

The Tallahassee Scientist

THE JOURNAL OF THE TALLAHASSEE SCIENTIFIC SOCIETY

First Issue Announces our 2007 Annual General Meeting . . .

WELCOME TO OUR NEW PUBLICATION

July, 2007, saw the last issue of the Tallahassee Scientific Society’s Newsletter, and beginning with this issue, the Society will be publishing a Journal that will reflect the interrelationships between the several disciplines that comprise scientific endeavor in our region. The Journal will, like the Newsletter which it replaces, be a monthly periodical, and an invitation is issued to all our members to contribute to its success as an information organ, primarily for members.

So, to begin, please send us your comments on the format, layout, etc., bearing in mind that this is a work in progress. Please send us news items, too, about scientific activities in which you are involved, discoveries you have made, achievements of individuals and organizations, and anything that can be shared with fellow members. We also invite your letters regarding any item that appears in our pages, or, for that matter, on any scientific subject; we will publish your letter in our “Letters” column, and add any necessary explanation as a comment. You may wish to name one person in your organization as a correspondent for the *Scientist*, and channel your information through him/her.

The Journal is a member benefit provided by the Society, and is therefore sent to members in good standing, only. An abbreviated version will appear on our website, www.tss.eng.fsu.edu.

Let’s do all that we can to make our Journal a success!

Our Eighteenth Annual General Meeting is Just Around the Corner

Monday, September 10, 2007, is the date set aside for our Eighteenth Annual General Meeting, which will take place at the Werkmeister Reading Room in Dodd Hall, Florida State University. Reserved parking for the event will be available in the Diffenbaugh lot, corner Jefferson and Copeland Streets.

The meeting will begin at 7:30 p.m., but a cash bar will be open throughout the evening, beginning at 5:30 p.m. (For those who made reservations, dinner will be served at 6:30 p.m.).

Two presentations will be made, the first by Tyler Rowland, the winner of the TSS Science Fair Award for 2007. He explored the feasibility of using kudzu (*Pueraria lobata*) as a source of ethanol for use as a motor fuel. The second presentation will be by Professor Joseph Travis, who will be awarded the TSS Gold Medal of Honor at the meeting. Dr. Travis’ presentation is entitled, *Exploring Where Evolutionary Biology Meets Ecology*.

Continued on Page 2: AGM

In This Issue . . .

Welcome	1
Annual General Meeting Announcement	1
TSS Mailbox	2
Science News Tidbits	2
• Health Broadcasts	
• Germs In The Office?	
• Boosting the Output of Solar Cells	
TSS Board Meeting, October 1, 2007	2
TSS Operating Committees: <i>An Invitation to Service</i>	3

The Scientist's Mailbox

Evolution/Intelligent Design Conflict an American Problem - TSS Newsletter, July, 2007:

Question about an article that appears in the newsletter, on page 2, in which you refer to an MSNBC report about Britain "mandating the teaching of ID in schools in religious knowledge classes...." I wasn't aware of this, and the most recent article I can find on the topic is this one: <http://www.vnunet.com/vnunet/news/2192888/government-decides-intelligent>.

Also, the U.S. doesn't ban "the teaching of religious knowledge in schools" --or at least not that I'm aware of. Many schools, both public and private, now offer comparative religion classes in their curricula. There are constitutional bans, of course, in promoting religious beliefs, or proselytizing, in publicly funded schools--is that what you were referring to here?

- Frank Stephenson.

[Note: The MSNBC article, dated January 24, 2007, appears on their website at www.msnbc.msn.com/id/16791773. The ban on teaching religious knowledge in USA is primarily school-determined, to solve the problem of lawsuits by organizations like the ACLU.

- Editor].

Tidbits

"To Your Good Health" Talk Radio Programs

Tune in to WTAL 1450 AM on Tuesdays from 1:00 to 1:30 p.m. for a broadcast on some item related to health. The discussion can possibly be one that you need to hear.

Here are the subjects for the month of September, 2007:

- September 4 - *Stroke: What You Should Know*, led by Leonard DaSilva, M. D., Tallahassee Neurological Clinic.
- September 11 - *Kidney Disease*, led by Charlotte Root, R. N., DaVita Home Training.
- September 18 - *Kids Care Outreach Insurance*, led by Pat Smith, Program Coordinator.
- September 25 - *Menopause*, led by Temple Robinson, M. D., Medical Director, Bond Community Center

Germ's In The Office?

The Clorox Company recently sponsored a University of Arizona study to determine the most risky places in offices. Researchers swabbed offices of 54 men and 59 women nationwide, and summarized that:

- The top three bacteria hot spots in women's offices were:
 1. The make-up case,
 2. The phone,
 3. The purse.
- The top three bacteria hot spots in men's offices were:
 1. The wallet (worst offender)

2. Personal digital assistant,
3. The phone.

But there's more. The moldiest spot in the office was the bottom of the desk drawer, due to food being stashed away there occasionally!

The report of this eye-opening study, entitled *Men vs. Women Office Study*, 2006, may be found on www.WebMD Medical News. It is part of a more comprehensive study entitled *Top 9 Jobs Where Bacteria Thrive*, which shows that School Teaching is the most hazardous occupation with respect to bacteria!

Boosting the Output of Solar Cells

With the rising price of oil, plus the emphasis on environmental friendliness, researchers have been working hard to produce solar cells at affordable prices, for installation on the roofs of homes and other buildings. A recent breakthrough came from scientists in Korea and California, who devised a method of boosting the efficiency of cheap plastic solar cells, making them more competitive than traditional silicon solar cells. The method involves piggybacking two layers of light-absorbing, electron-emitting plastics, the combination converting a broader spectrum of light into electricity than either could do alone.

Researchers anticipate the possibility of linking additional layers in tandem, subject, of course, to the transparency of the material.

Now, if we may only get the sun to shine some more in the sunshine state . . .

Boeing 787 Dreamliner Takes to the Skies

Remember the aircraft mentioned in our July Newsletter with a carbon-fiber fuselage made in Italy? Little did we know that its manufacture was already a *fait accompli*. The aircraft is already up and running . . . er . . . flying. It was presented at Boeing's Seattle, Washington, plant in August!

TSS Board Meets October 1

Our Board of Directors will hold a special annual meeting on October 1, to appoint the Society's operating committees for the year 2007/8. The work of some of our committees has been hampered in the past by a shortage of manpower: the success of the Society in fulfilling its objectives depends entirely on the contribution of members.

Elsewhere in this issue, details of the operations are listed, with an invitation to members to take up the challenge and contribute energy and effort towards fulfilling the Society's objectives. It was the recognized need to have these objectives met that resulted in the establishment of the Society several years ago.

AGM - from Page 1

TSS members are encouraged to attend this meeting, and receive and discuss information regarding the operations of our Society. The success of our Society in fulfilling our obligations to our region depends entirely on members' participation.

TSS Operating Committees:

A Call to Service

Given below is a listing of the various operating committees of the Society. The chairs of these committees, together with the officers of the Society (President, Vice President, Secretary, and Treasurer) form the Executive Committee, whose function is to coordinate the activities of the committees. The Executive Committee meets once per month for this coordinating activity; individual operating committees meet separately, as often as is required for the execution of their respective functions.

The Board invites members of the Society to serve on these committees. It is recognized that virtually nobody “has the time” for voluntary work such as the Society needs; members are encouraged to “make the time” to assist the Society to meet its objectives: (a) providing a forum for inter-disciplinary interaction among scientists; (b) making improvements in the process of education in the sciences, and (c) developing public interest in and awareness of the sciences, in our region.

Please scan the following functions of the various committees, then contact our Secretary, Al Hall at halla@talgov.com to volunteer to serve on one of them - either as Chairman or as a member of the committee. Your offer to serve will be a big help to our Board when we meet in October. Some expertise in management would be an asset for volunteers for committee chairs.

PROGRAM COMMITTEE

This Committee organizes the learned-society activities of the Society. Working in liaison with the organization Sigma Xi, the Program Committee brings the multi-disciplined scientific community together for technical presentations, discussion, and inter-disciplinary communication and interaction.

As the committee shares its function with Sigma Xi, an agreement has been reached between the two organizations to have a joint committee for the planning and execution of these activities. A minimum of two representatives from each organization is considered desirable. The Chair is appointed by Tallahassee Scientific Society’s Board of Directors.

AWARDS COMMITTEE

The Awards Committee provides recognition and reward to members, on the one hand, as well as other scientists in the region served by the Society, for outstanding achievements in various fields of endeavor. The Committee defines the field(s) of endeavor at the beginning of the Society’s year of operations (June 1), and determines the method by which candidates may be nominated or otherwise selected, and how the awardee(s) should be determined.

The Committee also plans the Award Ceremony - whether a comprehensive stand-alone ceremony, or a part of a special meeting or conference, such as the Society’s Annual Meeting. The Awards Committee has three or four members, named from among the members of the Society. One of these persons is designated as Chair.

COMMITTEE ON SCIENCE EDUCATION

This committee studies in detail the systems and methods used in education in the sciences, at all levels of education - grade schools, colleges and universities - and determines improvements to be made. The committee is prompted by the extremely low standing of science education in the United States when compared with the rest of the world (USA placed 57th in the last international survey), and works with the educators of science teachers, science curriculum developers, textbook writers, school boards, and all others involved in the process of education in the sciences, in solving the problem. While the scope of the committee’s endeavors is essentially the community centered by Tallahassee, it is recognized that the fruits of the committee’s efforts will have national significance.

The committee recognizes that, because the education process of any one individual covers several years, the fruits of the committee’s endeavors are not quickly achieved, and therefore does its planning and programming with long-term views, making the necessary provisions for continuity.

The committee also recognizes that its work introduces a new level of thinking on processes that have existed for hundreds of years, and is therefore prepared to make presentations to local, state and national government leaders, with regard to provision of funds for bringing about the desired improvement in the nation’s standing in education in the sciences.

The committee comprises a number of members of the Society who are familiar with the possibilities that may be achieved, and are willing to undertake what may be a difficult project. The number of committee members is flexible, in view of the wide-ranging tasks to be carried out, but should not be less than three.

FINANCE COMMITTEE

The Finance Committee has two basic functions:

- (a) The committee prepares the Society’s annual budget, and determines how it is to be funded. For the budget, the committee receives expenditure estimates for the Society’s several operations from the chairs of the operating committees, and summarizes these estimates into the budget. The Committee then seeks out ways and means to fund the budget, including members’ dues, anticipated gifts, solicited grants, and so forth.
- (b) The committee does the groundwork for the development of financial policies for the society. This includes, but is not limited to: procedures for handling funds received by the Society; nomination of banks for keeping the Society’s funds; investment of the Society’s funds; procedures for making purchases, and for making payments for purchases; establishment of business charge accounts; bookkeeping; financial reports; procedures for Society credit cards; and any other financial operation that requires discussion and financial expertise for its determination. The Finance Committee will present its determinations in the form of proposals to the Board of Directors, who, in turn, will make the final decision regarding the Society’s financial policy or policies.

Membership of the Finance Committee will be at least four members of the Society with knowledge of accounting plus the Treasurer (and Assistant Treasurer(s) if elected). The Committee may draw on the expert resources of other members (or professional accountants, even if they are not members of the Society) if the occasion arises that such expertise is needed in order to arrive at a determination of a matter in hand.

GORRIE TRAVELING LECTURE COMMITTEE

The Gorrie Traveling Lecture “takes science to the people,” so to speak, in keeping with the Society’s objective to enhance scientific knowledge and awareness in its community. It is named after the late Dr. John Gorrie, inventor of air conditioning. The Gorrie Traveling Lecture Committee’s function is to plan how this annual lecture is to be presented, and to execute the plan. With its scope being eleven communities within a fifty-mile radius of downtown Tallahassee, the committee meets with key individuals in public and private sectors in each of the communities, in a sense making the plans community-based, and each of these groups determines the date, time, venue, publicity, chairperson, and other details (refreshments, contests, etc.) for the lecture. If it is necessary to make charges to cover expenses, the committee will ensure that full accounting is done, for the satisfaction of the Internal Revenue Service, in the event that the Society is called upon to show this accounting. The accounts, and financial transactions, are coordinated with the Treasurer.

The committee first determines the subject and presenter for each year’s lecture, and works with the lecturer to develop visual aids, demonstrations, equipment, literature, souvenirs, etc. all related to the theme of the lecture.

Preferably, the entire committee will work on all of the lectures, to ensure uniformity, but logistics may determine otherwise.

The Gorrie Lecture Committee will be necessarily a large committee, consisting of individuals (members of the Society) with expertise in the various activities involved in setting up and conducting the Lecture. These include, but are not limited to, negotiating for the use of lecture venues (theatres, lecture halls, school assembly halls and gymnasiums, church halls, etc.); press releases to local newspapers; production of handbills and flyers; preparation of visual aids; speaking at service clubs; setting up and operating supporting systems (computers, projectors, sound systems, etc.); accounting; conducting quizzes and entertaining; to name a few.

LANNUTTI MEMORIAL LECTURE COMMITTEE

The Lannutti Lecture is a memorial to the late Dr. Joseph Lannutti, a past member of the Board of Directors of Tallahassee Scientific Society, and is an annual broad-based highly technical lecture presented to a cross-section of the professional scientific community of Tallahassee. The planning committee selects the lecturer, and, if from outside Tallahassee, arranges for his/her transportation and lodgings; determines the format of the lecture and plans and prepares appropriate ancillaries - refreshments, dinners, etc., depending on the format of the Lecture. The committee also prepares and distributes invitations, announcements, press releases, posters, flyers, and other means of publicity. Programs are also prepared for use at the Lecture.

Planning for this annual event will require a small committee - three or four members of the Society. The planning committee members must have a flair for perfection and excellence.

LEON ASSOCIATION FOR SCIENCE TEACHING

The Leon Association for Science Teaching (LAST) is, by and large, the association of Science Teachers in Leon County. Membership in LAST is also open to individuals who support, or are in any way involved with, Science Teaching.

The primary objectives of LAST are:

- To establish open lines of communication among all persons involved in science education in the local area;
- To foster life-long interest in the sciences;
- To foster increased knowledge and skill of science teachers;
- To coordinate curricula and services most conducive to outstanding science education in Leon County, and
- To provide monetary support for special science teacher and student projects.

LAST is also affiliated with the Florida Association of Science Teachers, and, by extension, the National Association of Science Teachers.

Having a specific field of endeavor, LAST has its own membership structure and membership subscriptions, and elects its operating committee from among its membership.

MEDIA COMMITTEE

The basic function of the Media Committee is, in summary, to “keep the Sciences before the community,” with the objective of increasing public awareness of, and interest in, science and technology. The committee therefore carries out the following activities:

- Prepares articles on technical subjects for publication in the printed news media, in a manner to attract public interest;
- Encourages and assists the news media to present news of technical activities as real and technical;
- Arranges and assists the news media to cover events of a technical nature;
- Assists the printed media to publish a “Science Page” on a regular basis, to include articles, reports, and so forth, on scientific matters;
- Prepares and conducts scientific information broadcasts on the electronic media;

- Obtains information regarding scheduled technical activities from the several technical organizations in the Society's region, and prepares a calendar for public information;
- Works as a liaison between the press and the scientific community;
- Manages the Society's communications media - its Newsletter, its "Listserv" circulation list, and its Worldwide Web site, and
- Conducts any other activity, related to the sciences, involving media, news, etc.

The Media Committee will have, essentially, members who are able to write attractively and in an effective manner. The chair will be a member with a managerial appreciation for scheduling activities and operations. The number of members involved in the committee will be dependent on the needs of the various functions, and will vary with the workload of the committee.

MEMBERSHIP COMMITTEE

It is appreciated that, without members, the Society does not exist. Because of this, the importance of the Membership Committee cannot be overstated. The membership Committee is therefore charged with the dual responsibility of member recruitment and retention.

The Committee may give consideration to any number of classes of membership, and may also recommend membership fees for these classes. The committee would make recommendations to the Board, who, in turn would make Bylaw amendments to include the classes, as it sees fit.

The Membership Committee also develops and conducts the following functions:

- Determines and provides membership cards, and souvenir tokens, as it sees fit.
- Seeks out other organizations and negotiates with them for additional benefits for members;
- Follows up on delinquent members, with a view to retention;
- Conducts membership drives, and
- Seeks to resolve any questions that members may have regarding the operations of the Society.

This Committee will comprise three or four members of the Society, with good interpersonal skills.

COMMITTEE ON STUDENT ENRICHMENT

This committee has operated in the past under the name Mentoring Committee, which was applied in the light of its primary responsibility. But with the increase in its scope of activities, the name Student Enrichment is more appropriate.

The Board of Directors will be asked to change the name at the October 1 meeting.

In pursuit of its mentoring function, the Committee brings science teachers and students in middle and high school into direct contact with professional scientists, who, by virtue of their careers, are able to assist teachers and students from the bases of their experience, and thereby bridge gaps between theory and practice. The committee organizes members of the Society who volunteer for this activity, in terms of their special areas of expertise and their availability for service. To achieve these objectives, the committee carries out the following activities:

- Maintains a roll of Tallahassee Scientific Society members willing to volunteer as participants in this program;
- Arranges for professional scientists to visit schools to promote scientific careers;
- As coordinated with teachers, arranges for members of the professional scientific and technological community to assist with teaching classes/courses in schools, especially where field experience will be an asset;
- Arranges for scientists to be mentors to individual students, in relation to their science education, and in preparation for Science Fairs, and
- Establishes liaison with the management committees of the various science-based, student-oriented organizations in our region: the Capital Region Science and Engineering Fair, the Challenger Learning Center, the Brogan Museum of Art and Science, and the Tallahassee Museum.

The committee will have five or six members who will plan its functions. Outside of this, the committee will appoint one central contact person to receive requests from teachers, and to make assignments to mentors. The committee will provide the contact person with the resources needed to facilitate this function.

COMMITTEE ON PUBLIC AFFAIRS

The Committee on Public Affairs carries out two basic types of activities: (a) those that seek to inform the TSS membership of the kinds of political and legislative activities at the state and local levels that affect scientists, educators in the sciences, and the lay public in the understanding of science; and (b) those that provide information from the TSS to decision makers.

Working in concert with the TSS Media Committee, and as determined consistent with the Society's aims and objectives, the Committee identifies topics on important policy matters in science, with special reference to their societal significance, that should be brought before the public.

The Committee also develops procedures to gather and provide information to assist government executives, state and local legislators, and other decision makers, on matters in which the expertise of the TSS can be utilized. In providing legislative

representatives with scientific information as needed to carry out their duties, the information is to be of a technical nature only, and free of bias.

In implementing these objectives, the duties of this committee would include establishing contact points for volunteers from TSS membership with special expertise in different scientific fields to assist with its functions. Such points would also be established and maintained to local leaders in the community who have an interest and understanding of the legislative processes, to help direct the activities of the committee.

Membership of the Committee on Public Affairs would be those TSS members who volunteer for this committee, and would include a chair to coordinate its activities. The chair would be elected annually, by majority vote of the members of the Committee, and appointed by the Board of Directors.

COMMITTEE ON ENVIRONMENTAL ISSUES


The Environmental Issues Committee's function is essentially to integrate environmental awareness and consciousness in the operations of the Society and in the minds of the citizenry. Its work is predicated on the importance of environmental awareness to the health and welfare of humanity, and therefore the need for humanity to take care of the environment in which

we live; and that the way to do so is led, naturally, by the professional scientific community.

To these ends, the Committee:

- Seeks to increase public awareness of environmental issues;
- Prepares articles on environmental issues for publication in the TSS Newsletter and other media;
- Assists with the development, procurement and review of educational materials on environmental issues;
- Assists the Academic Activities Committee with provision of speakers on environmental issues;
- Assists the Committee on Public Affairs with the review of issues and materials related to the environment.

The Committee will have four or five members who, by virtue of their professions, are involved in activities related to the environment - planning and/or designing systems, monitoring, operations and activities, and so forth.

 **Tallahassee Scientific Society,**
c/o FAMU/FSU College of Engineering,
2525 Pottsdamer Street,
Tallahassee, Florida 32310-6046.