF ART AND SCIENCE. You are invited to spend the evening at the Brogan, downtown, for special shows, presentations, supper, and so forth. (The October 18 program was not available up to press time).

THE FSU PHYSICS DEPARTMENT is hosting its annual series of Saturday Morning Physics for high school juniors and seniors. The program is intended to generate interest in Physics, and to teach in an entertaining way. It began on September 29, and runs as follows:

- September 29: *Physics of Waves*
- October 6: *Physics on the Web*
- October 13: *From Electrons to Quarks*
- October 20: *Nuclei, Neutron Stars and Black Holes*
- October 27: *Exotic Materials*
- November 3: *The Science and Technology of Magnets*
- November 10: *Physics of Sports*
- November 17: *Astronomy of the New Millennium*

Except for the November 3 event, the program is being held at the FSU Richards Building, UPL 101, beginning at 9:30 a.m. each Saturday. November 3 will be at the Magnet Lab.

Health Matters

Members are invited to listen to radio station WTAL 1450 AM on Tuesdays from 1:00 to 1:30 p.m., for the following presentations on enjoying good health:

- October 2: *Breast Cancer*, by Dr. Tim Broeseker, Hematology Oncology Associates.
- October 9: *Stress and Depression*, by Mr. Larry Kubiak, TMH Behavioral Health Center.
- October 16: *Preparing Healthy Meals*, by Chef Matrell Hawkins, Specialties Gourmet.
- October 23: *Obesity*, by Dr. Maria Spicer, FSU Nutrition, Food and Exercise Sciences.
- October 30: *Lung Cancer*, by Dr. Eric Rost, Oncology Llc.

The program is entitled, *To Your Good Health*.

Tidbits

Tidbits is a selection of scientific news, of interest to TSS members, gleaned from far and near.

- **“Trucking” drugs through the body.** The September/October issue of MIT’s *Technology Review* reports that researchers at Johns Hopkins University School of Medicine and University of Delhi, India, have developed a process to transport insoluble drugs to the places in the body where they are needed. Working with curcumin, the pigment that gives the curry spice turmeric its bright yellow hue, the researchers found that it produces beneficial effects in the treatment of tumors, cystic fibrosis and Alzheimer’s disease, but because it is insoluble, they could not provide for it to reach the points where it was needed in the system. So they turned to nanotechnology, and developed a 50-nm “truck,” hydrophobic on the inside and hydrophilic on the outside, filled it with the pigment, and injected it into the test cases. Once in the blood stream, the carriers dissolve, and the curcumin is free to circulate. Animal studies will begin shortly at Johns Hopkins.
- **“Portable” Hurricane.** It is now possible to conduct actual tests of the effects of hurricanes on structures and trees, instead of (in addition to?) relying on calculations. Engineers at the University of Florida have developed a truck-mounted source of wind power, equivalent to a Katrina-like hurricane, complete with the water spray, which may be set up at any desired point. The unit consists of eight five-foot fans, powered by four 700-hp marine engines, with a water injection system and controls to simulate the various turbulences in a hurricane. The data gleaned will be used to update Florida’s building codes. This item also reported in MIT’s *Technology Review*.
- **Collapsing Bridges.** The thought alone is heart-wrenching. But the recent Minneapolis tragedy has awakened us from complacency, and there are plans to apply the sciences to maintaining our bridges. Let us, as scientists and technologists, apply our expertise toward shortening the discussion, and spearheading productivity. The October issue of the *Professional Engineer* discusses this at length.
- **Automobile Test Dummies** are reminiscent of “bionic men.” They are fitted with a massive array of instruments and transmitters, to provide simultaneous simulation of the several effects of different types of car crashes on the human body. The objective, of course, is to use this information in the design of safety factors for the driver and passengers, as much as possible.

The October issue of *Spectrum* magazine takes readers on a virtual tour of the manufacture of these dummies. The publication may also be accessed at www.spectrum.ieee.org.

An Invitation. . .

The Tallahassee Museum *Golden Jubilee*

The Tallahassee Museum cordially invites you to attend their Fiftieth Anniversary Celebration, to be held on Saturday evening, November 10, at Ayavalla Plantation. The celebration will feature wonderful music, an exquisite dinner exquisite company, and a grand finale. Music will be provided by the Tallahassee Swing, and Bill Wharton and the Ingredients. An auction sale will also be held.

Tickets are \$125 per person. Proceeds will benefit the Museum’s Endowment Fund, to help pave the way for the future.

For reservations, please call 575-8684, Ext. 140.

What’s happening in your corner?

The *Tallahassee Scientist* would like to hear from members regarding projects and activities in which you are involved. Are there any new developments (no trade secrets, please)? Member achievements? Organizational changes?

Please send your information to halla@talgov.com. It may be helpful to elect a “reporter” in your organization to send in news items. How about it?

And, of course, our Board is earnestly seeking volunteers to serve on our committees. There is much to be done, and while we do not have time for voluntary service, we are invited to make the time. Volunteers will have that sense of achievement that is itself a reward!