

## *January Section Meeting*

**Topic:** Archaeological Chemistry of Rock Paintings: Radiocarbon Dating and Chemical Analysis

**Speaker:** Ruth Ann Armitage, Ph.D., Eastern Michigan University, Department of Chemistry

**Place:** UNIVERSITY OF DETROIT-MERCY  
Corner of Livernois & McNichols  
Enter Gate from McNichols  
ROOM C118, CHEMISTRY BUILDING  
(see page 15 for map)

**Date/Time:** Thursday, January 25, 2007,  
6:00 PM with a reception before at  
5:30 PM and dinner with the speaker  
after (Dinner RSVP info below)

**Abstract:** Rock paintings, or pictographs, are unique cultural remains that are difficult to place into archaeological contexts because they are not a part of the buried stratigraphic record of a site. Direct radiocarbon dating of the paint itself would ideally be used to determine their age. The paint is typically an inorganic pigment (iron oxides and hydroxides are common) presumably mixed with an organic binder or vehicle to make the paint flow and adhere to the rock surface. Dating rock art by conventional radiocarbon techniques would have required completely destroying the paintings; the advent of accelerator mass spectrometry (AMS) for direct measurement of  $^{14}\text{C}$  changed that. A plasma-chemical oxidation method was developed in the 1990s to selectively remove organic carbon from small samples of paintings, yielding  $\text{CO}_2$  for radiocarbon

*(Continued from page 1)*

analysis by AMS. Some paintings contain easily recognized organic material, such as charcoal, but most do not. At EMU, we are using chromatographic methods to determine the nature of the organic material present in rock paintings, and using the plasma-chemical oxidation/AMS method to date them. Results of our work on paintings from sites in Idaho, Texas, Guatemala, and other locations around the world will be presented.

***The Speaker:*** Ruth Ann Armitage earned a B.A. in Chemistry from Thiel College, and completed a Ph.D. in Analytical Chemistry at Texas A&M University on radiocarbon dating of charcoal-pigmented rock paintings. Dr. Armitage is currently teaching and carrying out archaeological chemistry research at Eastern Michigan University, applying analytical methods to characterize rock paintings and building materials from Colonial sites in Maryland.

Please join us for this most interesting program.

DIRECTIONS: Refer to map on page 15 or visit:

<http://www.udmercy.edu/about/drivingdirections.htm>

Contact Mark Benvenuto 313-993-1184 or [benvenma@udmercy.edu](mailto:benvenma@udmercy.edu) to be included in the dinner with the speaker after the meeting.

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## Section Election Results Reported

The teller's committee of the Detroit Section of the American Chemical Society counted election ballots on November 14, 2006. The election winners for the 2007 Detroit Local ACS Section are as follows:

Chair-Elect: Steven L. Scribner  
Secretary-Elect: Mary Kay Heidtke  
Treasurer-Elect: Megan Klein

Councilor: Walter O. Siegl  
Alternate Councilor: Kevin Perry

*Anthony Sky, PhD*  
*Section 2006 Secretary*

*(Editor's Note: see pages 8 & 9 for a complete list of the Section's Officers and Committee Chairs)*



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## 2<sup>nd</sup> “Chemistry Day at Belle Isle” is Big Hit With Area Girl Scouts

On Saturday, November 18<sup>th</sup>, 194 junior Girl Scouts and 65 Troop Leaders or chaperones participated in the second annual “Chemistry Day at Belle Isle”. The Casino building at Belle Isle was bustling with activity as the Girl Scouts of the Metropolitan Detroit area learned about the role of chemistry in every day lives. The event was a large success, mostly due to the support of our volunteers and sponsors. Donations received were crucial in making this event possible. The Detroit Section of the American Chemical Society wishes to thank the following organizations for their support:

General Motors Corporation  
Harness, Dickey & Pierce, P.L.C.  
Little Caesar Enterprises, Inc.

The Girl Scouts were enthusiastic as they took part in three activities for the day including a service project, career session, and hands-on experiments. The service project was organized by Liz Roberts-Kirchhoff (UD-Mercy) with assistance from Kim Sherwin, an interpreter from the Belle Isle Nature Zoo. Special nature treats were made from Crisco and sunflower seeds. These treats were donated to the Nature Zoo, where they will be used throughout the winter to feed the resident birds and squirrels of Belle Isle.

Each Girl Scout also made a birdfeeder using common household materials (water bottle, wooden dowel rod and nylon string). As the theme for this year’s National Chemistry Week was “Your Home – It’s All Built on Chemistry”, the birdfeeders were a nice tie-in. The birdfeeders were given a final personal touch as the Girl Scouts decorated them with permanent markers.

Next, the Girl Scouts were exposed to a variety of careers available in the field of chemistry. Meghann Mouyianis (UD-Mercy) and Yolanda Watts (BASF Corp) organized this activity. We had four great speakers who shared information about their careers and the impact that science has on their professional lives. The speakers met with small groups of Girl Scouts to answer questions regarding their careers. The Scouts were given suggested questions to ask the speakers. This way the Girl Scouts could determine why the speakers chose their profession and how they got started in their field. Afterwards, a game was held in which the girls won prizes if they could correctly recall which chemist

*(Continued on page 5)*

*(Girl Scouts, Continued from page 4)*

held a particular job duty. The speakers for this activity were:

Victoria Hornick-Rosinski, Student Teacher, East Detroit High School

Barbera Radecki, Product/Process Development Manager, BASF Corporation

Hulya Ahmed, Research Technical Specialist, BASF Corporation

Denise Glassmeyer, Patent Attorney and Counselor at Law, Young & Basile, P.C.

The third activity for the day was the hands-on experiments. In this event, the volunteers utilize their backgrounds in science to communicate the importance of chemistry to our quality of life. While the girls are having fun creating messy goo-like substances (Gluep and Slime), they are also learning about the importance of polymers. Cannons made with dry ice helped to explain properties of matter. In all, six experiments were organized by Megan Klein (Ash Stevens), Denise Grimley (BASF Corp) and Mary Kay Heidtke (Magni Industries, Inc).

Special thanks go to Charlene Hayden (General Motors R&D Center) and Caroline Feathers (Girl Scouts of Metro Detroit) for acting as the lead organizers to bring the two groups together. As mentioned above, the event was very successful and met with rave reviews particularly because of our volunteers. These volunteers graciously gave their time, energy and enthusiasm:

Angela Allen	Amie Henshaw	Matt Mio	Bryan Vos
Brittany Allen	Liz Hugel	Maria Militello	Teresa Woodrum
Catrina Ashford	Alexis Johnson	Andrew Perkowski	Branden Yaldov
Hana Attar	Dave Johnson	Jonathan Shafer	Katherine Young
Inga Balke	Michelle Lowry	Jennifer Shango	
Lindsey Cullen	Maggie Nazelli	Meredith Stratton	
Andrew Gasso	Tom Ott	Josh Thomson	
Jessica Heidt	Emil Lozanov	Patty Troy	

We sincerely hope that you enjoyed the event as much as the Girl Scouts did!

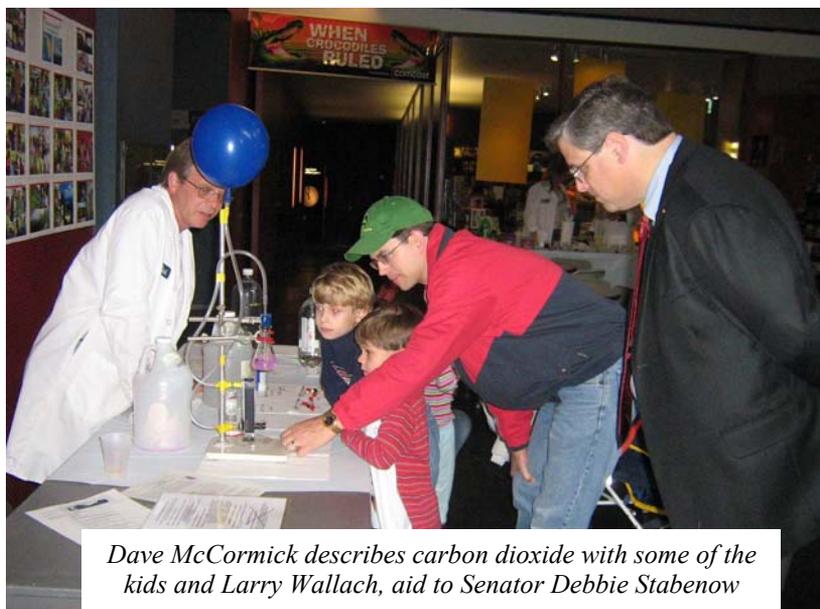
*Submitted by Mary Kay Heidke*



## National Chemistry Week 2006

On October 22, 2006 a spectacular National Chemistry Week event was held at Cranbrook Institute of Science in Bloomfield Hills, MI. 10 hands-on experiments were conducted with children of all ages which included magic vegetables involving acid/base chemistry, making slime, the amazing fun that we have with the evolution of carbon dioxide and of course, hydrogen balloons. many more.

Denise Grimsley (BASF) was the lead organizer for this event. Denise had a wonderful team of volunteers, which included many Kids, & Chemistry volunteers to support National Chemistry Week. We thank Emil Lozonov (Wayne State U), Tony Sky (Lawrence Tech U), Gina Ludwig (Henkel), Mike Martin (BASF), Dave Gzesh (Henke), Donna Garrigues (Henkel) Megan Klein (Ash Stevens), Mike Iglehart (BASF), Emily Mullins (Henkel), Ed Yee (BASF), Dave Durocher (BASF), Hulya Ahmed (BASF), Maria Oslan (BASF), Jesse Reich (BASF), Steve Springer-Wilson (Abbott), Tom Ott (), Christine Utter (), Tiffany Gaines (Thurston HS), Ted Bierman (Madonna U), Kim Merola (Henkel), Annise Goodman (Pfizer), Jamie Benigna (Roepert HS), Andre Arndt (Ash-Stevens), David McCormick (Henkel), and Walter Siegl (ACS). We had many new volunteers this year and always welcome those who would like to get involved.



*Dave McCormick describes carbon dioxide with some of the kids and Larry Wallach, aid to Senator Debbie Stabenow*

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*(National Chemistry Week, Continued from page 6)*

David McCormick did a nice poster showing Kids and Chemistry in action at the Dominican Republic. He also brought along some Cartesian divers and explained the scientific concept behind the visuals.

U of D Mercy student affiliates did two chemistry demonstration magic shows. The show including flame tornadoes, electric pickles, liquid nitrogen and bananas was lead by Matt Mio and his crew included Andrew Gasso, Jon Shafer, Amy Hamlin, Lindsey Cullen, Drew Perkowski, Jennifer Shango, Jess Heidt, Branden Yaldou, Bryan Vos, Andy Ward, Victoria Hornik-Rosinski, Hana Attar and Matt LeMerise. Close to 100 folks attended the first show, and about 60 were at the second.



*Matt Mio, Mark Benvenuto and Bill Carol (ACS Past-Chair) with the UDMercy Student Affiliates*

Special guests of this event were Bill Carol and Larry Wallach (Regional Manager for Senator Debbie Stabenow). Bill Carol is the immediate past President (2005) of the ACS. Gina Ludwig escorted Larry Wallach through the institute to each experiment and then to the Chemistry magic show.

Larry Wallach delivered a message to parents and children from Senator Stabenow who was unable to attend the event. The Senator wrote “An understanding of chemistry, are vital to the future of our nation and our state. Michigan is becoming a center for the production of alternate fuels, and for sciences and biotechnology. Careers in all of these areas require a solid knowledge of chemistry.” She added “Kids and Chemistry is doing great work in our communities”.

*Submitted by Gina Ludwig*

# 2007 Detroit ACS Section Officers and Committee Chairs

## 2007 Section Officers:

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**Secretary-Elect: Mary Kay Heidtke**

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**Alternate Councilor(2006-2008): Steven Scribner (see above)**

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**Professional Relations (Career Program): Megan Klein (See above)**

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**Silver Circle: Mark Benvenuto (see above)**

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**USNCO (Chemistry Olympiad): Mark DeCamp (see above)**

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## **COUNCILOR REPORT from the 232<sup>nd</sup> ACS National Meeting in San Francisco, CA, September 10-14, 2006**

For your three councilors from the Detroit Section, the highlight of the recent meeting in San Francisco was the opportunity to represent the Detroit Section at the ChemLuminary Awards Ceremony held September 12th. Going into the ceremony, the Detroit Section was listed as a finalist for four awards:

- 1) Outstanding Performance by a Local Section (Medium Large Size Category) Award – presented by the Committee on Local Section Activities;
- 2) Outstanding Career Program Award (Small to Medium Large Section) - presented by the Committee on Economic & Professional Affairs
- 3) Outstanding Kids and Chemistry Award – presented by the Society Committee on Education
- 4) Outstanding High School Student Program Award – presented by the Society Committee on Education

AND, we came away with the top award in the first three categories! The first award, Outstanding Performance by Local Section, is the highest honor that a local section can receive. We have been a finalist for the past several years, and were extremely happy to be recognized this year. Congratulations to all of the hard-working volunteers, elected officers, and committee members who helped make this possible!!

All three councilor attended the council meeting on September 13. For this particular meeting, there were no items requiring a vote. Each councilor provides some news from the meeting below:

James Landis serves as Chair for the Chemists with Disabilities (CWD) committee and reports that the CWD Committee is collaborating with the Committee on Minority Affairs (CMA), the Women's Chemists Committee (WCC) and Younger Chemists Committee (YCC) in a diversity affairs working group. In local sections there are often not enough active people to form viable minority affairs or CWD committees. Smaller local sections may do better with a diversity affairs committee instead of having several very small committees.

Jim is also a member of the Meetings and Expositions Committee (M&E) which is involved with the logistics of National and Regional meetings.

Walter Siegl continues to serve as a member of the Constitution and Bylaws Committee. He reports that there has been a fair amount of politicking regard-

*(Continued on page 11)*

*(Council Report, Continued from page 10)*

ing the nomination process for candidates for national offices. Candidates for the office of President of the Society and for seats on the Board of Directors of the Society are intended to come from the council committee on nominations and elections (N&E). The N&E committee, whose members are elected by the council, normally is a very powerful committee because it controls who the candidates are. However, the Society bylaws do allow for candidates to be nominated by petition. Recently there have been a lot of petition candidates, someone eroding the power of N&E. Accordingly, N&E is trying to promote changes which would make it more difficult to nominate candidates by petition and those who oppose the power of N&E are trying to protect the current rules for nominating by petition. Bylaw changes have been proposed by each faction that would advance their cause. At the meeting, each side was lobbying for support. All of which made for a more interesting meeting.

Charlene Hayden is serving as the Grants & Awards Subcommittee Chair for the Local Section Activities Committee (LSAC) and has some information to share with our local section. The theme for Earth Day in 2007 will be "Chemistry Can", all about recycling. LSAC is encouraging all local sections to appoint an Earth Day Coordinator. Accordingly, we will be looking for a good volunteer who would like to "run" with this program. Based on a meeting earlier this year, the Belle Isle Zoo may be interested in hosting an Earth Day activity for 2007. LSAC is also trying to encourage local sections to host a "Science Cafe", which is an informal meeting open to the public aimed at sharing technical information (via an "expert in the field") and fostering discussion around current scientific issues. Minigrants of \$500 will be available from LSAC on a first come first served basis this fall, and the Detroit Section plans to request this funding. Stay tuned for more information about these events early next year!

Respectfully Submitted,

Jim Landis, Charlene Hayden, and Walter Seigl

Councilors of the Detroit Section



## Portrait of a Volunteer – Don Ray

Don Ray is one of our retired members who happens to be a pretty active volunteer. We recognize Don here for his volunteer activities with our Kids & Chemistry group, particularly our Rouge Water Festival programs (spring and fall). He has also volunteered with the chemistry merit badge programs put on by the Univ. of Detroit-Mercy student-affiliate group.

Don's big volunteer interest through the years has been scouting. He has served the Detroit Area Council as a scoutmaster (Troop 781), an adviser (Venture Crew 781) and has led backpack and canoe trips all over the USA. He has also served as a district vice chairman for the Sunset District, a national Jamboree Troop Scoutmaster for the 1997, 2001 and 2005 Jamborees in Washington, DC, and will serve as an assistant scoutmaster for the Michigan World Jamboree Troop on its trip to London, England for the 2007 World Jamboree.

Don is a chemical engineer with engineering degrees from the UofM (B. ChE.) and Wayne State (M.ChE.), and an MBA from the UofM. Most of his professional career was carried out at Ford Motor Company (1965-2002) as a R&D engineer and manager. At Ford he was involved with developing a broad range of materials and processes for the automotive industry (glass, plastics, composites, and electronics). He is the author of three patents on composite body panel applications. In the final phase of his career he was an interior systems R&D project manager for advanced cockpit (instrument panel and electronics) development. While chemistry was the central science for his career, Don says that he acquired a lot of knowledge and experience in the mechanical and electronic engineering disciplines.

In addition to his many volunteer activities, Don maintains a strong interest in learning. He is currently enrolled at Schoolcraft College where he is taking courses in chemistry and biology to broaden his knowledge in new areas like green chemistry. He also works as a part time tutor in chemistry and biology at a Plymouth-area tutoring firm. Whether with scouts, Kids and Chemistry, or tutoring, Don says that his life-long fascination with things chemical has made it natural for him to find enjoyment and satisfaction in sharing, with young people, his knowledge of chemistry and its role in our everyday lives. We invite you to come out and meet Don and the rest of our volunteers at one of our outreach programs.

## Travel Awards Available

The Eli Lilly & Company is once again sponsoring a program to provide funding for undergraduate, graduate, and postdoctoral women chemists to travel to scientific meetings in 2007 to present the results of their research. Grants may be applied only for registration, travel, and accommodations, and are restricted to travel to meetings within the United States. Grant funds are limited, but there are some funds set aside for undergraduates. Only U. S. citizens and permanent residents are eligible. Applications should be limited to one per research group. Awards will be given with preference to the following order: (1) any applicant who will be making her first presentation (regardless of format) at a national or major meeting, (2) graduate or postdoctoral applicants who have not presented at a national or major meeting since leaving undergraduate school. Women who have received a prior award under this program are ineligible.

The deadline is February 15, 2007, for receipt of applications for meetings between July 1 and December 31, 2007. For application and more information visit the WCC Web site <http://membership.acs.org/W/WCC/> or write [wcc@acs.org](mailto:wcc@acs.org).

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## The Women Chemists Committee Turns 80 in 2007

The Women Chemists Committee (WCC) will celebrate its 80th birthday in 2007. The committee has planned a number of events to honor and recognize their achievements since 1927. We will kick off our celebration at the American Chemical Society's 233rd National Meeting in Chicago, IL. Symposia planned include "Symposium in Honor of the Recipient of the ACS Award for Encouraging Women into Careers in the Chemical Sciences" and "Women Achieving Success: The ACS as a Platform in Leadership Development." In addition to the above symposia, WCC will hold its WCC Luncheon on Tuesday, March 27, 2007. The keynote speaker is Dr. Laura Kiessling of the University of Wisconsin, Madison who is the recipient of the 2007 Garvan-Olin Medal, an ACS National Award that recognizes a female scientist for her contributions to chemistry.

Additionally, the WCC will recognize 13 of the 22 recipients of the 2007 spring Eli Lilly Travel Award during the WCC/Eli Lilly poster session and reception on Tuesday, March 27. On Monday, March 26, the WCC will hold its Women in Industry Breakfast. Other spectacular events and programs are in the works. Please check the WCC Web site <http://membership.acs.org/W/WCC/> in January 2007 for a complete listing of all the Chicago national meeting activities

## Calendar of Upcoming Events

**January 25, 2005** — “Archaeological Chemistry of Rock Paintings: Radiocarbon Dating and Chemical Analysis”, a talk by Ruth Ann Armitage. (*See pages 1, 2 & 15 for details.*)

**February 25, - March 2, 2007** — 58th Annual Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy (Pittcon 2007) , Chicago, Illinois, USA (*see page 3 for details*)

**March 25-29, 2007** — American Chemical Society 233rd National Meeting & Exposition Chicago, IL USA

### **Detroit ACS Section and ANACHEM on the Web**

A Website for the Detroit ACS Section and ANACHEM, maintained by Ed Havlena can be found at:

**<http://www.detroitsection-acs.org>**

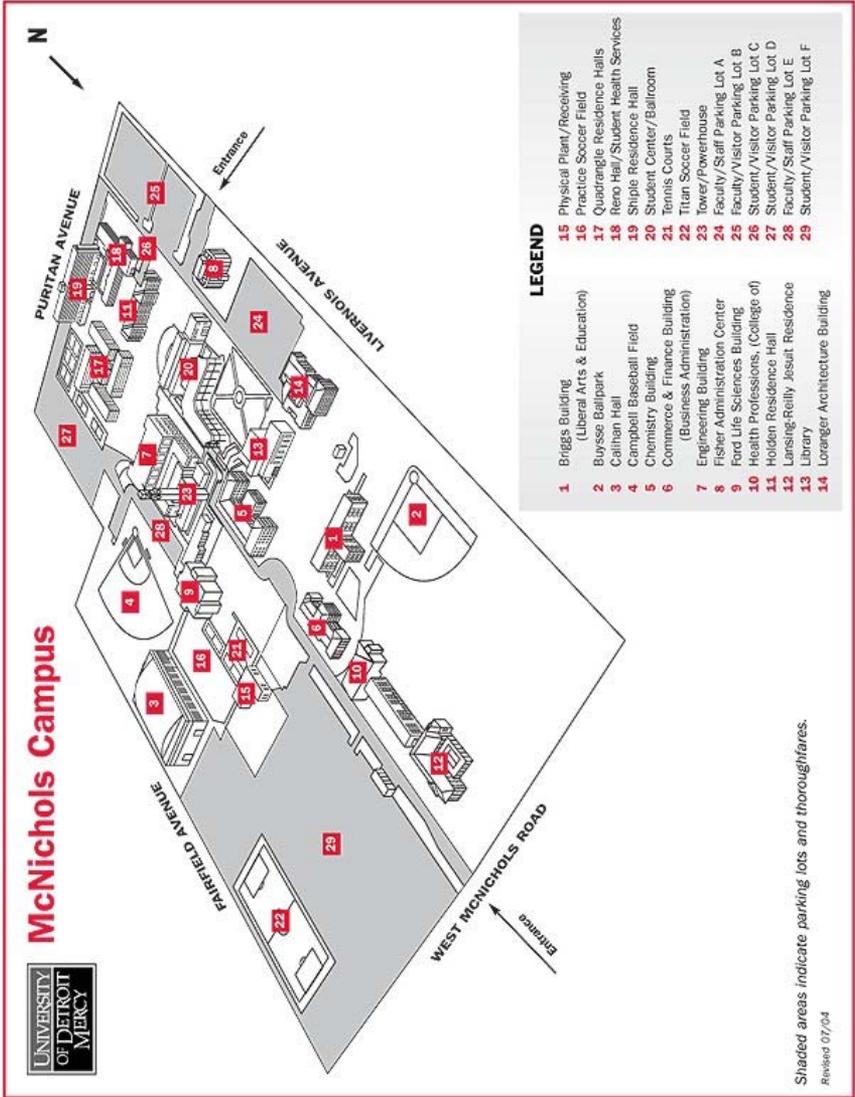
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in the body of the message.



# Location of January Meeting:



Detroit Section ACS  
1560 Beaver St.  
Dearborn, MI 48128-1475

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