



## Newsletter for Senior Chemists

July 2022

### Raising a Puppy, Chemistry Sensitization, Preserving History, Chiles, and More!

#### Welcome to the Summer Issue of the Senior Chemists Newsletter

*Dr. Robert A. Yokley retired from Syngenta (formerly Ciba-Geigy) where he was a research scientist and Manager of the Analytical Resources Group. He is a member of the American Chemical Society, serves as Chair of the Senior Chemists Committee, and as Councilor for the Central North Carolina Local Section. He received a B.S. degree in chemistry from Middle Tennessee State University and a Ph.D. in chemistry from the University of Tennessee under the direction of Professors Gleb Mamantov and Earl Wehry.*



The Senior Chemists Committee (SCC) newsletter editorial team continues its strong tradition of publishing articles that demonstrate the depth, breadth, range, and diversity of activities enjoyed by senior chemists. Examples of topics in store for the reader in this issue include preserving the history of a local section, training dogs for service duty, ACS Scholars support, molding wood into beautiful objects, and Chiles (part 3) among others. Yes, retirement is the beginning - not the end. Please forward this newsletter to your colleagues and especially encourage those over 50 years of age to open and read the content (the opening rate for the newsletter is exceptional). If you have ideas for articles or wish to submit an article, please contact me or our editors, Lynn Hartshorn and Adriane Ludwig, at [seniorchemists@acs.org](mailto:seniorchemists@acs.org). Additionally, please feel free to join the conversation and voice your opinions at "Senior Chemists on the Move" at <https://communities.acs.org/t5/Senior-Chemists-on-the-Move/tkb-p/senior-chemiststkb-board>.

Chicago – here we come. The spring ACS meeting in San Diego was primarily an in-person event and was quite successful. Thus, we have high hopes that COVID will become less of a hindrance and the fall meeting in Chicago will surpass the spring meeting in attendance. Plan to attend the in-person Senior Chemists Breakfast on Tuesday morning, August 23 at the McCormick Place Convention Center. Our guest speaker will be Dr. Jacob Bean, a Professor in the Department of Astronomy and Astrophysics at the University of Chicago, who will talk about the James Webb Space Telescope. Tickets can be purchased for this event and are limited to 120 attendees. During COVID, the in-person SCC breakfast was replaced with a virtual "Coffee Hour" event. We are delighted to return to the in-person format at this meeting. A hybrid version will not be offered.

will not be shared.

Immediately following the Senior Chemists Breakfast, be sure to attend a special symposium, “A Brief History of Three ACS Pioneers”, to honor the first three chairs of the Senior Chemists Committee: Eli Pearce, George Heinze, and Thomas Beattie. These gentlemen were instrumental in creating and organizing senior chemists’ activities prior to and after this group become an official ACS committee.

While in Chicago, visit the Senior Chemists Booth at the ACS Expo at the McCormick Place Convention Center to obtain more information about the SCC. Expo Hours: Monday and Tuesday from 11:00 AM to 6:00 PM, and Wednesday from 10:00 AM to 2:00 PM.

Our Ice Cream Social, student, and young professional mentoring event will be conducted virtually from 2:00 to 3:30 PM on Sunday, September 18. This event is sponsored by the Senior Chemists Committee, the Young Chemists Committee, the Division of Business Development and Management (BMGT), and the Undergraduate Student Advisory Board (USAB). Future networking programming will be conducted in-person for the spring ACS meetings and virtually for the fall ACS meetings. Information for all SCC events will be listed on the ACS National Meeting app, online via the ACS Network, in the Chicago meeting program, and the [SCC website](#) at ACS Senior Chemists - American Chemical Society.

The SCC is committed to expanding its impact. Thus, senior chemist events have been planned for many of the regional meetings in 2022. Please let us know if you are involved with regional meeting planning and want to include some senior activities - we will be happy to assist. Efforts are already underway for Senior Chemists activities at the Central Regional Meeting (CERM) and Middle Atlantic Regional Meeting (MARM) in June and the Northeast Regional Meeting (NERM), Southeastern Regional Meeting (SERMACS), and Western Regional Meeting (WRM) in October.

The SCC developed guidelines and best practices on how to create a senior chemist’s group (SCG) within your local section. At present, almost 70 local sections have active SCGs plus many other local sections conduct some type of senior chemist related activity. If your local section does not have a SCG, please consider forming a group to encourage and enhance senior chemists’ participation in your local section. Check the SCC web site or contact [seniorchemists@acs.org](mailto:seniorchemists@acs.org) for information and assistance. The Mission of the SCC is “to address community needs and ambitions by utilizing senior chemists’ knowledge and experience”. The ChemLuminary Awards will be presented in Chicago for the local section senior chemists group with the “Best Continuing Senior Chemists Activity” and for the “Best New Senior Chemists Activity”. Plan to attend the ChemLuminary Awards ceremonies and cheer for your local section.

The SCC also provides mini-grants to fund local section programs/activities that involve senior chemists. Programs and activities that involve senior chemists and underrepresented communities can be funded via DEIR grants. The SCC also supports the ACS Scholars Fund. Please be generous to this very worthwhile and successful program.

*For information on any of the topics presented mentioned in this article, please contact [seniorchemists@acs.org](mailto:seniorchemists@acs.org). See you in Chicago.*

Robert A. Yokley, Ph.D.  
Chair, Senior Chemists Committee

**Senior Chemists Events at ACS Fall 2022**  
**Chicago, Illinois - August 21 - 25**

### **Senior Chemists Breakfast**

Tuesday, August 23 from 7:30 am - 9:00 am CT  
McCormick Place Convention Center - Skyline Ballroom W375d

### **A Symposium Honoring Three Great Pioneers of ACS: Eli Pearce, George Heinze & Thomas Beattie-A Journey from the Silver Circle to the Senior Chemists Committee**

Tuesday, August 23 from 9:00 am - 12:00 pm CT  
McCormick Place Convention Center - Location: S504a

### **Senior Chemists Booth**

Expo Hours: Monday and Tuesday, August 22nd and August 23rd, from 11:00 AM to 6:00 PM CT,  
and Wednesday, August 24th, from 10:00 AM to 2:00 PM CT

### **Networking with Chemistry Professionals & Students**

Sunday, September 18 from 2:00 pm -3:30 pm ET – (virtual only)  
Look for registration details later this summer on the SCC website

## **Embracing Retirement**

*by Todd Williams*

*Todd's undergraduate chemistry work was done at Cornell University (Ithaca, New York), and his PhD at UCLA IN 1971. He spent all his career as a research chemist at 3M Company in St Paul, Minnesota. He and his wife live in Lake Elmo, MN.*

After almost 35 years as a chemist at 3M, I retired in late 2006. I looked forward to retirement since I had lots of plans. I was going to be a consultant, a handyman, an expert woodturner, a volunteer, a duplicate bridge whiz, a better golfer and bowler, and grandfather. So many things....so little time! As I have heard from many other retirees, "When did I ever have time for work"?

Well, in fact I tried, and still try, to do all those things and more. Lucky me! I know some men who retire and have no plans, no goals, no hobbies. They sit around and watch sports on TV and gain weight. I don't mean to preach, but what a shame! Don't do that! There are plenty of healthy, fulfilling, societally useful activities any of us can do. A key is to try new things. Some will work and some will not. Here is a summary of my activities. Hopefully, this list might stimulate your own.

My chemical consulting and handyman businesses lasted a few years. Now, my "consulting" is serving as an ACS-sponsored "Science Coach" to a local high school chemistry teacher. My handyman services are centered on volunteering at my church and Solid Ground, a local family shelter. Other volunteer activities include various public outreach activities, such as "Chemists in the Library"; the small committee to manage local participation in Chemistry Olympiad; judging at the State Science Fair; and volunteering for the online incarnation of Science Bowl. I have encountered many former 3M colleagues who also volunteer in these activities. Unfortunately, many of these activities have been suspended or greatly curtailed by COVID. I look forward to when they fully resume.

I have participated in local politics over the years, including serving on the local City Council and various Commissions and Committees, including a six-year stint on the Planning Commission ending in 2018. There are always new and old issues coming up locally that cry out for more citizen participation.

Having sung in my church choir for years, I tried my hand at local community theater, acting in several productions. Unfortunately, my age and aging joints have hindered my participation in musical theater, which almost always involves dancing as part of the “ensemble”. And there are vanishingly few roles for 76 year olds in drama, so I have set that activity aside. But call me for an audition at any time!

After dabbling in making furniture and having only a small shop, I got serious about woodturning after retiring. I have taken classes, joined local and national woodturning organizations, and made lots of items. After saturating the “market” of gifts to relatives, and running out of room for storage, I established a small business making turned wood objects and selling them in some local galleries and art fairs. As my wife says, “It keeps him off the street.”

I have been very fortunate that my health has been very good since retirement. Oh, I have one artificial knee, and significant arthritis in my hands. But I have tried to stay active and get exercise regularly. As my arthritis became more severe, I gave up cold-weather cross-country skiing. But I found a new love in pickleball – a cross between tennis and ping pong. It can be played outside in good weather and inside during our snowy Minnesota winters. It is great exercise for old fogies like me and a source of new friends.

And of course, I could not be so happy in retirement without my wonderful family, including my wife and my son and his wife and two sons. When the boys were babies, Grandma and Grandpa watched the boys a couple days a week until they grew old enough to go to school. Since they were born three years apart, this wonderful bonding experience lasted almost eight years. I highly recommend it, if you have the chance. And now, I have the pleasure of watching them grow and develop interests of their own.

So, I hope you understand that there are lots of things to do when you retire. Do a little planning. Try new activities. Embrace the new life you worked all those years to achieve. If you want further details on any of my activities, feel free to contact me at [toddwilli@comcast.net](mailto:toddwilli@comcast.net).

**Going Through the Books**  
*by Dennis Chamot, former SCC member and ACS Board Member*

In my pre-retirement life, busy with raising a family and pursuing careers, there was rarely enough time to just relax for an extended period with an interesting book, especially a large book or set of books. So, over the years I accumulated a collection of books to read “when I retire.” Well, I am happy to say that this has been one of the joys of retirement, having the opportunity to start going through the collection and read.

Among others, I have accumulated a lot of books about art and artists, as well as history in general (books of fiction, for the most part, were read when acquired). Even though some are many years old, the contents stand up well. I would like to share with you some of my favorites, usually available from used book sources at very reasonable cost.

1. The Story of Civilization, by Will and Ariel Durant. The full set of 11 volumes goes from ancient times through the Age of Napoleon. Each volume can stand on its own, and all are very well written and a pleasure to read. The authors write not only the usual stuff about wars and political developments, but also about various cultures, art, customs, and so on.

2. Time-Life Library of Art, by various authors. Of the 27 volumes I have (more may exist), all but two deal with a single artist, from da Vinci to Picasso. The slim volumes are very well illustrated and very readably written. Not just discussions of the art, each biography attempts to also offer a picture of each artist as a human being. I have not read all these yet, but of those I have, I have found them to be extremely well done.

3. The Lives of the Great Composers, by Harold C. Schonberg. A large collection of short biographies, from Johann Sebastian Bach to Schoenberg, Berg and Webern. The author discusses the music, but not in overly great detail as other books tend to do, but rather he talks as much or more about the life of the composer. Very interesting, especially if you are already familiar with a particular composer's music.

4. A smattering of the classics I had not read before, e.g., Plutarch's Lives; plays by Chekhov and Ibsen; Typee and Omoo by Herman Melville (not as well known as Moby Dick but tales of fascinating adventures in 19th century Polynesia).

5. Gotham: A History of New York City to 1898, by Edwin G. Burrows and Mike Wallace. Now, this recommendation might appear to be a bit much coming from someone who was born and raised in Brooklyn and thus well understands that the City's rightful place is at the center of the universe. However, the book, with a text running over 1200 pages, really is excellent.

So, having the time for reading in retirement is a blessing. So, too, is extra time to listen to great music, but that is another story.

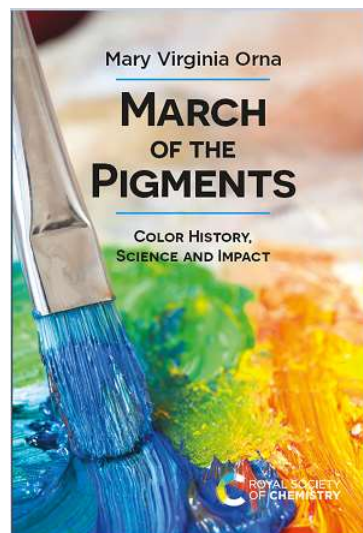
## **Preserving the History of an ACS Local Section** *by Norm Henry, SCC member*

As a 50-plus year-member of the Delaware Section, I am sharing my years of experience and suggesting an opportunity for Senior Chemists to pursue in their Local Sections. Since history is about people, places, and activities, it is important for organizations to preserve and remember their past. One significant individual I remember when, in 1967, I joined the Delaware Section was Herman Skolnik. He was an information Chemist and amateur historian who had published the 50-year history of our Section in the Del-Chem Bulletin. At that time, I became the assistant advertising manager of the Bulletin. Two years before his death in 1994, Herman published the 75th Anniversary and History of our Section. When I became Section Chair in 1998, I received a call from Herman's widow, Emma-June Tillmanns Skolnik. She had several boxes of Section records and historical items, and she wanted to know if we were interested in keeping them. I agreed, and several days later I walked into my office to find three large boxes full of old Del-Chem Bulletins, correspondence and administrative records of Section activities, pictures, and awards. I contacted a member of our Chem Vets committee, set up for retired chemists by Herman in 1976, and he agreed to help organize the contents of the boxes. We wanted to send old issues of the Del-Chem Bulletin to be archived at the University of Delaware Morris Library. Current and past issues of the Bulletin would then be accessible to all members of the Section and public. The back issues of the Bulletin were very detailed and captured many of the activities and contributions of our industrial, academic and government colleagues. There were also collectable items of laboratory equipment from discoveries such as Nylon (Carothers), (Labowsky) and Kevlar (Kwolek) that Chem Vets acquired after these inventors, all Section members, had died. In 2006, a group of former Chem Vets formed the Delaware Academy of Chemical Sciences, whose purpose was to find a place to store and display these items. We asked the University of Delaware Biochemistry and Chemistry Department if we could use their display shelves in the Lammont Dupont Laboratory on campus. They agreed on the condition that we maintain the display. We have since had two events to show off the items so that students can view them in the department. The public was also invited to attend the opening of the displays.

In 2017, we celebrated the 100th Anniversary of the Section and I wrote its history for a special issue of the Del-Chem Bulletin in the December edition. Now as current Section Chair, former Chem Vet and a member of the SCC, I have suggested that the Delaware Section creates a position "Chemistry Historian". This individual would be responsible for maintaining the display of the Section's and the Department's history as well as the contributions of Section member teachers, professors, and research chemists who work in industry and government.

## **March of the Pigments: Writing a Book during COVID-19 Lockdown** *by Mary Virginia Orna*

I'd like to tell you about my new book which was published by the Royal Society of Chemistry (RSC) this past May, 2022. Its beginning coincided with the beginnings of COVID-19 in March of 2020. Just as I was cancelling all travel plans for 2020, including the Biennial Conference on Chemical Education in Oregon, the ACS National Meeting in San Francisco, and Pacificchem in Honolulu, an offer from the RSC literally fell on my desk: would I write a book on the history of pigments? Would I? If COVID-19 had not occurred, there would be no question: I have no time. But come the lockdown, I spent the next 16 months crafting the 16 chapters that make up the book.



One seeming difficulty was the concomitant closure of all the libraries to which I would need access, but fortunately, as a member of the New York City Public Library, I had access to an unlimited supply of articles sent to me electronically, a policy initiated due to the lockdown. Later on, the libraries opened partially to allow for the pickup and drop-off of interlibrary loan books, another service I took advantage of.

With helpful advice from ACS colleagues and friends, the chapter outline took a roughly chronological flavor, beginning with the pigments used in the Paleolithic cave paintings and ending with electronic pigments that defy the traditional definition of what a pigment actually is. A lengthy chapter on the most ancient substrate on which pigments were slathered, the human body, touches on cosmetics, ancient and modern, pigment toxicity, hair coloring, cultural usage of body paint, and finally tattooing application and removal. Mummy brown and Egyptian blue open a window onto export practices from that fabled country in ancient times and in the early modern period. Mining for prized pigments like cinnabar exposes the reality of child labor in times past, and the world's oldest color industry, dyeing with Tyrian purple, is faulted as an extreme example of environmental devastation. A mysterious blue color used by the indigenous peoples of the New World reveals pre-Columbian nanotechnology that stumped archaeologists for more than 60 years. Later chapters deal with alchemical and chemical accidents that afforded a rash of new pigments, both organic and inorganic. Pigment usage in the Renaissance and by the Impressionists shows how artists capitalized on chemical creativity. We also see how we've turned waste materials into a whole rainbow of tints and hues to color our clothes, our food, and ourselves, and how with a snip of a genetic scissor, we've harnessed bacteria to gift us with "greener" blue jeans and dazzling dashikis. As part of its publicity, the Royal Society of Chemistry (RSC) says: "Pausing for reflections en route to share stories around pigment use and discoveries informed by history, religion, sociology and human endeavor, this book will have you absorbing science and regaling tales. Jam packed with nuggets of information, March of the Pigments will have the curiously minded and the expert scientist turning pages to discover more."

*The book is dedicated to the devoted health professionals who risked their lives to keep us safe and healthy and the scientists who worked around the clock to develop vaccines in record time.*

**Professor Donald D. Clarke receives the Bene Merenti Medal from Fordham University**  
*by Frank Romano, SCC member*

On March 6, 2022, Professor Donald D. Clarke received the Bene Merenti Award from Fordham

On March 9, 2022, Professor Donald D. Clarke received the Dono Merenti Award from Fordham University for Sixty Years of Service. This is quite a milestone. Many of you have most likely interacted with Don since he has been a very active member of the ACS and in particular a past member of the SCC. Prior to the Senior Chemists becoming an official committee of the ACS, Don Clarke was a member of the Silver Circle and the Senior Chemists Task Force and provided supporting documentation to make SCC an official Committee of the ACS. His knowledge of the history of the ACS, specifically the New York Section, is impressive. The next time you see Don, please take the time to congratulate him. I'm sure he will have his medal on the lapel of his jacket at the next formal ACS event. The following is the excerpt from the Awards Program at Fordham University which gives some highlights of Don's accomplishments.



*Don Clarke's calm, kindly disposition provides an interesting contrast to his fierce love of learning and his intense dedication to the field of biochemistry. Born in Jamaica, West Indies, and a longtime resident of the Bronx, he earned his B.S., M.S, and Ph.D. degrees at Fordham. Before joining the faculty, he held research positions at such prestigious places as the University of Toronto, Mount Sinai Medical Center, New York Psychiatric Institute, and Columbia University. After joining the Fordham faculty, he continued his affiliation with the Mount Sinai School of Medicine. Ultimately, his research in biochemistry and neurochemistry resulted in the publication of more than 100 articles and book chapters.*

*In addition to his remarkable research accomplishments, Don has given an exceptional amount of service to his professional affiliations, especially the ACS. On the local and regional levels, he has served as chairman of various committees. On the national level, he was recognized for 20 years of service as a Councilor. In 2011, Don received the highest recognition given by the ACS: He was named a Fellow of the American Chemical Society, a testament to the high regard in which he is held by the entire chemistry community.*

*Teaching is yet another area where Don's great breadth of knowledge is evident. Prior to the termination of the University's doctoral program in chemistry, he taught graduate courses in biochemistry and neurochemistry. During the transition to an undergraduate department, Don was able to continue a senior-level course in biochemistry while joining the organic chemists in their teaching duties. A noteworthy addition was a course in food chemistry for non-science majors to fulfill their physical science requirements. At the opposite of the student spectrum, Don occasionally taught seminars on timely topics for his colleagues. With deep gratitude we acknowledge the many accomplishments of a beloved friend and colleague, Donald D. Clarke.*

**Chemistry Sensitization for Youth Involvement in National Development:  
An Urgent Need for Paradigm Shift  
by Joshua Ayoola Obaleye (SCC member) and Olubunmi Atolani  
Department of Chemistry, University of Ilorin, Ilorin, Kwara State, Nigeria  
Correspondence Email: jobaleye@yahoo.com; jobaleye@unilorin.edu.ng +2348033582048**

From the kitchen to the living room; from the classroom to the town; from the laboratory to the



warzone, chemistry holds an important position. We currently live in an emerging modern and complex world riddled with humanitarian crises caused by people, which are often complicated because of the application of the knowledge of chemistry. Chemistry has a tremendous direct and indirect impact on everyone. Our life, social and economic lifestyle and interaction with others, and the environment, are seriously influenced by the chemicals and knowledge of chemistry we have attained as human beings.

While the application of knowledge by young chemists for national development cannot be overemphasized, the intensity of the downside of chemistry, which includes chemical warfare, heightened terrorism, threats, global warming, and attacks, are all instances of the utilization of knowledge of chemistry for bad reasons. Undoubtedly, young chemists are the future drivers of both breakthroughs and crises in the field. The youth are energetic, dynamic, and spirited. They try to surpass previous attainments in the pursuit of global recognition.

The empowerment of the next generation of youth, particularly the future chemists and potential policy makers, has become an imperative that should not be ignored. The population size of young people within the 10 – 40 years age bracket has projected the class as an indispensable group of attainment in all spheres. Since most of the global population falls within this age group, the positive influence of the young will obviously help mitigate umpteen global challenges.

A natural or self-induced paradigm shift is indeed indispensable. The immediate utilization of young chemists of today will be considerable in saving and securing national developmental goals. Therefore, there must be an aggressive re-orientation, development and deployment of the youth, particularly emerging chemists, to mitigate the emerging menace of global insecurity, and crises.

Indeed, young and emerging chemists should not and must not be waved aside but should be encouraged because of their enormous passion and untapped strength. The time to offer the best attention to young chemists is now. Hands-on engagement of the youth is necessary for the paradigm shift. In addition to this, new policies in favour of young chemists should be put in place. This will inspire young chemists to see themselves as potential solution providers for current global crises. Experiments and research must be made interesting and educative such that these future chemists see themselves as belonging to the distinguished scientific community. Therefore, there must be the continuous education and empowerment of the upcoming generation to make a positive and productive use of their skills and talent.

The enlightenment and education of all stakeholders and particularly the young, is a powerful empowerment option that would rapidly foster the development and the expected paradigm shift.

**Chiles: The Chemistry of Capsaicin - Part 3 of 4: Chile Types, Consumption, and Applications (Part 1 appeared in the July 2021 issue and Part 2 appeared in the March 2022 issue)  
by Robert A. Yokley, Ph.D. and Chair, Senior Chemists Committee**

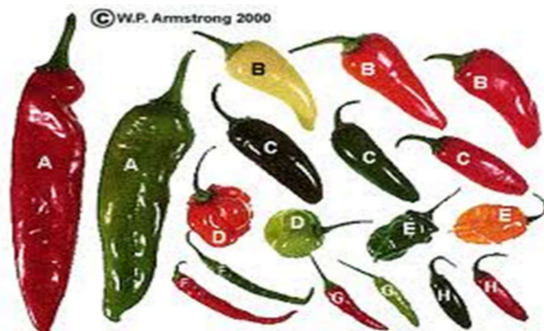


Figure 1. Popular Chiles: A = Anaheim, B = Hungarian Wax, C = Jalapeno, D = Caribbean, E = Habanero, F = Cayenne, G = Super Chile, and H = Serrano

Taxonomically, chiles are a fruit in the genus *Capsicum*. The five cultivated species are: *C. annuum* (mild bell peppers to jalapenos); *C. frutescens* (cayenne, Tabasco, paprika); *C. Chinense* (habanero, Scotch bonnet); *C. pubescens* (Rukutu, rocoto); and *C. baccatum* (Aji Amarillo, primarily grown and consumed in Peru). Some popular chiles are shown in Figure 1.

Capsaicinoids are produced by glands at the junction of the placenta (white area in center) and the pod wall (Figure 2) and reside mostly in the placenta with lesser amounts in the seeds and the least in the flesh. The total capsaicinoid content is dependent on the species, growing conditions (rainfall, humidity, soil, light intensity, and temperature), maturity, seed lineage, # seeds/pod, where/when grown, age, position on the plant, etc.

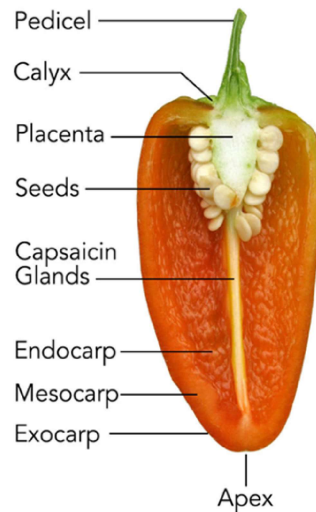


Figure 2. Parts of a Chile

The world's top five "hottest" Chiles are listed below. The Carolina Reaper and Trinidad Moruga Scorpion are shown in Figures 3 and 4, respectively.

1. Carolina Reaper (2,200,000 SHU)
2. Trinidad Moruga Scorpion (2,009,000 SHU)
3. Brain Strain (1,900,000 SHU)
4. Pot Primo (1,900,000 SHU)
5. Pot Douglah (1,850,000 SHU)

Consumption of Chiles by country per capita are listed below. Mexico is the largest consumer of chiles whereas, chile consumption in the U.S.A. and Europe is low.

Country	Daily Consumption
1. Mexico	20.0 g/person/day
2. Saudi Arabia	15.5 g/person/day
3. Thailand	5.0 g/person/day
4. India	2.5 g/person/day
5. Europe/USA	0.15 g/person/day

The annual Chile Production (2014) in millions of tons (MM) by country is listed below. China is the biggest exporter and Mexico must import to meet demand.

1. China (16.1 MM)

1. China (10.1 MM)
2. Mexico (2.7 MM)
3. Turkey (2.1 MM)
4. Indonesia (1.9 MM)
5. India (1.5 MM)
6. Spain (1.1 MM)
7. U.S.A. (0.90 MM)



Figure 3. Carolina Reaper

Anthropologists and archeologists report that Aztec's used chiles to relieve toothache. Mayans used Chiles to treat asthma, coughs, sore throats, and as a food preservative. Chile smoke was used to create smoke screens in battle, as a fumigant, and to discipline children.

Chiles are a good source of vitamins A, C, and E, low in calories and sodium, and contain no carbohydrates. Medical applications include: decreasing the itching and inflammation due to psoriasis; decreasing arthritic pain and diabetic neuropathy; appetite suppression; and reduction in cardiovascular disease and colorectal and prostate cancer incidence. A spicy diet also slows metabolism decline that occurs as a result of ageing.

Chile extract is used in: bird feeders to keep mammals and insects from consuming the seed; marine coatings to stop barnacles from growing on ships; and to kill garden pests. Chiles are used in teas and lozenges and are the active ingredient in pepper spray.

In part 4, I will address modern analytical techniques for the analysis of capsaicinoids.



Figure 4. Trinidad Moruga Scorpion

**Raise a puppy, Change a Life, Part 1**  
*by Patricia Redden, Professor Emerita, St. Peter's University in Jersey City, NJ*

I have a beautiful Celtic interlocking design hanging above my desk. These designs have individual strands weaving among each other so intricately that it is very difficult, if not impossible, to see where each begins and travels; it struck me that my life has been very similar. In Part 1, threads of my life are presented. In a future article, I will show how these threads lead to my passion for the training of service dogs.

**Thread 1: Academics.** Like many New York City (NYC) girls in the late 50s and 60s, I went to a single-sex high school and a women's college, Cabrini College in my case, a very small, new institution with a serious commitment to science. Leadership roles among students, and to a large extent for faculty and administrators, were filled by women. It was assumed that women could pursue any goals they wanted, including a doctorate in physical chemistry, my goal. Graduate studies at Fordham University, a Jesuit college in NYC, led to 53 years on the faculty at Saint Peter's University, New Jersey's Jesuit college. I retired a year ago but continue involvement, as Professor Emerita.



**Thread 2: Local ACS involvement.** My St. Peter's department chair was active in the Hudson-Bergen subsection of the New York (NY) Section; he encouraged me to be active in the subsection. I served on the subsection board and as chair, making me part of the NY Section board as well. Early involvement was on the new safety committee, carrying out voluntary local college safety inspections. I was also active in outreach activities, as coordinator and presenter for National Chemistry Day/Week (NCD/W) activities at the American Museum of Natural History. I chaired the section and have been a councilor for the section almost constantly since 1983.

**Thread 3: Faculty role.** My main faculty responsibilities were teaching analytical and general chemistry and general education courses, but the NCD/W activities (and a nephew in kindergarten in a local school) led me to conducting hands-on programs for elementary school students, Girl Scouts, and K-12 teachers. This led to teaching a science methods course for elementary education students that has continued to my retirement.

**Thread 4: Disability awareness.** I adopted two wonderful daughters from India, both paraplegic because of polio. They were involved in sports of all kinds, including track, basketball, and skiing. Travel for ACS meetings and athletic competitions reinforced for me the difficulties faced by members of the disabled community; sideline discussions with parents of disabled children taught me a lot about the daily medical issues of their children. I became a volunteer for adaptive skiing and track/field programs, ultimately becoming a USA Track and Field (USATF) national and paralympic level track and field official; information about working with students with disabilities became an important part of the science methods course.

**Thread 5: National ACS activities.** The safety committee for the NY Section led me to the Division of Chemical Health and Safety (CHAS). My first national committee appointment as a councilor was the Committee on Chemical Safety (CCS). Other committees followed, but the most important for me was the Committee on Chemists with Disabilities (CWD). I've been on the CWD since 2015 and its liaison to CCS for four years. I was honored to be elected a CHAS Fellow in 2001 and an ACS Fellow in 2011.

*Look for Part 2 of this article in a future Newsletter!*

## **Gerry Meyer: paying it forward to the next generation of chemists**

*In the following inspirational letter, ACS Senior Chemists Committee member Gerry Meyer, describes his motivation for generously supporting aspiring chemists through the ACS Scholars Program.*

Greetings fellow senior chemists!

In my 82 years as an ACS member, I've seen many changes in the field of chemistry and in the organization. The one thing that hasn't changed is my commitment to my profession.

As a longtime ACS member and volunteer, I see the ACS Scholars Program as something really worthwhile and the most direct way to help someone, regardless of his or her background, along the path we've taken as chemists. I've benefited so much from my work in chemistry and my association with ACS, so I want to help the next person do the same. To do this, I've established and endowed the E.G. Meyer Family Fund for ACS Scholars.

There aren't a lot of well-to-do people where I've lived. There are large Hispanic and Native American populations that haven't gotten the opportunities they deserve, and they need assistance to further their educations and careers. My endowment will fund four scholarships annually for students from underrepresented groups who have demonstrated a potential for chemistry, a desire to pursue an education in the field and the drive to succeed.

I've also specified that the scholarships go to two students attending public institutions east of the Mississippi River and to two institutions west of the Mississippi. I've found that many people aren't very geographically aware of the world beyond their own backyard. I'm hoping that my scholarships will allow more students to have the opportunity to explore schools in other parts of the country and be encouraged to expand their educational horizons.

One thing I've learned in my 102 years is that you have to work hard and support the things that are important to you. As such, you should be willing to devote time, effort and thought to whatever those things are. This is your profession. If you've had success, you owe it to yourself and to others to pay it forward, so someone else has the chance to change the world through chemistry.

Please consider joining me in supporting ACS with a gift in your estate plan. Together, we can ensure ACS champions chemistry and inspires and educates deserving future scientists.

Sincerely,  
E.G. "Gerry" Meyer

PS: If you would like to learn more about various giving options and how your gift to ACS can have a truly lasting impact, you can contact Mary Bet Dobson, CAP®, ACS Senior Director of Individual Giving and Gift Planning, at (202) 872-4094 or [m\\_dobson@acs.org](mailto:m_dobson@acs.org).



During a 2018 event, Gerry Meyer celebrates his birthday with Cameron Taylor, a student he supported through the E.G. Meyer Family Fund for ACS Scholars.

## **The Fifth Quarter - ACS Industry Matters**

### **Escaping the Tyranny of the Workweek**

*Natalie Foster wants to keep 'spinning and burning' in retirement*

Natalie Foster retired from the Chemistry Department of Lehigh University after a 28-year career in research and teaching. In terms of research, she pursued a long-standing interest in the behavior of porphyrins as potential diagnostic agents for the detection of malignancy and as contrast enhancement agents to improve visualization of sites of clinical interest in MRI. [READ MORE](#)



## **We Need Help From Our Readers!**

We hope that you have enjoyed this Senior Chemists Newsletter. So that we can continue publishing this, we need help from you, our readers. Without this help, the Newsletter might not happen! Could you write a short (less than 500 words) article for this Newsletter? What could you write about? We publish a wide range of articles. Some suggestions are: a retirement pastime or hobby that you enjoy; a review of a book or movie that you liked (especially with a science background, though this is not essential); what permanent changes (If any) that the pandemic has made to your life; volunteer work that you do; travel that you enjoyed, or plan to do soon; an article about chemistry or other science that you have worked on, or that you would like to find out about (note—we are not asking for research level science here, but a more general approach); or something else entirely.

If you have an idea, even if you are not sure, please send us an email at [seniorchemists@acs.org](mailto:seniorchemists@acs.org) and we will help. Thanks!

Lynn Hartshorn and Adriane Ludwick, SCC Newsletter Editors



Lynn Hartshorn and Adriane Ludwick, members of SCC and editors of the Newsletter

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