



Spring Awards Banquet Honors Outstanding Teachers, Students, and others *See pg. 3*

See also...

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THE MIDLAND CHEMIST

Volume 45, Number 3
June 2008

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The Midland Chemist is published six times a year by the Midland Section of the American Chemical Society.

American Chemical Society
Midland Section
PO Box 2695
Midland, MI 48641-2695
<http://membership.acs.org/M/Mid>

Volunteer Staff

Ann F. Birch Editor
989-832-7485
ann.birch@editech-mi.com
Dave Baker Writer
Peggy Hill Writer
James R. Birch Design, layout

Please submit all articles and photographs to the editor, Ann Birch. Instructions for article submission are on the Midland Section web site, as is contact information for other staff members. Authors can also contact Ann directly with any questions.

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*Chair Column***Midland Section: “Busyness” as Usual**

The Midland Section has been very busy since the last newsletter! I’d like to take the opportunity to briefly summarize our activities and thank our member volunteers. If you’d like to learn more about a particular event, please check out the articles in this and future issues of *The Midland Chemist*.

Our Science Literacy crew was invited to attend PITTCON to hold a training session for teachers from the New Orleans area. The session covered 16 hands-on experiments, taught to Louisiana and National teaching standards, and reached 25 teachers. I’d like to extend a very big thank you to John Blizzard, Angelo Cassar, Gretchen Kohl, and Gina Malczewski for taking on such a significant effort. They obviously had fun, but this program, without a doubt, required a lot of hard work and dedication, not to mention a week of their lives in service to the community, to science education, and to the Midland Section.

We held our annual Spring Science Education Recognition Dinner. Each year we recognize outstanding students and teachers from the Section’s academic institutions, as well as outstanding volunteers from the community. I would like to extend our Section’s gratitude to our Awards Committee members, Petar Dvornic, Steve Keinath, Minghui Chai, Jennifer Dingman, Steve Kaganove, Deb Mendrick, Pam Slavings, Mary Tecklenburg, and in particular Scott Gaynor, who chaired the Awards Committee this year, and Brad Fahlman, who will take over as chair next year. These folks work very hard to solicit nominations for our awards, select and notify the winners, and organize the annual banquet. I’d also like to extend appreciation to our nominators. Without this core group of people who took time and effort to write nomination packages for their peers and colleagues, we would not have a viable program.

Our annual Earth Day event was held in partnership with the Midland Center for the Arts. This year’s theme was “Streaming Chemistry.” We had a booth with facts about the earth’s oceans, along with demonstrations involving water (water tornados, super-absorbent polymers, and surface-treated sand). The Midland Section participated in an illustrated haiku competition as part of the National ACS “Chemists Celebrate Earth Day” celebration. Entries from three classrooms at Plymouth Elementary and Siebert Elementary were on display, and the winner has been entered in

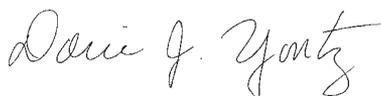


Dorie Yontz, Chair
ACS Midland Section

the National contest. A big thank you to the organizers and volunteers who made our Section's participation possible: Gretchen Kohl (overall coordinator), Angelo Cassar, Dave Stickle, Gina Malczewski, Chen Wang, John Blizard, Joan Sabourin, Pankaj Gupta (photographer), and Dee Strand (haiku contest) along with Dee's daughters Greta and Emily. I'd also like to thank our Earth Day partner, the MCFTA, and MCFTA contacts Bruce Winslow and Debbie Anderson in particular, for all of their efforts.

One additional note on Earth Day: Those of you who read the last issue of *The Midland Chemist* may have seen the letter to the editor about the board's discussions about a climate change speaker who opposes the view of human-induced global warming. I'd like to assure you that we have not arbitrarily opposed this view nor have we abandoned the issue. We decided to decouple the event from our Earth Day event in consideration of our co-sponsors, but we did not drop the idea permanently. Some folks on the board had concerns about whether we could use the ACS name in sponsorship of a seminar in opposition to the National ACS position statement* and we needed time to investigate the matter. Towards that end, we dedicated an hour of our April board meeting to a discussion about the topic with leaders from National ACS. Dr. Chuck Kolb, current chair of the ACS Committee on Environmental Improvement; Dr. Bonnie Charpentier, current chair of the ACS Committee on Public Affairs and Public Relations; Glenn S. Ruskin, director of the ACS Office of Legislative and Government Affairs; and Ray Garant, assistant director of the ACS Office of Legislative and Government Affairs joined us by teleconference. It appears that the best route forward is to hold a debate-style session. I personally was impressed with the detailed knowledge these folks had about the data on both sides of the issue, and I have hopes that they will be good resources to help us identify credible, affordable speakers from each position. This would be a great proposal topic for the Innovation Grant program mentioned in my last column. If you would like to get involved in planning a debate on climate change, please e-mail me (djyontz@dow.com).

*For more information on the National ACS position statement on climate change, go to the Midland Section website (<http://membership.acs.org/m/midl/>) where you will find a link.



See pg. 25 for the calls for volunteers.

Section Recognizes Outstanding Achievements

By Scott Gaynor

Photos by Brad Fahlman

On April 23, 2008, the Midland Section of the American Chemical Society recognized students and educators throughout the Section's five county region (Bay, Gratiot, Isabella, Midland, and Saginaw counties) at its 17th Annual Spring Awards Banquet held at Dow Corning's Corporate Center in Auburn, MI. Dr. Thomas Lane, president-elect of National ACS and director of Global Science and Technology Outreach at Dow Corning, was on hand to help present the awards.

Local high school students who took the Chemistry Olympiad exam and performed well were recognized. They were: Alexander Carney (H.H. Dow), Matthew McCullough (H.H. Dow), Harsha Nahata (Heritage), Nilesh Raval (Heritage), Charles Baumer (John Glenn), Natasha Golder (Laker), David Maust (Laker), Ryan Lucas (Midland), and Adam Rule (Midland). Additionally, local high school students who were selected by their teachers as Outstanding High School Chemistry Students were presented certificates of achievement: Lyndsey Carter (Chesaning), Meagan Crofoot (Freeland), Justine Travis (Shepherd), Andrew Stockwell (Frankenmuth), Joan Fath (John Glenn), Nilesh Raval (Heritage), and Adam Rule (Midland). The Section presented awards to Outstanding College Chemistry Students,



Chemistry Olympiad outstanding scorers: Tom Lane (ACS President-elect, presenter), Natasha Golder, Harsha Nahata, Matthew McCullough, Alexander Carney, Nilesh Raval, Ryan Lucas, Adam Rule, and Bob Howell (CMU, presenter)



Outstanding HS Chemistry Students: Tom Lane (ACS President-elect, presenter), Adam Rule, Nilesh Raval, Joan Fath, Justine Travis, and Steven Kaganove (Michigan Molecular Institute, presenter).

as selected by their respective colleges: Benjamin Brandt (Delta College), Ben Place (Chemistry – Alma College), David Lapham (Biochemistry – Alma College), Katelyn Carter (Chemistry – Central Michigan University), and Christopher Walczak (Biochemistry – Central Michigan University). Additionally, the Mid-Michigan Technician Group presented the Outstand-



Outstanding College Chemistry Students: Tom Lane (ACS President-elect, presenter), Christopher Walczak, Katelyn Carter, Ben Place, Benjamin Brandt, David Lapham, and Petar Dvornic (Michigan Molecular Institute, presenter).



Outstanding Chemical Technology Student: Tom Lane (ACS President-elect, presenter), Gerald Rupprecht, and Dana Fuerst (Dow Chemical, presenter).



Outstanding Achievement in Elementary Science Education: Rachel Pappas and Tom Lane (ACS President-elect, presenter).

ing Chemical Technology Student award to Gerald Rupprecht of Delta College. This award is presented to students showing outstanding achievement while completing their associates degree in chemical, chemical process, or environmental technology.

Outstanding teachers were also recognized. Rachel Pappas (Jesse Loomis Math, Science and Technology Academy, Saginaw) was presented the Outstanding Achievement in Elementary Science Education Award, and Mark Koschmann (St. John's Lutheran School, Midland) was presented the Out-



Outstanding Achievement in Middle School Science Education: Mark Koschmann and Steven Keinath (MMI, presenter).



Promotion of Diversity in Chemistry, Related Sciences and Engineering Award: Sandra Parker and Scott Gaynor (Dow, presenter).

standing Achievement in Middle School Science Education Award.

Tim Drier of The Dow Chemical Company was presented the 2008 Science Education Volunteer Award for his glass-blowing demonstrations and creations that have become a staple of the Section's outreach and educational programs. Sandra Parker, also of Dow, was presented the Promotion of Diversity in Chemistry, Related Sciences, and Engineering Award for her efforts to encourage underprivileged and underrepresented youth into the sciences.

MMTG Honors Janet Smith, Plans Events

By Dana Fuerst, MMTG Chair

MMTG hosted a celebration dinner honoring the 2008 National Chemical Technician Award recipient, Janet Smith. Janet has been a member of MMTG for over 10 years and has served as treasurer, delegate, director, chair-elect, and chair for the group. The dinner event was held at Timbers Bar & Grill in Saginaw on March 26. Over 20 MMTG members, co-workers, and friends of Janet attended the event. The attendees were able to congratulate Janet on this outstanding accomplishment, network, and enjoy good food and drinks.

MMTG's next event is a lunch 'n learn session that is being hosted by TA Instruments. This session will cover the rheological capabilities of TA thermal equipment and how to decide which instrument will work best for samples. Lunch and training will be provided for free and is open to MMTG members only. If you would like more information on joining MMTG, please contact one of our board members.

Another event in the process of being planned is a two-part membership drive/social event. The first part of the event will be a lunchtime talk on the chemistry of beer. That evening, members will be invited to attend a private tour of the Tri-City Brewing Company to see the process in action. These events are being tentatively planned for June 12 and will be open to members and anyone interested in joining MMTG.



Members, friends, and co-workers of Janet Smith enjoy the dinner held in her honor.

*Councilor's Report***235th National Meeting of the ACS***By Bob Howell*

The 235th National Meeting of the American Chemical Society was held in New Orleans the week of April 6, 2008. The weather and food were great—provided one had time to enjoy them. It was a very busy week for both Midland Section councilors. This was the first working governance meeting for councilor Kurt Brandstadt. He is a member of Corporation Associates and, of course, attended the Council meeting. This was an enlightening experience for him, one that was made all the more enjoyable by the presence of President-Elect Tom Lane on the dias. The Council selected Joseph S. Francisco and Josef Michl as candidates for 2009 president-elect.

A petition to use preferential balloting for election of president-elect and district director when three or more candidates are being considered was approved. This change is intended to make the balloting procedure more uniform and to avoid the complications and expense of run-off elections. Also approved was a petition to modestly increase the number of signatures required to place a petition candidate on the ballot for president-elect (0.5% of Society membership) and director-at-large (0.25% of Society membership). The larger question of when petition candidates must be identified is yet to be resolved. There is rather strong sentiment to have petition candidates identified early enough that they can appear before Council and be subject to the same scrutiny as candidates selected in the normal manner.

Membership categories were streamlined. The petition approved broadens qualifications for membership and creates a new category of student membership. Member dues for 2009 were set at the fully escalated rate of \$140. The Society remains financially robust with a net from operations at the end of 2007 of \$9.6 million. This was \$2.2 million favorable to the approved budget and in full compliance with Board-established financial guidelines. Attendance was strong for a spring meeting with 6,681 regular attendees, 4,659 students, 1,156 exhibitors, 374 exposition only, and 432 guests for a grand total of 13,302. The exposition featured 482 booths representing 319 exhibitors. Exhibitors presented a total of 15 workshops for exposition visitors. The Chem Jobs Center, as usual, did a brisk business. However, in contrast to most recent meetings, the number of positions posted (807) was almost as large as the number of job seekers (936). Membership remains strong: 439 members were lost at the end of 2007 but 16,533 new applications had been received. Current membership is 160,052.

This year represents the 40th anniversary of Project SEED. This has

been a phenomenally successful program—84% of participants go on to college, 64% in chemistry or allied science. Over the years the program has provided 7800 research experiences for economically disadvantaged high school students. For 2008 the SEED Committee has awarded stipends to place 475 students in about 100 scientific laboratories to conduct a meaningful program of research. The estimated program cost, expended exclusively for student stipends, will be \$1,075,000. In addition, the committee will award 27 college scholarships, totaling \$135,000, to former Project SEED students for the 2008-2009 academic year.

The Committee on Professional Training (CPT) has issued new guidelines for B.S. programs in chemistry. A major positive in the new guidelines is that departments will now have great flexibility in designing curricula leading to a B.S. degree in chemistry, and curriculum innovation will be encouraged. A major negative is that a course in polymer science was not included in the “foundation” areas. This despite the fact that most chemical scientists work in a polymer or polymer-related area, and our modern society and high standard of living would not be possible without the pervasive influence of polymeric materials. The Committee did recognize that polymer science is an important component of training in the chemical sciences and added the following statement to the final version of the guidelines:

Foundation courses can also be used to introduce topics that span multiple areas of chemistry. For example, the synthesis, analysis, and physical properties of small molecules give an incomplete picture of the higher order interactions in macromolecules and supramolecular systems, e.g., the physical properties of synthetic polymers, information storage and transfer by biopolymers, or aggregate properties of self-assembled systems. Students should be exposed to the principles of macromolecules across foundation areas, which could then serve as the basis for deeper exploration through in-depth coursework or degree tracks.

As one of our European colleagues put it, “This leaves the U.S. only about half a century behind the rest of the world.”

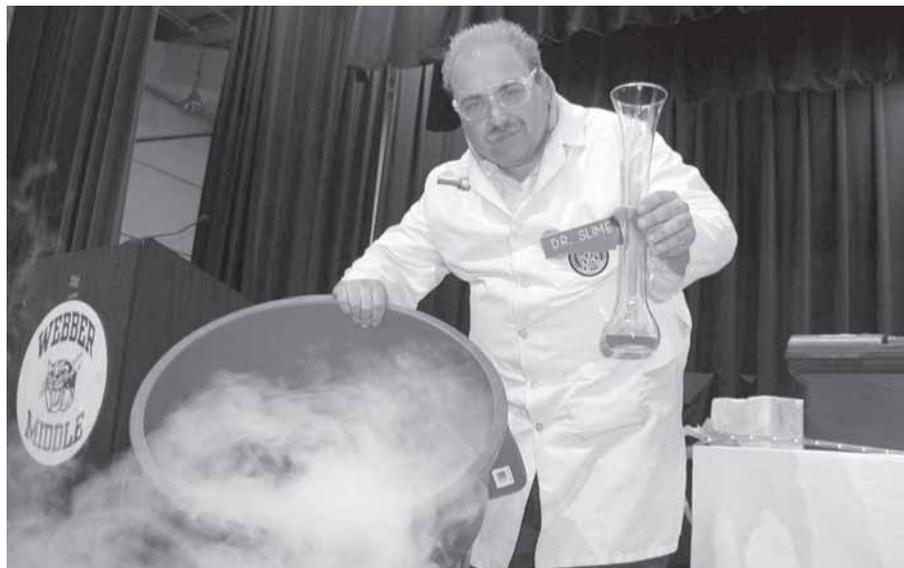
Bob Howell continues to serve as a member of the Patents and Related Matters Committee (CPRM), the POLYED Committee (undergraduate awards chair), and the Committee on Nomenclature, Terminology and Symbols. As usual, CPRM met on Saturday. Major action items included recommendations for ACS nominees to the National Inventors Hall of Fame and for the National Technology Medal and a discussion of patent reform legislation which appears to be stalled in the Senate. A major focus of the Nomenclature Committee was the definition of the kilogram (a symposium on this topic was held Sunday afternoon). Major world bodies have agreed

to base the kilogram mass on an exact definition of Planck's constant. This will allow better (and fixed) values for other fundamental quantities and removes reliance upon an artifact for mass definition. The impact on chemists will be exceedingly small. The definition of the mole will be decoupled from carbon-12 and will simply reflect Avogadro's number of particles. The POLYED Committee again selected the outstanding polymer poster presentations in the undergraduate poster session sponsored by the Division of Chemical Education. This poster session has been a very positive addition to national meetings. It has largely been responsible for a huge increase in student participation in national meetings. This year there were 54 posters in the polymer section alone. This meeting featured several interesting symposia. Perhaps the most notable was a four-day session on "Fire and Polymers."

Dr. Slime Wows Saginaw Students

By Ann Birch

Dr. Slime (aka Mike Garlick, Delta College) presented his chemistry show to students of Saginaw Public Schools in April. "The children had a blast!" said Dr. Elsa O. Olvera, Parent Resource Center Coordinator and 21st Century Learning Center Project Director, Saginaw Public Schools. Dr. Lin Dorman, Midland Section member and chair of the Minority Affairs committee, made the arrangements.



The dashing Dr. Slime presents one of his many curious chemical conundrums for Saginaw students.

A Letter *from* the Editor

By Ann Birch

With the December 2009 issue of *The Midland Chemist*, I will have been editor for 10 years. That seems like a good time to turn the reins over to someone else. If you enjoy writing and editing and would like to get some experience with a publication, this may be a great opportunity for you. If you have a friend or colleague who would like to be co-editor, that would be fine, too. I would like to plan on having the new editor(s) work with me for a year then take over publication with the January issue in 2010.

The Midland Chemist is published six times a year and is currently distributed via hardcopy, although it is also available on the web site. I estimate that I spend about 8 hours on each issue, depending on issue length and complexity. I actually write few articles; most are provided by Section members and MC staff writers. Most of my time is spent with communications, gathering and editing articles, and preparing the issue for printing. In December, I prepare an editorial calendar that lays out the issues for the following year. For a look at the editorial calendar for this year, and also to see past issues, go to <http://membership.acs.org/m/midl/midchemist.htm>. Through the next year or so I expect the time involved preparing the publication to go down as we move to online publishing. A major portion of the preparation time is getting the issue ready for the printer.

I wear several other hats for the Midland Section but the only one of these that I would recommend that the MC editor continue to be responsible for is the role of webmaster. It does not take very much time (maybe an hour or so a month) but it does use much of the information that will also be used in *The Midland Chemist*. I also would recommend that the new editor plan on attending board meetings, even if they are not a member of the board. It is a good way to keep up with Section events.

The Midland Chemist has two writers on staff, Peggy Hill and Dave Baker. My husband Jim renders photos for publication and does the final preparation of each issue for the printer. His role will disappear once we move toward online publishing. Photography is usually provided by members of the publicity committee, although photos may come from other members and contacts as well.

What qualifications are needed of a person interested in this position? Primarily he or she should have a good command of English grammar and basic writing skills. Some experience in writing and editing would be helpful, but the most important thing is that the new editor be interested in the publication and in the member and community outreach of the Midland Section. I have truly enjoyed my position as editor and like and respect all

of the Section members with which I have worked. They are a great group of people!

If you are interested, just e-mail me or give me a call at 989-835-2856. I would be happy to answer questions and provide more information.

Call for Posters

2008 Fall Scientific Meeting

By Mike Owen

Please consider presenting a poster at the Fall Scientific Meeting, which will be held on Friday afternoon, October 24, 2008, at the Midland Center for the Arts. Abstracts are being accepted now through September 19, 2008. The theme for the meeting will be “Materials for the 21st Century.” However, posters covering all areas of chemistry and chemistry-related topics are invited.

Each abstract should contain title, author(s) and author(s) affiliations, and abstract body text. The format specifics include:

- Single spacing with blank line between title and author and between author and abstract body text.
- Times New Roman typeface in 12-point size (or comparable).
- Submitted as an e-mail attachment in Microsoft Word (preferred) or other conventional word processor format.
- 225 words or fewer.
- Presenting author’s name underlined. (Note: The e-mail address of the submitter will be the default contact person for additional information.)

E-mail all abstracts to Brad Fahlman (fahlm1b@cmich.edu). Address questions to co-chair Mike Owen (michaelowen01@chartermi.net, 989-631-7339). The FSM web pages will be available from the Midland Section web site by July at <http://membership.acs.org/m/midl/>.



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Chair-Elect Attends 2008 ACS Leadership Conference

By Angelo Cassar

During the last weekend of January, I attended an ACS leadership conference in Dallas, Texas; the weather was not good: rainy and cold. So much for traveling to Texas to get out of cold Michigan weather! The majority of the people there were like myself, chair-elects of a local section. Other than the ACS staff who were teaching the class, there were three important people at the Dallas conference: Past President Katie Hunt; President Bruce Burnsten; and our own President-Elect Tom Lane. All three spoke to us about their visions for this largest scientific organization called ACS.

I attended this conference with the hope of learning skills that relate to being chair of the Midland Section. The approach used in this Leadership Conference reminded me of building a house. The foundation was laid as expressed by vision and mission statements. Both statements were short on verbal count but deep in meaning. The ACS vision is "Improving People's Lives Through the Transforming Power of Chemistry." The ACS mission is "To Advance the Broader Chemistry Enterprise and Its Practitioners for the Benefit of *EARTH* and Its People." The capitalized and italicized *EARTH* was not added by me, but by ACS. Apparently they want us to realize the importance of our home (planet) and those of us who live in this home.

After the foundation was laid, the first floor of the house the Dallas conference built was the class *Innovation: Styles and Process*. This class dealt with basic problem-solving techniques with a few new ideas. Problems are part of any section's journey through time, and the first question must be "What is it we are trying to accomplish?" or "What problem needs to be solved?" In essence, innovation is a way that improves performance; innovation focuses on generating ideas and evaluating alternatives. The new twist to this problem-solving class was taking a short question and answer evaluation. From the responses it can be determined whether the person is a Refiner, Philosopher, Experimenter, or Visionary. Each type of person looks at problems and solutions in a different light, and it is important for a section to have all four types at board meetings. It is also important to recognize that different people perceive the problem and the reasonable solutions differently based on if they are a Refiner, Philosopher, Experimenter, or Visionary.

After the foundation was laid and the first floor was built, the second floor dealt with *Involving Volunteers*. Practical and very informative would be the way I would describe this class. Although there was more information given in the class that can be described in this short article, the main take-away message was "JUST ASK!" Based on studies done, on average,

5% of volunteers are group leaders, 15% are active volunteers, and 75% are occasional volunteers, with the remaining 5% nonvolunteering critics. The key learning is to ask the right people who are in the 75% to become active volunteers for our Midland Section. We will need to match motivated people in the 75% who possess the right talents to tasks that are needed. Another aspect that was brought up in class is the necessity of thanking volunteers for contributing their time and talents.

After the second floor was built, the final floor of the Dallas Conference house was solving hypothetical problems with chair-elects from around the country. Since the two previous classes on Innovation and Volunteers were composed of chair-elects from around the country, many of us had met previously. Secondly, we shared meals together, which added to the friendly atmosphere at this conference. Topics that were discussed in this final class included writing the final section report, applying for innovation grants, and suggestions on how to chair a successful section.

If I could put a roof on this good house, it would be the inspirational talks given by Past President Katie Hunt, President Bruce Burnsten, and President-Elect Tom Lane. Each speaker inspired us to reach the goals of ACS. Reasons for contributing to ACS were enumerated along with personal experiences of their ACS involvement. Tom Lane's talk was informative, inspirational, and entertaining.

The only common complaint that I heard from other chair-elects was that the classes had more information than could possibly be covered in the time allowed. However, the conference presented information that had the right balance of theory and practical information. Other positives included meeting other chair-elects, both in Michigan and from around the country, along with sharing common concerns and problems. And although it was for the most part cold and rainy in Dallas, I had a sunny time at the conference.

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Call for 2009 Officer Candidates

By Kevin Lewis

Here is your chance to become more involved in your local ACS section. We need candidates to run for the following positions for 2009:

One-Year Terms

Chair-elect
Secretary
Treasurer
Chair, Nominations & Elections
Director (position vacated, 1 year remaining)

Three-Year Terms

Directors (3 slots open)
Councilor
Alternate Councilor

If you are interested in running for any of these positions or know someone who might be interested, please contact Kevin Lewis at 989-496-8141 or kevin.d.lewis@dowcorning.com. If you have any questions regarding what the positions entail, contact your current officers on the Leaders page of the Midland Section web site <http://membership.acs.org/M/Midl/>.

Committee members include Kevin Lewis (chair), Brian Marinik, Angelo Cassar, and Dorie Yontz.



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Harvesting Project SEED

Adapted from a C&EN article by Linda Wang

Editor's note: The Midland Section has participated in Project SEED for over 20 years (see The Midland Chemist, December 2007, pp. 20–22). The article below is an abbreviated version of an article that appeared in Chemical & Engineering News in celebration of this 40-year-old mentoring program developed and sponsored by ACS.

For Claire A. Tessier, the summer of 1970 was a turning point. “Very important things happened to me that summer,” she says. “I grew up a lot.” Then a junior at Champlain Valley Union High School, in Hinesburg, Vermont, Tessier was selected to participate in Project SEED, the American Chemical Society’s social action program that provides summer research experiences to economically disadvantaged high school students. For 10 weeks, she worked side-by-side with other members of Claus A. Wulff’s chemistry lab at the University of Vermont.

Tessier remembers successfully performing a recrystallization of a compound that an undergraduate had been having difficulty with. She also recalls the time a graduate student was surprised to learn that she was only a high school student.

Asked how she can so vividly recall details from a summer nearly 40 years ago, Tessier replies: “Those were just really important moments. I think they were moments that really gave me direction,” she says. “They were victories, big victories.”

Tessier’s poignant testimony is just one of thousands of success stories that organizers of Project SEED hope to unearth as the program passes its 40-year mark this year. Since Project SEED started in 1968, more than 7,400 high school students have participated in the program.

“It’s important to track these students because it’s one of the ways to measure the success of the program,” says Cecilia Hernandez, staff liaison to the Council Committee on Project SEED. “We want to know whether the program has made a difference in their lives.”

J. Philip Bays, chair of the Council Committee on Project SEED and a professor of chemistry at Saint Mary’s College, in Notre Dame, Indiana, says the committee is undertaking a large-scale effort to find out what happened to former Project SEED participants. But this task is a difficult one because alumni continue to change jobs, e-mail addresses, and even names.

C&EN’s own efforts to track down former Project SEED participants illustrates just how challenging it can be to reconnect. We first approached long-time coordinators of the program, who are responsible for matching students with mentors and research projects, and asked them to provide

names and contact information for their former students. This yielded some results, but we knew it was just the tip of the iceberg.

Armed with lists of past participants, we began googling names. The more unusual names gave the best results, as common names yielded hundreds of irrelevant hits. Women were virtually impossible to find because their last names often change after marriage.

In the end, we tracked down nine former participants and asked them to share their stories. We learned that five of the alums pursued careers in chemistry either in academia, industry, or government, while two of them entered medical-related fields. One of the former Project SEED students became an advocate for children's issues, and another is now an attorney. All of the former students we tracked down are extremely successful, and all say that Project SEED helped them realize their full potential.

"One of the things to emphasize is that although chemistry is important, the real goal of the program is to show these kids what unimagined opportunities they really have," says Bays.

Tessier says that Project SEED gave her the confidence she needed to pursue a career in chemistry during a time when few women were entering the field. She remembers watching a female graduate student in the lab become exasperated with her research to the point of tears. "It was an important lesson to learn that you have to tough it out, and it wasn't going to be easy," says Tessier.

Tessier is now a chemistry professor at the University of Akron. After graduating from high school in 1971, she went on to receive a B.S. in chemistry from the University of Vermont. In 1982, she received a Ph.D. in chemistry from the State University of New York, Buffalo. After a postdoctoral fellowship at Northwestern University, she taught for a year at the University of Rhode Island and then worked as an instructor and research associate at Case Western Reserve University. She also spent a semester as a visiting professor at the University of Wisconsin, Madison.

Many admitted that before they participated in Project SEED, they had limited knowledge of what career options were available to them. "Project SEED opened my eyes to the opportunities within science," says Kevin W. Hunt, who participated in Project SEED in 1989 and has been a medicinal chemist at Colorado-based Array BioPharma for six years. "Before that, I didn't really know exactly what I could do with a science degree," he says.

Marc A. McKithen, who participated in Project SEED in 1991 and is now an attorney specializing in chemical and pharmaceutical patent litigation at Milbank, Tweed, Hadley & McCloy, in New York City, also credits Project SEED with sparking his interest in science. "I would not have studied chemistry if I hadn't participated in Project SEED," he says.

Science Literacy Team Goes to Pittcon

How the ‘Big Easy,’ Since Katrina, Has Been Anything But That

By Angelo Cassar

with Gretchen Kohl, John Blizzard, and Gina Malczewski

Photos by Angelo Cassar

Four members of the Midland Section of the American Chemical Society were asked to participate in “Science Week” at the 2008 Pittcon Conference in New Orleans, March 1–5, 2008. We were asked to teach a “Bringing Science to Life in the Classroom” teacher workshop on Saturday and then to teach an activity to about 1000 young students, third to eighth graders, over a 3-week period. Little did we know that as we prepared to go there to teach, we would come away learning so much more!

Very little has been publicized about the devastating effect of Hurricane Katrina on the education system of Louisiana. In some parishes (counties), specifically Saint Bernard’s Parish, Katrina destroyed the entire school system, all fourteen schools, leaving virtually nothing to which teachers and students could return. Even if science equipment was found at what remained of a school, FEMA workers often ordered it destroyed in an effort to contain post-storm biological hazards.

While there were many heroes in the wake of Katrina, we found a group of unsung heroes—the outstanding local educators. At an awards banquet organized by the Pittcon 2008 Science Week Committee, Chairs Jim and





Laura Faith Bock and Ann Wilson, Program Coordinator for Science Louisiana Department of Education, provided some insight into what these education heroes were able to do. According to Ann, three days after Katrina devastated Louisiana, 100% of her staff was on duty. Also, 90% of the teachers were ready to go back to work. “This dedication to teaching was remarkable,” said Ann, “especially considering that most of these teachers did not even have a home of their own left standing to go back to.”

At the Pittcon 2008 Science Award and Appreciation Banquet, Jim Bock presented eleven “Appreciation Awards” and twenty “Extra Effort for Education Awards.” Individuals receiving these awards had taken steps to minimize the effects of Katrina, helped with recovery efforts, improved school relations with the community and/or industry, offered enrichment programs for peers, or demonstrated exceptional perseverance in spite of extreme difficulties. At least two teachers participating in our workshop were among the honorees recognized that Monday night.

We found another pair of unsung heroes, Jim and Laura Faith Bock. They went to Louisiana from their home in Pittsburgh months before Pittcon 2008 and met with school administrators, principals, and teachers throughout New Orleans, Baton Rouge, and surrounding school districts. On one day they drove over 100 miles outside New Orleans to meet with school officials, not only to experience the devastation first-hand, but also to understand the needs of the schools in Louisiana. This outstanding effort did not go without reward, as they were able to pull together an exceptional group of talented individuals from a broad area to provide 20 teacher workshops for Pittcon 2008. These 20 workshops were chosen to provide and meet the needs of K–12 educators from around Louisiana.

We are honored that our Science Literacy workshop, “Bringing Science to Life in the Classroom,” was selected as one of them. Our workshop, as titled, allows teachers to experience “hands-on” basic chemistry using items that are normally found at home, and lasted from 9 a.m. to 4 p.m. Some teachers drove an hour to come, many represented parochial schools, and two were curriculum directors.

There are 16 experiments in our workshop that cover many basic concepts, from acid/base chemistry to states of matter. All chemicals used were purchased from grocery or hardware stores and shipped from Michigan to Pittsburgh, where they were trucked to Louisiana, except for the dry ice obtained at a local gas supplier. During the workshop, teachers were encouraged to try new things, ask questions, and learn from each other. For example, by dissolving the shell of a raw egg to expose the thin membrane underneath, the scientific concept of osmosis is demonstrated, using colored water and other solutions. In another experiment, an iron-fortified cereal is crushed and diluted in water. Using a magnet it is possible to extract the small actual iron filings in the cereal.

Each of the teachers participating was given \$500 in supply grants by the Pittcon conference, and five of the teachers were chosen, at random, to take home the workshop chemistry kits. In addition, each teacher received the BSTL booklet (which had been revised to include correlations to Louisiana curriculum standards), lunch, a hand-blown glass head (each one unique) from Midland Section's 2008 Outstanding Science Volunteer, Tim Drier, a copy of *You Can be a Chemist* by Pat Moore, and a choice of Dow Corning give-aways including highlighters, wristbands, and computer mouse pads. Each teacher rated her experience (all were women);



evaluation scores were high for every segment. In all, the Midland Section Science Literacy distributed over 500 pounds of supplies to these teachers.

The Pittsburgh Conference's support did not stop at the teacher workshops. In all, over \$125,000 was raised to assist these school teachers. This does not include the additional funding and supplies provided by other industrial institutions such as the Dow Corning Corporation, Perkin Elmer, VWR, Lab Safety Institute, Vernier Software, and educational institutions such as the Audubon Zoo, the University of New Orleans, and Promoethan. All teacher workshops and symposia presented at Pittcon 2008 were eligible for Continuing Learning Units (CLUs) for these educators.

Continuing with Science Week activities the following week, over 1000 K-8 students were introduced to a whole host of hands-on science work-

shops designed not to just demonstrate science, but to involve the students in science. The workshops scheduled for Monday were designed primarily for elementary grades 4–6. The workshops on Tuesday and Wednesday were best suited for middle school grades 6–9. All of the workshops were filled to capacity. Students and teachers attending the workshops received t-shirts with a Pittcon/Science Week logo. These ten different workshops ranged from *The Behavior of Gases* to *Chromatography* to *Air Rockets* and everything in-between, mentored by volunteer chemists, college students, and educators. These 30-minute sessions were designed such that the students became the “chemists.”

Our session on the separation of mixtures into compounds was entitled *Fun through Paper Chromatography*. Teaching six sessions, each day, Monday through Wednesday, in back-to-back 30-minute segments, the students learned about chromatography using water, pipettes, coffee filters, paper towels, and Vis-à-vis water-soluble ink markers. Chemicals, mixtures, and separations of various kinds were discussed during the period, and students learned the benefits of chromatography (popularized by the TV show *CSI*) as they separated various inks. They experienced the use of science in creating art, what it means to formulate and test a hypothesis, and what kinds of things scientists do. All sessions were lively and interactive. Some parents and teachers were also in attendance—all were encouraged to participate.

Before leaving, all students were given a *You Can be a Chemist* book, and teachers were given enough Dow Corning donated give-aways to share with their classes back at school.



On Tuesday, we were asked to host a special group of younger children who were attending an abbreviated Science Week program. These children ranged in age from two to seven, but were accompanied by adult helpers. All the children were assisted in doing their own color separations. One of the helpers told us that one of the little girls did not want to come to the session, but at the end did not want to leave.

Also during this week, a special Forensic Science Workshop for senior-high students was held. Paula Gregory discussed DNA technology and how it has transformed forensics and the criminal-justice system. Paula was able to share her experience in making the “learning about science” fun for students at every level. Adam Becnel of the Louisiana State Crime Lab spoke about crime investigation methods, forensics, and careers in law enforcement. Hands-on crime scene investigation activities provided high-school students with a fresh look at chemistry careers.

Later in the week, there was a lecture/demonstration program at the La Nouvelle Orleans Ballroom in the Morial Convention Center for students in grades 9–12. The title of the program was “The Dead Chemists Society Presents: From Molecules to Bowling Balls.” The Dead Chemist Society demonstration programs have been an annual event at Louisiana Science Teachers Association conferences since 1990. It featured about 15 to 20 demonstrations that illustrate a wide variety of scientific principles. The program lasted for approximately one hour and fifteen minutes. It is nationally recognized as one of the most interesting, entertaining, and educational programs of its type.

So what did we, as a group, learn during our New Orleans experience? Being involved in both the teachers workshop and the student workshop in New Orleans was a very rewarding, yet humbling experience. We had hoped that the hands-on demonstrations that we presented would be exciting for both the teachers and the students. We were very pleased to be told at the end of the conference that our sessions were the most popular at Science Week. We have also been invited back to provide workshops at Pittcon 2009 (Chicago) and 2010 (Orlando). The pleasure for us was the knowledge that we were able to contribute in a small but important way to the knowledge basic chemistry to a few of the citizens of New Orleans, and that hands-on learning makes a difference.

Community Organizations Co-sponsor 2008 Earth Day with Midland Section

By Gretchen Kohl

Earth Day 2008 was celebrated on April 19, 2008, co-sponsored by the Midland Section, the Alden B. Dow Museum of Science and Art, the Whiting Forest, and the Chippewa Nature Center. An Earth Day Expo science fair event was held from 10:00 a.m. to 3:00 p.m. at the Midland Center for the Arts, which houses the Dow Mu-



Midland Section Chair Dorie Yontz helps a young Earth Day visitor with an experiment.

seum. A variety of booths were available for hands-on activities, many of which were focused on water-related activities, in keeping with the ACS National theme of “Streaming Chemistry.”

A special feature of the event was the continuous showing of the Great Lakes Environmental Student Film Festival winners from 2008. This festival is sponsored by Delta College and is open to middle-school, high-school, and college students. Entry forms were provided for anyone who wants to compete for the 2009 festival. The first-place winner in each Feature (up to 30 minutes) video category will receive \$1000 and in the Public Service Announcement category will receive \$500 award and will be able to show their work at the film festival at the Bay City State Theatre. The first-place winners in the photographic competition will receive a \$500 award. Recognition will be awarded in the first, second, and third categories.

Another special event was two showings of “Animals of the Rain Forest,” a Michigan-based traveling exhibit. This show featured live animals and emphasized the importance of the rainforest, diversity of its habitats, and the impact of deforestation. The Midland Recycling Center and Landfill, the Little Forks Conservancy, and the Chippewa Nature Center all had booths with hands-on activities. The Dow Museum had an interactive game set up in the theater lobby, where kids could “be” a water drop and could experience becoming a cloud and raining on the earth and eventually completing the whole water cycle, with an accompanying coloring book page. The *Appledore*, a Bay City-docked, 85-foot research schooner, was repre-

sented by a booth that showed the projects they are doing and how the community can learn from their cruises and demonstrations. They handed out imprinted water bottles to fill with tap water as a reusable alternative to “store-bought” bottled water.

The Saginaw Children’s Zoo provided a booth featuring live animals and other tactile displays. The ACS booth displayed the winners of our CCED haiku contest that featured the winners from area elementary schools. There was also hands-on chemistry showing the amazing properties of water, including water tension, wettability (or not) of sand, how to create a vortex, water absorbency of diapers, and PVA growing dinosaurs. There was also a nine-question quiz about the Earth’s bodies of water. Participants all received stickers and issues of ACS’s *Celebrating Chemistry*. The Midland Section provided pizza and soda for the presenters. Over 500 people participated in the Earth Day event, despite this being the first Saturday with nice weather in Midland.

Two other Earth Day events ran concurrently: hiking and display exhibits at the Whiting Forest (including a scavenger hunt and free refreshments in the visitor center) and a “Green Gardening Day,” featuring crafts and planting projects, at the Chippewa Nature Center. All three events were advertised on the same handbill and press release, which were mailed to all members of all three venues and to local schools. A print advertisement also ran in the *Midland Daily News*, on a special Earth Day event page.



Midland Recycling presented some interesting and challenging puzzles.

In Past Issues of *The Midland Chemist*

By Wendell L. Dilling, Midland Section Historian

- **40 Years Ago This Month**—In *Education Committee Activities Outlined* by Dr. Howard Potter: “The first event is the ‘Outstanding Chemistry Student Award.’ One student from Central Michigan University and one from Alma College is named annually by the staff at each school. The recipient is guest of the Section at the dinner for the speaker and is recognized at the November meeting.”
- **30 Years Ago This Month**—In *Councilors Request Member Opinion* by David C. Young, Wendell L. Dilling, and Eldon L. Graham: “At the ACS Council meeting in Anaheim, the Women Chemists Committee submitted the following motion: ‘That the Council recommend to the Board of Directors that future National Meetings determined to be held in one of the fifty states be scheduled only in those states which have ratified the Equal Rights Amendment (ERA). In addition, every effort should be made to reschedule meetings currently planned in states which have not ratified the Equal Rights Amendment.’”
- **20 Years Ago This Month**—In the *Editorial* by Muthyala Ramaiah: “I was told when I first moved into Midland that it has highest number of science graduates per capita in the country. Whether this is correct or not, the probability for it to be true is certainly high. Therefore, one would expect our schools should have exceptionally high quality of education. But, I hear more often than I want to, that we are lacking better teachers and good science curriculum in our school system.”
- **10 Years Ago This Month**—In *Councilor’s Report, 215th National ACS Meeting, Dallas, Texas* by Bob A. Howell: “There was great news from the Employment Clearing House—147 employers posted 1336 positions available with 1039 candidates registered. This represents the best ratio of available positions to job candidates that we have witnessed for perhaps the past ten years. Hiring at the M.S. level is up strongly with starting salaries up 10–15% over a year ago. Hiring is also strong at the B.S. level but many B.S. chemists are being hired as technicians or temporary contract employees.”

Call for Volunteers

Program: Dow Chemical's Public Affairs group has asked the Midland ACS for help during the Dow Family Reunion. Members of the Dow family will be taking a tour of the plant and they would like to have chemistry-related activities for the kids.

Position/Job: Volunteers to conduct hands-on demos with kids of various ages. (All materials and instructions will be provided.)

Time/Date Needed: Morning of Friday, June 27, 2008. Starts at 9:00. Ends before lunch.

Location: Lobby of 1790 building at Dow Chemical. This is a public building, so no special access is required.

Skills Needed: Willingness to spend a few hours out of your work day to bring science to life for kids.

Contact: Dorie Yontz by June 7, dyontz@dow.com, 989-636-2571

Call for Volunteers

Program: Professional Day at the Midland County Fair

Position/Job: Help staff the ACS Professional Day event at the Midland County Fair; serve food, provide science demonstrations, sell ride bands, etc.

Time/Date Needed: Thursday, August 14, 3:00–8:00 p.m. (or a portion thereof)

Location: Midland Fairgrounds (exact location to be determined)

Skills Needed: Make popcorn, cook hot dogs, excite kids about science

Contact: Jennifer Dingman by August 1, j.dingman@dowcorning.com, 989-496-8290

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Important Dates on the ACS Midland Section Calendar

- Jun 16 Midland Section board meeting, Midland Center for the Arts, 7:00 p.m., Board Room (on lower level) (Dorie Yontz, dyontz@dow.com, 989-636-2571)
- Jul 7 Deadline for August issue of The Midland Chemist (Ann Birch, ann.birch@editech-mi.com, 989-835-2856)

AMERICAN CHEMICAL SOCIETY
P.O. Box 2695
Midland, MI 48641-2695

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