U.S. Geological Survey

The Geologic Division Retirees Newsletter



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An organization of retirees of the Geologic Division, U.S. Geological Survey, who seek to keep in touch with each other and with their former Agency.

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About the Cover:

U.S, Geological Survey crew, Thiel Mountains, Antarctica, 1961. Left to right: Art Ford, Bjorn Anderson, Rowland Tabor, John Aaron, and Ray Elliott. See note from Art Ford on page 13.

From the President



A Few Good Birds, and an Election

One of the great benefits of being around the U.S. Geological Survey for a few years (now 57 for me) is the pleasure of learning from experts, especially in subjects other than geology. Many of you are aware that there has been a long tradition of strong interest in (some would say obsession with) birds by various members of the institution. One of the outstanding birders during my time in Reston was Tom Nolan (Director, 1956-1965), who died in 1992. Though I don't know when Tom became interested in birds, it was apparently early in his career. I was lucky that Tom and Bob Smith, and later Dave Stewart and John Aaron, encouraged my avian interests. Tom, along with Ed McKnight, Art Baker, and Bill Rubey, started an annual USGS Christmas Bird Count, part of the Audubon Society's national CBC program, near Stafford, VA, in 1947. That count has continued through its 71st year this past December, and it has been staffed mostly by USGS scientists over the years. One of the notable changes documented by this count is the dramatic population recovery of the Bald Eagle. Ed McKnight was the initial organizer, a task he performed from 1947 through 1985. When Ed was ready to pass on the organizing duty, Dave Stewart and Odette James took over. For the 2017 count, Laurel Bybell, Dave Govoni, and Steve Hilburger took on the responsibility. In other Survey locations, there have been equally avid birders. I'll mention a few, but the

list will not be comprehensive. In Denver, Warren Finch, Paula Hansley, Don Mullineaux, and Bob Fleming come to mind. In Western Region, Dan Dzurisin, Doug Morton, Clark Blake (see Memorial in this issue), and Bob Wallace have all been dedicated to the avocation. Through the years, the birders have been subject to a certain amount of humor regarding their obsession. For example, Dallas Peck, though a happily obsessive gardener, was not especially interested in birds. But, he said, with a chuckle, "Each year when I visited Dave Stewart's field project in Penobscot Bay, Maine, the first day in the field was spent refreshing my knowledge of local birds!" Another good story is about James Papike, who worked for the Survey in Washington, D.C., in the late 1960s, before departing to teach at Stony Brook. At that time there was a brown-bag lunch group presided over by Dan Appleman. The group discussed refined topics each day, like favorite violin concertos and rare birds they had seen. The first day Papike was asked to join the lunch group, Appleman opened the conversation by saying, "Jim, do you like birds?" Papike replied, enthusiastically, "Oh, yes-I go duck hunting every year!" It was NOT the answer the group was hoping for... So if you are thinking of taking up a new hobby, get in touch with one of the Survey birders. They are easy to find-just look for someone out on the lawn, tripping over flower beds because their eyes are glued to binoculars!

On a different note, you will find a ballot in the mailing with this Newsletter. It's time for an election of our officers, and I am stepping down to be on the ballot as Vice-President. It's been a great five years in this position. I want to thank all of you who have supported the GD Retirees, especially those who contributed your time and effort to maintain the vitality of the organization. Please continue your support for the Newsletter by actively submitting stories and features that would otherwise be lost from our history.

John Keith

Treasurer's Report and Membership Statistics

This report summarizes the financial situation of the Geologic Division Retirees as of the end of 2017. Our present financial health is good because we have found a printer for our newsletters and directory who does a good job at a much lower cost than our former printer. We printed two newsletters and a directory in 2017. We currently have a considerable surplus, which we have been reducing over the past few years. At current levels of expenses, the current surplus could fund the organization for two years, even with no dues or donation income. This last year, our expenses were about \$1500 greater than our income, so if this trend continues, our surplus should decrease to a more reasonable level over the next year or two. We will keep dues at the current \$6 level for another year or two, to continue to reduce the surplus, but soon it will be necessary to increase dues, especially if the membership continues to decline.

Net worth, January 1, 2017	11,307.55	
2017 Income		
Dues and contributions received		
Dues for 2016 and prior years	162.00	
Dues for 2017	1,190.00	
Dues for 2018 and beyond	511.00	
Contributions	<u>368.00</u>	
Total income	2,231.00	
2017 Expenses		
Dues notices (envelopes, stamps, labels)	296.64	
Preparation and mailing of		
newsletters and directory	3,400.71	
Bank charges	6.00	
Total expenses	3,703.35	
Net change in net worth	-1,472.35	

9,835.20

Assets, December 31, 2016

Checking account, Wells Fargo	11,307.55
Undeposited dues & donations	0.00
Total assets	11,307.55
Assets, December 31, 2017	
Checking account, Wells Fargo	9,835.20
Undeposited dues & donations	0.00
Total assets	9,835.20

Notes:

<u>Comparison with 2016</u>: The amount received for dues in 2017 is \$227 less than in 2016, and the amount received as contributions is \$16 less. Dues billing cost \$52 less (this cost varies considerably from year to year because of advance buying of envelopes and labels in some years).

Escrow for future dues: Of the assets at the end of 2017, \$1086 represents advance dues payments and must be regarded as funds in escrow for 2018 and future years.

<u>Dues billings</u>: For 2018, dues notices were sent out in a single batch. Members who have not paid dues since 2015 will be dropped from the active membership list if they do not pay by the fall. They will no longer receive newsletters and their names will no longer be listed in the directory.

Membership statistics:

Year-end membership:		
2017 - 360	2010 - 453	
2016 - 382	2009 - 484	
2015 - 398	2008 - 504	
2014 - 390	2007 - 519	
2013 - 407	2006 - 531	
2012 - 414	2005 - 555	
2011 - 434	2004 - 579	

Net worth, December 31, 2017

In January 2018, we added two new members but dropped several members for nonpayment of dues, so as of the beginning of 2018, our membership stands at 354. Since 2004, we have had an average annual net loss of about 17 members. Of our members at the end of 2017, 63 were in arrears, 183 were paid up through 2017, and 111 had paid advance dues; 3 are life members. All members who have not paid dues since 2014 have been dropped from the active membership list. About 93 of our members were Emeritus geologists with the USGS at the end of 2017.

> Odette James Secretary/Treasurer

New Members

James Crock Ed DuBray Lucy Edwards Bill Hanna John Repetski Steve Schindler John Slack Michele Tuttle John Unger

Essays, Anecdotes, and History

White House Nominates New USGS Director

On January 26, President Trump announced his intent to nominate Dr. James F. Reilly, II, Ph.D., of Colorado Springs, CO, to be Director of the USGS; his confirmation hearing before the Senate Energy and Natural Resources Committee is scheduled for March 6. Dr. Reilly currently serves U.S. and allied militaries as a subject matter expert on space operations, and he is a technical advisor supporting the National Security Space Institute of the U.S. Air Force. Previously, Dr. Reilly held management positions in academia, as well as at TAEUS Corp. and PhotoStencil Corp. in Colorado Springs. During his 13-year career at NASA, he flew 3 spaceflight missions conducting 5 spacewalks for a total of over 856 hours in space. Prior to NASA, he was chief geologist at Enserch Exploration, Inc., working projects around the world including in Antarctica and on the continental slope of the Gulf of Mexico. He earned his B.S., M.S., and Ph.D. in geosciences from the University of Texas at Dallas.

Memories of Carle Dane Jim Fassett

[Ed. Note: this anecdote is excerpted from Jim Fassett's biographical profile of Carle Dane in New Mexico Geological Society Special Publication (2014), A brief history of geological studies in New Mexico with biographical profiles of notable New Mexico geologists.]

I had the good fortune to meet Carle Dane in the early 1960s when he invited me to join him at El Vado, where he was doing field work with Ed Landis and measuring sections of the lower Mancos Shale. Carle had learned of my work (with Jim Hinds) in the San Juan Basin using geophysical logs of the basin's thousands of oil and gas wells to correlate Upper Cretaceous strata throughout the subsurface of the basin. Having examined outcrops of these rocks around the rim of the basin for decades, Carle was intrigued to see how these rock units could be correlated in a very detailed way on logs. This was a time when a distinct change was taking place among stratigraphers about how to conduct our craft, and I clearly remember USGS old timers saying to me in those days that geophysical-log interpretations could not be trusted to do stratigraphy. Carle, however, was not one of those, and he was delighted to see that our subsurface well-log correlations tied in almost perfectly with his surface geology studies of these same rocks. Soon after that, Carle agreed to be one of

the reviewers of my coauthored USGS Professional Paper (Fassett and Hinds, 1971) on the geology and fuel resources of the San Juan Basin. Carle's review was extremely thorough and contributed immensely to the quality of the final product.

In 1967 while I was visiting USGS headquarters in Washington, D.C., Carle called and asked me to join him for lunch at the Cosmos Club. When I asked my Branch Chief if I could take a couple of hours off to join Carle for lunch, I could tell by his reaction that this was a significant honor, and of course our lunch that day was a heady event, for a still-young geologist learning his craft. As we were eating, a man came by our table and spoke to Carle, and Carle said, "Jim, I would like you to meet Bill Pecora, the Director of the Survey." Wow, I was impressed! As I recall, Carle was still extremely enthusiastic that day about the power of using electric logs to do stratigraphy, and looking back, it hardly seems possible that the use of logs was not more widespread in those days.

Total Solar Eclipse, Mitchell, Oregon, August 2017 Odette James

My son Jeff Stewart and I went to Oregon to view the total solar eclipse of August 21, 2017. We chose eastern Oregon because the chance of clear skies was excellent there. Because we waited until April to book, we had to settle for a bedroom in an Airbnb home in the tiny town of Mitchell, 200 miles southeast of Portland. Mitchell was near the center of the path of totality, so this seemed ideal. We planned to fly to Portland on Saturday, August 19, meet at the airport, rent a car, spend the night in Portland, drive to Mitchell the next day, view the eclipse Monday morning, and immediately drive back to Portland.

Jeff and I met as planned and drove to Mitchell the next day. We followed Interstate 84 along the Columbia River, stopping at Vista Point and Multnomah Falls, and turned south at Biggs Junction. As we approached what would be the path of totality, we began to see eclipse tourists. Wherever there was a flat patch of ground at the side of the road, there were tents and camper vehicles. Farmhouses had tents pitched in their yards. One farmer had set up a stretch of mowed fields next to the road for tent campers and had rented portapots.

As we got within a few miles of Mitchell, we started looking for a place from which we could view the eclipse. We wanted a long view to the west, so we could see the approaching shadow, and no high hills to the east, so the sun would be well above the horizon. About two miles north of Mitchell, we passed a flat plain that looked like a good location. At the north edge of the plain, there was a dirt logging road going west, and we saw that all along that road there were tent and vehicle campers. We decided to check it out the following morning.

We arrived at Mitchell (population 121) shortly before dusk. We found our Airbnb lodging in a house halfway along the 800-foot-long Main Street. We were given a bedroom with two beds and a bathroom shared with other guests (a special rate – \$613 for the night!). There were two other rented bedrooms, and the owner had rented space in his yard to tent campers (\$100 per night).

After we settled into our room, we wandered around Mitchell's Main Street. The largest buildings in town are of rough brown siding and look like they were built in the 1800s – very old timey. Some buildings were under renovation and others looked like they were about to fall down – the town did not have a lot of charm. That evening Main Street was thronged with eclipse viewers. There were booths on the street selling lemonade and ice cream. One cafe had set up an outdoor barbecue pavilion. The only bar in town had set up an outdoor area with live (very bad) local musicians.

The following morning about 7 am we drove to the logging road we had spotted the previous day, turned onto it, and headed west. We were in a long line of vehicles creeping along, and at every wide spot there were cars parked alongside the road in addition to tents and camper vehicles. About a mile in, we came to a jeep track along a low ridge heading south off the logging road. We turned onto the jeep track and went a few hundred feet before the track became too rough to continue. Ahead of us was a steep hill. Jeff pulled off to the side of the track, we took our gear, and we walked to the top of the hill.

As we climbed the hill, I realized we were at a spectacular geologic viewpoint (something I had not anticipated - I didn't look at a geologic map In the distance to the north and beforehand). northwest, there was a long high plateau of Miocene Columbia River basalt, with dark horizontal stripes marking individual flows. Below this was a scree slope derived from the basalt and an area of low rolling hills of the Oligocene John Day - strata of colorful white, gray, and pale orange water-laid tuff. Between our ridge and the John Day rocks were low hills and ridges with a few dark red layers – I got a geologic map of the area after returning home and found that these were of rocks of the Eocene Clarno Formation (mostly water-laid tuffs). In the distance to the northwest was a low-lying green farmed valley. At the west end of this valley, peeking out behind an intervening butte, we could see the highest hill of the Painted Hills unit of the John Day Fossil Beds National Monument northwest of Mitchell – a hill made up of colorful sloping strata. Later perusal of the geologic map indicated that our little ridge was in the Cretaceous Gable Formation (mostly sedimentary rocks). Just to the east of our spot, there was a low forested valley, and farther east and to the south, there were hills and buttes, also of the Gable Formation. Most of the area was covered with dry grass and scattered junipers. There were lots of small conical buttes, many of which I later learned were plugs of the volcanic rock that had fed the Eocene and Oligocene eruptions.

Jeff and I set up our camp stools at about 8 am, near the highest part of the hill. We had an hour to wait until first contact (the time when the moon takes its first tiny bite into the edge of the sun). There were already three parked cars and two other groups of viewers there – one group camped the previous night. Two other groups arrived after we did. We looked around and found that the tops of most nearby hills and buttes had clusters of eclipse observers. Eclipse watchers seemed to be dotted all over the landscape. Most every group of viewers had a lot of camera gear and some had expensive telescopes.

The people nearest us on the ridge called out when first contact was about to happen. We put on our eclipse glasses and soon it was clear that there was indeed a tiny nibble out of the edge of the sun. During the hour and a half of the partial eclipse before totality (which can be a bit like watching paint dry), Jeff and I occasionally put on our eclipse glasses, but neither of us took more than a brief look each time. Jeff spent most of his time exchanging work emails with coworkers back home, and I enjoyed the geologic view. About 15-20 minutes before totality, the temperature began to drop and a light breeze came up. The light began to have an eerie quality – there was much less light than normal, but there were still shadows so it didn't feel like a cloudy day, it just felt strange. I had been told that shadows would sharpen as totality approached, so I watched the shadows cast by a small bush at my feet. Shortly before totality, the shadows did appear sharper, perhaps because the sunlight was becoming more like point-source light.

As the visible part of the sun became a thin crescent, all of us on the ridge turned west to look for the approaching umbra. There was a darkening along the horizon, and, as we watched, the dark area expanded and came closer and closer. I had expected the umbra to be sharper edged, but it actually had a diffuse boundary. There was an ominous feeling as the area of darkness enlarged and swept toward us. As the edge of the umbra reached us, over several seconds it got darker and darker. Most of the watchers turned to look up at the sun, but I remained looking west at a woman standing on the jeep track – she still had a shadow, but then her shadow winked out. I turned and looked up to see a dark disc, with a white halo, where the sun had been. Totality!

I grabbed my binoculars and looked at the disc. There were several bright red blobs in the white corona bordering the black disc – prominences. I quickly passed the binoculars to Jeff so he could see the prominences. We then wheeled around to look at the horizon for the "360-degree sunset" – yes indeed, the entire horizon was lined with orange, with a band of pale blue above – we were looking out under the edge of the shadow.

During totality a few stars and planets were visible. Unfortunately, I had forgotten to get a star and planet chart for the eclipse, so we could not identify the few planets and stars we saw. I had also heard that colors disappear during totality, so we checked whether or not we could see color, and we could not. The light level was about the same as during dusk just when colors disappear. The corona and the lit horizon provide enough light that it never gets as dark as on a moonless night. I looked back at the sun and could see several coronal streamers. These were pale white and triangular, broad at the surface of the sun and narrowing to points away from the sun. I had not seen these at first but I presume they became visible as my eyes adjusted to the darkness. The sky was a dark bluegray.

Jeff and I were looking up when suddenly a thin bright pink line appeared along the top right edge of the black disc – the chromosphere, the sun's middle atmosphere. And then suddenly a ball of intense white light flared at the edge of the sun – the "diamond ring" – and the total eclipse was over. Jeff and I agreed that there had been so many things to observe during totality that it was over much too quickly (it had lasted only 2 minutes, 3 seconds). I had taken no photos as I wanted to savor the experience.

We quickly packed up and returned to our car. It was a bit after 10:30 am and Jeff had a 6:30 pm plane out of Portland. Driving back to Portland was a nailbiting trip at times, as we hit some areas where traffic was at a standstill. At one point it looked like the entire population of the state of Washington had come south for the eclipse. We got to Portland about 4:30 pm, and Jeff made his flight home. I stayed overnight in a motel and returned home the next day.

A great trip, a spectacular total eclipse seen from a lovely viewpoint, and a pleasant time with my son. He had not been enthusiastic about the eclipse and had gone only because I had insisted, but afterward he said that it had been a "cool" experience and well worth doing. And finding a viewpoint with beautiful geology was a bonus for me that I hadn't expected. Now I want a repeat – two minutes was way too brief. If I'm still alive and still mobile on April 8, 2024 – the date of the next total solar eclipse visible in the U.S. – I'll see it from Texas.

Seismic-Stratigraphic Group (1975-1984), Branch of Oil and Gas Resources, Denver, Colorado Bob Ryder

In 1973, the USGS Branch of Oil and Gas Resources was established in response to the OPEC embargo and the need for impartial research and analysis of the Nation's energy endowment. Within this new Branch, Chief Peter R. Rose organized the Seismic-Stratigraphic Group (SSG), whose purpose was to conduct research in the discipline of reflection seismology with emphasis on seismic characterization of stratigraphic traps for oil and gas. The original SSG (1975-1984) consisted of Group leader/geophysicist Alfred H. Balch (1928-2014), Bob Anderson, Myung Lee, John Miller, and Bob Ryder. Although several Geophysics Branches already existed in the USGS (e.g. Branch of Geophysics), their primary research objectives emphasized gravity, magnetics, refraction seismic, and earthquakes. Thus, the SSG was a first for the USGS because of its focus on reflection seismic research as applied to oil and gas exploration and later to regional tectonic- and stratigraphic-framework studies. Processing digital seismic records using the recently purchased Phoenix I seismic-data processing system was an integral part of the Group's duties. To this end, 2-D reflection seismic records were processed 24/7 at the Denver Federal Center, Bill Patterson (d. 2017) managed the data-processing activities with the assistance of Harold Oliver and numerous Colorado School of Mines graduate students. Several years later USGS geologists Dave Taylor (d. 2006) and Gerry Smith (d. 1979) joined the SSG and geophysicist Warren Agena was hired. Receptionists were Dorothy Mudge and Pat Worl. When Al Balch left the group in 1984 for the oil industry, he was replaced by USGS geophysicist John A. Grow (d. 2017) from Woods Hole.

Research activities of the SSG involved vertical seismic profiles (VSPs), 2-D horizontal seismic profiles, model studies of stratigraphic traps, and software development for processing VSPs. Digital VSP data were collected by the SSG in six wells in the Powder River Basin of Wyoming and Montana. The VSPs characterized seismic waveform signatures of stratigraphic traps in Cretaceous and Paleozoic sandstone reservoirs and of regional aquifers in Paleozoic carbonate rocks. Regional 2-D multifold horizontal seismic profiles collected between wells with VSPs successfully imaged the Bell Creek and Red Bird oil fields (both of which were controlled by stratigraphic traps) and aquifers in WRD's Madison Aquifer study. Moreover, a third stratigraphic-trap field (Patrick Draw in Wyoming's Green River Basin) was identified on a commercial reflection seismic profile donated by industry. 2-D ray-tracing model studies (using commercial software) of 15 welldocumented stratigraphic traps in sandstone reservoirs of the Rocky Mountain region revealed that most of these traps could be imaged with multifold seismic profiles. Because few VSP records existed at the time, software developed by the SSG was crucial for processing and interpreting our VSP data in Wyoming, Montana, and later localities such as the Nevada Test Site and salt diapirs in the Paradox basin.

Publications resulting from SSG studies include a USGS Professional Paper, *Geophysics* articles, a Society of Exploration Geophysicists book, am International Human Resource Development Corporation book, an AAPG Methods in Exploration Series book, USGS Oil and Gas Investigations Charts, and a Wyoming Geological Society Guidebook article. Furthermore, many Atlantic Outer Continental Shelf seismic lines interpreted and published by USGS Woods Hole and Reston geoscientists were processed by the SSG.



Caption: Reunion of the Seismic-Stratigraphic Group, 240 Union Restaurant, Lakewood, Colorado, August 17, 2017. L to R: John Miller (USGS Emeritus, Denver, working with USGS Emeritus Roland von Huene on tectonics and sedimentation of the Aleutian trench), Bob Ryder (retired USGS, Reston), Bob Anderson (Chief/Geophysicist of Branch of Geotechnical Data Services, DOI Secretarial Office for Indian Affairs, Denver), Myung Lee (retired USGS,

Denver). The original Seismic-Stratigraphic Group, Branch of Oil and Gas, was active between about 1974-1984 under the direction of research geophysicist Alfred H. Balch (1928-2014); receptionists Dorothy Mudge and Pat Worl.

An Unexpected Encounter with an Unusual Vehicle John Slack

I retired from the USGS in January 2016. Four years ago, in 2014, my wife, Peggy Yocom, and I moved to Farmington, Maine, a small college town in the foothills of the western mountains. I grew up in Maine in the 1950s and remembered many idyllic times that I spent camping, hiking, and fishing as a Cub Scout and Boy Scout. I always wanted to return there to live full-time.

I began work at the Survey in 1974 as a WAE employee in Menlo Park, mainly doing lab studies on the Carlin gold deposit in Nevada. After receiving my Ph.D. at Stanford University in 1976, I moved to Reston where I spent the remainder of my career. In my 44 years with the USGS, the majority of my research has been on the geology, mineralogy, and geochemistry of stratabound mineral deposits, especially volcanic- and sediment-hosted massive sulfides. I've also worked on banded iron formations. phosphorites, and metalliferous black shales. Since retirement, I have continued geological work as an Emeritus Scientist, mainly finishing dormant-but not yet extinct—manuscripts. I am also involved in several new studies with colleagues, on diverse topics such as redox changes linked to seafloor-hydrothermal systems in Paleozoic basins of Norway and China, sulfur isotope systematics of a volcanogenic massive sulfide deposit in Alaska, and geochronological and tectonic evolution of an island off the coast of Maine. One highlight this year was the publication of a major paper in Nature, as coauthor, on textural, geochemical, and isotopic evidence for the oldest life on Earth.

I have many stories from my 50 years of geological field work stretching back to undergraduate field camp in 1968. I love to share these stories with friends, and I hope to share more in future issues of this Newsletter. Here is one of my favorites, about an experience I had in the summer of 1972, while I worked as a field assistant doing mineral exploration in the Black Hills of South Dakota. My supervisor was Harold Sundelius, a geology professor at Augustana College (Illinois), who was also working in exploration that summer.

One morning we did reconnaissance geology on Route 385, a paved road that runs north-south along the eastern side of the Black Hills. We were checking out road cuts. I was driving the rental 4WD very slowly and, as it turned out, far too slowly, especially on such a curved and hilly road.

Suddenly, I heard a loud noise, looked in the rearview mirror, and saw only a blur of dark red. It filled the entire mirror and I had no idea what it was. Afraid that we would be hit, I immediately swerved off the road into a shallow ditch. Zooming by, nearly out of control, was a 20-foot-long hot dog, complete with bun, and mustard too, although I'm not sure. It had a yellow "Oscar Mayer" sign on the side. We were fortunate not to have been injured, or worse. We were lucky it was not a hamburger.

That fall of 1972, I began my Ph.D. studies at Stanford. On the annual department field trip, led by Prof. Konnie Krauskopf to see granites and tungsten skarns in the southern Sierra, faculty and grad students camped out for two nights. Each evening, we told stories around the campfire. The second evening, I told my story about the giant hot dog. Ron Lyon, one of the professors there, immediately challenged me: "John, that's baloney. There's no such thing as a mobile hot dog." In the rest of my time at Stanford, I never told the story again.

Fast forward five years, and I'm sitting in my USGS office in Reston when I get a phone call from

Ron, saying that he is coming east to D.C. for a committee meeting, and asking if we could have dinner together. I had not heard from him in all that time, but I said, "Sure," and we made plans to meet at Au Pied de Cochon, a small French restaurant in Georgetown.

I got there a bit early, and Ron entered 10 minutes later. We shook hands. "How are you?" I asked. He didn't say a word. He waved me off with a sweep of his hand. He sat down, I sat down. Very long pause.

"I've *seen* it," he whispered, leaning toward me over the table. He looked directly at me.

"What do you mean?" I asked. I had no idea what he was talking about.

"I've seen it," he repeated.

Finally, he explained. On a road somewhere in Nevada, he saw the giant hot dog, the Oscar Mayer Wienermobile. "I'm sorry for not believing you, back then at the campfire."

I smiled and said, "Thank you."

In the years that followed, I learned that in 1972, only a few Wienermobiles drove around the country. Now, there are many, although I have yet to see another. But whenever I order a hot dog, I think back to that mountain road in the Black Hills, and my close encounter with the giant speeding wiener.



News from Retirees



Tom Casadevall – In October I visited the National Mining Hall of Fame in Leadville, CO, with Bob and Fran Rye and Paul and Patty Barton, just after the induction of Vince McKelvey into the Hall. *Left to right:* Fran and Bob Rye, Paul and Patty Barton



Linda Gundersen is the editor of a new book published by the American Geophysical Union and Wiley, *Scientific Integrity and Ethics in the Geosciences.* From the publisher's description:

Science is built on trust. The assumption is that scientists will conduct their work with integrity, honesty, and a strict adherence to scientific protocols. Written by geoscientists for geoscientists, Scientific Integrity and Ethics in the Geosciences acquaints readers with the fundamental principles of scientific ethics and shows how they apply to everyday work in the classroom, laboratory, and field. Resources are provided throughout to help discuss and implement principles of scientific integrity and ethics. Volume highlights include examples of international and national codes and policies; exploration of the role of professional societies in scientific integrity and ethics; references to scientific integrity and ethics in publications and research data; discussion of science integrity, ethics, and geoethics in education; and

extensive coverage of data applications. Scientific Integrity and Ethics in the Geosciences is a valuable resource for students, faculty, instructors, and scientists in the geosciences and beyond. It is also useful for geoscientists working in industry, government, and policymaking.

Larry Rooney: Buddie and I continue to enjoy our last years of independent living, indulging in many of the pleasures that Whitefish has to offer. We are still fit enough to play golf, swim a half mile a day, and travel abundantly. I am more than a bit wobbly but do not yet carry a cane, although I needed one yesterday. Walking through more than knee-high snow to the barn at our son's farm, I fell and was barely able to get up. Actually, I thought, this is not a bad way to go.

Suspending caution, I continue to totter with Buddie around the globe. Early in 2017 we rented apartments in Brisbane, Melbourne, and Adelaide and also took the Ghan from Adelaide to Darwin, which we had not visited before. A month later, we took a Grand Circle trip starting in Rome around the boot of Italy to Venice, stopping at Malta en route. (Malta was the site of an adventure 61 years ago when we were with Mobil Oil.) Not long after the Italy odyssey, we took a Grand Circle trip through London, the Cotswolds, southern France, Spain, and Portugal. On both the Italy and London trips we stopped several days with our son who lives in Holland. Finally, we celebrated my 91st birthday on a paddle-wheel steamboat on the Columbia, as we had my 90th on the Mississippi. We have just returned from a Road Scholar trip to Cuba, notably Holguin, Gibara, Santiago, Trinidad, and Havana. In March, we will take a Road Scholar trip to Santa Fe, NM, and return by a grand Amtrak trip from Albuquerque, stopping in Los Angeles and Seattle. (A few years ago we made the same trip but the full loop from Whitefish through Chicago and then to Los Angeles.) We plan no further travel, but I suspect we

will not be able to resist crossing Canada by rail. I love train travel—so long as we have a bedroom with bath en suite.

In the late fall, our apartment in the Villas (part of an Immanuel Lutheran retirement complex in neighboring Kalispell) will be ready for occupancy. It will be our principal residence, where we will dine in style and spend the nights, but we will keep our home of the past 20 years so that we can continue to enjoy Whitefish.

George Ulrich: Life at the "Home." When Sally and I took up housekeeping at Erickson Living's Wind Crest in the South Denver area, it took a while to adapt to our new life-style. Not used to living with elevators, 3- & 4-wheeled walkers, electric scooters, and oxygen carts, we're amazed, after nearly three years how much we enjoy the urban environment on this 85-acre campus. We've renewed acquaintance with CU colleagues, and USGS retirees, including Karl and Nancy Kellogg, Bill Keighin, Jon Connor, Al and Tillie Miesch, and Joe O'Connor. Even ran into Mitch Reynolds at the Subaru shop. Also visited with Omer and Phyllis Raup over lunch several years back.

Still playing at tennis and pedaling on the excellent bike/pedestrian trails in the area. Besides working in the wood shop and placing 18 Bluebird houses around campus, which so far have attracted only Tree Swallows, I've joined the Learners committee, supporting 10-15 courses of 4 to 8 weekly classes three times each year. I've generated two courses, one on the Grand Canyon and another on Adventures to a Rocky Moon, reminiscing about the Flagstaff days of the last four Apollo missions.

Memorials



John Marshall Aaron, III, died November 20, 2017, following a brief illness. The son of John M. Aaron and Margaret Kimbrough Aaron, John was born in Wilmington, Delaware, on June 7, 1936, and grew up in Chadds Ford, Pennsylvania. He earned his B.S. in geology from Franklin & Marshall College and his Ph.D. in geology from the Pennsylvania State University.

Highlights of John's professional career are given below, but he had many interests in addition to his love of science. He was a prolific gardener who raised native orchids in Puerto Rico, an enthusiastic oenophile, and a lifelong student of classical music. He learned to play ice hockey in his sixties and played for more than 10 years on a recreational team before finally hanging up his skates at the age of 75. He was an avid birder, leading a team of spotters on the lower Potomac River every December for more than 30 years for the Audubon Society's annual Christmas Bird Count. A devoted student of American history, John joined the Christian Sanderson Museum in Chadds Ford in 2012, first as a museum guide and then an elected member of the board.

John leaves two daughters, Anne Aaron of Annapolis, Maryland, and Jennifer Aaron of Ashburn, Virginia; a sister, Missie Bauman of Wilmington, Delaware; two grandchildren; and many cousins. His wife of 42 years, Barbara Robinson Aaron, died in 2006.

Reston Connection newspaper

Career Highlights

- Chief, Office of Scientific Publications, 1981-1995: John managed a workforce of around 300 USGS library and publications staff that provided geoscience information services to a worldwide constituency. He developed the policies, procedures, and standards applied to publishing USGS book, map, and electronic information products and introduced state-ofcomputer and communications the-art technologies on a nationwide scale. Under his leadership, the USGS began the Public Issues in Earth Science series of circulars to provide succinct, scientifically accurate, non-technical information to the public on earth-science such coastal issues as change and geochemistry. John environmental also introduced the use of CD-ROM technology as a standard USGS publishing medium, allowing cost-effective dissemination of massive data sets addressing a broad spectrum of public and professional interests.
- Chief, Branch of Eastern Technical Reports, 1980-1981
- Chief, North Atlantic Environmental Assessment, 1977-1980: John oversaw and conducted environmental geologic and geophysical studies related to the planned development of potential petroleum resources

of the continental shelf and slope offshore of New England.

 John's field work included mapping the complex volcanic, metamorphic, and surficial geology of Puerto Rico; he became Chief of the Puerto Rico Cooperative Project in 1971. In the early and mid-60s, John mapped the volcanic and metamorphic rocks of the Thiel Mountains and Hudson Mountains, Antarctica, and mapped the stratigraphic and structural geology of the Lehigh Valley and Reading Prong of eastern Pennsylvania and western New Jersey.

Personal comments from people who worked with John Aaron:

Avery Drake:

When I returned from Europe in the first week of September 1960, I was quite surprised to find John sitting at my desk in my office in the Interior building. I had no idea who this young man was. Gene Boudette, who was sharing my office, introduced me. John had recently been hired to work on the Antarctic project. As I was also going to Antarctica, we experienced the same training and became close friends. In November 1960, John went to Antarctica, and I went in January '61. After our return in '61, John went to New Jersey with me to work on the geology of the Reading Prong. When it got hot, John escaped to work in Massachusetts. In the fall, John returned to Antarctica and came back in spring '62. He went back to New Jersey to work with me. Back in Washington he worked in the office and lived in my apartment on F Street. In the fall he entered the Graduate Program at Penn State. His thesis area was the Nazareth quadrangle in Eastern Pennsylvania, which was in my project area. When he completed his academic work, he was assigned to the Puerto Rico project. John was a genuine pleasure to work with, and I have the fondest memories of our many years of friendship.

Art Ford:

John was a member of the USGS small field parties on the first explorations and geological mapping of mountains near the South Pole in austral summers 1960-61 and 1961-62. The work was part of the U.S. Antarctic Research Program managed and funded by the National Science Foundation. In that first field season none in the party had previously been to Antarctica, and most had no experience in the arts of bowline and other knots and ropes and ice-axe use in crossing dangerously crevassed glaciers and ice sheets or of crevasse-rescue techniques. John, for one, had recently come off a project in the jungles of tropical Puerto Rico. However, he enthusiastically learned fast, and the group stayed out of any crevasses encountered, even on the Aaron Glacier, a feature named by the U.S. Board on Geographic Names to commemorate his explorations

(<u>https://en.wikipedia.org/wiki/Aaron_Glacier</u>).

Snafus in logistics severely shortened that field season to about one month, which, with the lack of motor toboggans (ski-doos) and thus field travel limited to skiing and man-hauling of sledges (the old-fashioned way of explorers), meant that little of the original plans was accomplished. Even so, after a debriefing in Washington's Interior building on the party's return, the Chief Geologist declared the season a success likely because all returned alive! Thus a USGS "Antarctic project" was birthed, headquartered along with Florida in the Branch of Eastern Regional Geology (for proximity to the NSF funding source across G Street, no doubt). Plans were laid for continued explorations and mapping ranges of the great continent-crossing chain of the Transantarctic Mountains – and John waxed his skis for the 1961-62 polar summer to finish studies of the Thiel Mountains. This time, with (primitive) motor toboggans for transport and a party experienced in mountaineering, studies were completed. John's characteristic great sense of humor kept morale up during days of tentbound blizzards. One highlight was an unidentified dark brownish rock studded by bright glassy olivines found in a moraine. Though none had ever seen one, John's vote made it unanimous that it was a meteorite. What else?, as only granites made up all adjoining mountains. Good guess: back home it turned out a pallasite – and Antarctica's only third known meteorite, of some 7,000+ known today. Thus ended John's polar geology career, and he returned eventually to Pennsylvania for work toward his doctorate.

Henry Spall:

I was John Aaron's Deputy Chief in the Office of Scientific Publications from 1980/81 until 1995, when I retired. It was a crucial period in the publications world. It marked a dramatic changeover from traditional methods to the advent of the digital age. In the late '80s, computers appeared on the stage. Not only did this change and streamline the preparation of text, but also of illustrations, as well as printing, especially of color geologic maps. John was very keen to make sure that OSP staff in all three regions had ample opportunities to learn and embrace the new methods. To accomplish this goal, John supported many staff people to attend courses at the Rochester Institute of Technology, a well-known leader in advanced publications technology.

OSP was also involved in managing the Survey libraries. Budgets had to be adapted to make sure that new scientific texts were adequately forthcoming, and that holdings were not unnecessarily deselected. Accepting the Library of Congress classification system was a significant project. To prepare exhibits and briefing boards for Survey staff charged with giving abstracts and talks for scientific purposes, a Visual Services branch was supported in Reston. John added several people to the OSP staff who made major additions to the Survey's standing in the scientific world. Jim Queen (Denver) and Will Stettner (Reston) both made crucial improvements in the preparation and printing of the Survey's thematic maps. John hired Jerry McFaul, who had tremendous knowledge of the new digital storage field. As well as co-ordinating meetings in the local DC area of workers in data storage, he initiated a new Survey publication series in CD-ROM. Under John's watch, the Survey continued to develop a strong worldwide reputation in its publication and data storage efforts.

John Keith:

I got to know John well during the 12 years he was my supervisor, 1983-1995. John did a couple of great things for me professionally. First, he asked in 1983 whether I would be willing to write speeches for Director Dallas Peck. This turned into a very satisfying 10-year task which was a tremendous education about the operations of the Survey. Then, in 1986, he selected me to head the Branch of Visual Information Services, another very educational assignment. I had to learn skills that were highly useful later in my career, such as managing people, principles of publication design, and digital production of publications. When I first started working with John, I was becoming interested in birding, as I was being encouraged by Tom Nolan and Dave Stewart. John emphasized to me what a satisfying hobby birding is, especially if one's scope is birds of the world in addition to those of the U.S, and he went birding with me numerous times to help me learn. So I am much indebted to John for giving me a life-long avocation that extensively expanded my knowledge of natural history.

Richie and Mary Ellen Williams:

Mary Ellen and I first met John at Penn State after his return from his second field season in Antarctica. He had spent two field seasons (1960/1961 and 1961/1962) doing geologic field mapping of nunatak outcrops in the Thiel Mountains of Antarctica with USGS colleagues the late Pete Bermel and Art Ford (*see Art's essay*). Later in my career, I established that "blue-ice" areas in Antarctica could be mapped on Landsat images; such areas are prime collecting places for meteorites, so another geographic location of mutual scientific interest was in common between us.

Our post-Penn State years were a continuing intertwining of our career paths with the USGS in Puerto Rico, Falmouth, and Reston - not always at the same time, however. While working on my dissertation in Puerto Rico, one day we went to the International Airport in Santurce to meet my sister, when who got off the airplane but John and Barbara on their honeymoon no less; you should have seen the looks on their faces when they saw the totally unexpected "greeting party!" Later in John's memorable career, he was involved in geologicquadrangle mapping in Puerto Rico – at a proper scale, 1:20,000, and in the metric system, way ahead of the time. Then came the stint in Woods Hole to study the sea floor as part of the Survey's effort to map the continental shelf and determine if oil or gas deposits in the formations were economically feasible. The Aaron family returned to Reston, where our paths crossed again. John became Chief of Scientific Publications and was promoted to SES. We enjoyed many evenings with John and Barbara, including a memorable sailing vacation in the British Virgin Islands, where John emulated a submarine-launched ballistic missile when he spotted a "large" barracuda while snorkeling!

When we transferred from Reston to Woods Hole in 1991/1992, we brought the "Aaron" sunfish with us. That was the last time both families were in the same place and – after the death of Barbara in 2006 – we lost touch. Thankfully, we reconnected in Falmouth in 2016 with a visit by John and Anne at our home in West Falmouth, only a few streets away from where they had lived. We have always felt extremely fortunate to have John and his family as members of a small group of special friends, especially with so many shared or vicarious experiences during our respective careers. We could, of course, relate many more stories about John. John was a great mentor at the USGS in helping us navigate through the ever increasing bureaucratic brambles and in providing much appreciated advice on many occasions. John will be missed by both of us as a friend and valued colleague!

Milton C. Blake, Jr., known to all as Clark, died on August 5 in Bellingham, WA. Clark was born in San Francisco on February 20, 1932, the son of Milton C. Blake, Sr. and Easter Carol Wilson. He spent his youth in San Francisco and the Sonoma Valley where he graduated from Sonoma High School in 1949. After attending Santa Rosa Jr. College, Clark joined the U.S. Army in 1952 and spent a year studying the Russian language at the Army Language School, followed by a 2-year stint as an interpreter and translator in Austria and Germany. Upon his return to California, Clark attended U.C. Berkeley and received a B.S. in Geology in 1958. While receiving his degree, he began work as a field assistant for the USGS, and then attended Stanford University, where his work on blue-schists in the Franciscan led to a Ph.D. in 1965. He then continued his 35-year career at the Survey, where the bulk of his work was in the San Francisco Bay region and Great Valley. He was also fortunate to be able to travel the world in search of answers to geological questions. He received a Fulbright Grant in 1970 to work in New Zealand and New Caledonia. During his appointment as Branch Chief of the Western Environmental Branch of the Survey in the early '70s, he spent six months at the University of Paris where he worked in the western Alps and the Cyclades Islands of Greece. In 1988, he continued his work in the Alps of France and Italy with a C.K. Gilbert Fellowship. He also did extensive work with the New South Wales Geological Survey in Australia.

Clark retired in 1993 and moved to Bellingham where he became a Research Associate at Western Washington University. He continued to work on joint projects with USGS colleagues and, under an NSF grant, studied the geology and tectonic history of the San Juan Islands with W.W.U. Colleagues. In addition to geology, Clark was an avid field ornithologist, did extensive genealogy research of the Blake and related families, and was a lover of good food and wine.

He is survived by his wife, Patty Combs Blake of Bellingham, daughter, Emma C. Blake, son-in-law, Robert Schon, and two grandsons, Henry Robinson (Harry) Schon and Charles Edward Schon, all of Tucson, AZ, as well as two brothers, Wilson Blake of Clarkston, WA, and Donn Blake of Las Vegas, NV.

Carl Wentworth and Patrick Muffler



David A. Brew died in Los Altos, California, on November 7, 2017, at age 87, after a 66-year career as a USGS field geologist. In addition to his love of geology, he was a world traveler and a passionate defender of our natural resources. He was most at home in the mountains: hiking, skiing, and making geologic maps. Dave leaves his wife Sally, four daughters, eight grandchildren, and a myriad of friends.

Dave graduated from high school in Ithaca, New York, in 1948 and received his B.A. in geology from Dartmouth College in 1952. His career with the USGS started in 1951 with the uranium project in western Colorado, where he worked until 1957 when he undertook graduate studies at Stanford University, receiving his Ph.D. in geology in 1964. During this period, he spent the summers of 1958, 1959, and 1961 as a field geologist under then-USGS Director Tom Nolan, and the results of this work became his Ph.D. dissertation. In 1959–1960, Dave spent a year at the Geologisches Institut, University of Vienna, Austria, on a Fulbright Scholarship.

In 1961, Dave started work as a geologist in southeast Alaska, beginning the dominant theme of his long career. I was transferred to Alaska Geology Branch in 1962 and worked with Dave for two field seasons on the geologic mapping of Baranof and Kruzof Islands. Dave supervised my work in the Keku Straits in 1963, and together we wrote several papers on southeast Alaska, most notably one on Triassic glass(!) and a large professional paper on Baranof, Kruzof and Chichagof Islands (with Bob Loney and Jack Pomeroy).

Dave then moved on to geologic studies in the Juneau area, primarily with his long-time colleague, Art Ford. These studies continued throughout Dave's USGS career, expanding to include stratigraphic, tectonic and petrologic studies throughout all of Southeast Alaska, with primary focus on the Juneau, Petersburg, and Glacier Bay areas. In 1966, Dave began work with Ed MacKevett on a massive investigation of mineral resources in Glacier Bay National Monument, including extensive helicoptersupported investigations of the Fairweather Range. This work ultimately resulted in the geologic map of Glacier Bay National Park, a product being processed by the USGS at the time of Dave's death.

In 1970, Dave moved to Washington, D.C., as Deputy Assistant Chief Geologist for Mineral Resources. During this period, he chaired the Special Interagency Task Force for preparation of the Final Environmental Impact Statement for the Trans-Alaska oil pipeline. The huge impact of this document in insuring that the pipeline minimized environmental damage to the fragile Alaska terrain was in no small part due to Dave's skillful leadership.

Dave returned to Menlo Park in late 1972 to resume work on the Juneau project and the Glacier Bay studies and to begin work on the Metamorphic Facies Map of Alaska, the Tracy-Arm/Fords Terror wilderness study, the Petersburg project, and the undiscovered mineral-resource assessment of the Tongass National Forest. Dave also served as chair of the Geologic Division Reorganization Committee in 1982 and served as Assistant Chief of Alaskan Geology Branch, from 1991 to 1992.

Dave retired from the USGS in early 1995 after producing nearly 200 papers, maps and reports. For 22 years subsequently, he served as a Scientist Emeritus, continuing his Southeast Alaska studies and producing 40 more papers, maps and reports. Dave's last season of significant field work was in 2002, some 41 years after he began work in southeast Alaska. But he continued to work on map compilation in the Petersburg, Craig, and Skagway quadrangles, on the southeast Alaska part of the state geologic map, and on his Glacier Bay map. In addition, he became a critical voice among the community of residents and activists targeting proposed large-scale real-estate developments in Squaw Valley, North Lake Tahoe. He was smart enough to see through the spin, and fearless enough to raise his concerns. He earned the affection of many in Squaw Valley and beyond.

I was fortunate to meet Dave when we were both young geologists in Nevada, to work with him on Baranof Island and the Keku Straits, and to interact with him off-and-on throughout his emeritus years. I shall miss the twinkle in Dave's eyes and his wry sense of humor.

L. J. Patrick Muffler



John Richard Dyni of Boulder passed away on September 24, 2017, at age 85. He was born in Chicago on February 9, 1932, to Carl Leonard Dyni and Helen Laamanen Dyni. At age nine, following the death of his father, he, his mother and older brother Robert moved to Detroit to be near his Finnish relatives. There, he graduated from Cass Technical High School and Wayne State University. He received his Master's degree in geology from the University of Illinois in 1955, followed by 6 months in the U.S. Army Critical Skills program.

His professional career began with the Army Corps of Engineers in Kansas City, followed by over fifty years with the USGS in Denver. There he became a respected expert in world oil shales and associated minerals. In 1981, he received his doctorate in geology from the University of Colorado. Jack was an active member of the Civil Air Patrol Jeffco Senior Squadron for over 40 years. He attained the rank of Captain and was a certified flight instructor. His other interests included ham radio, photography, radio-control model airplanes, and fishing and camping with his family and friends. He leaves behind his wife of 59 years, Anne Quinby Dyni, his son Robert Dyni (Denise), his daughter Elizabeth Dyni Reigel (Dennis), three grandsons, and seven nieces and nephews.

Published in The Daily Camera (Boulder, CO)



John Pojeta, Jr., 81, USGS Scientist Emeritus, passed away on July 6, 2017, at Casey House, Rockville, Maryland. John was renowned for his work on the origins and early evolution of molluscan classes; his research focused primarily on the evolution, phylogeny, biostratigraphy, and paleoecology of Cambrian and Ordovician pelecypods, chitons, and rostroconchs. His research contributions to paleontology were matched by his tireless service to the profession, in which his wife of 60 years, Mary Lou, avidly joined him.

A native of New York, John received his B.S. in biology from Capital University in Bexley, Ohio, and completed his M.S. (1961) and Ph.D. (1963) degrees at the University of Cincinnati under the supervision of Kenneth Caster. From 1963 until his retirement in 1994 John was employed by the USGS, initially as geologist and eventually as Chief of the Branch of Paleontology and Stratigraphy (1989-1994). During his more than 30 years at the USGS, John developed collaborations worldwide; he served as USGS-Australian Bureau of Mineral Resources exchange scientist and as visiting scientist to the New Zealand Geological Survey, and he participated in field expeditions in the Ellsworth Mountains of West Antarctica and in Senegal. He also served as consultant on living mollusks (involving extensive SCUBA work at Eniwetok Atoll and in Belize) for the Department of Paleobiology at the U.S.

National Museum, where he remained a research associate until his death. In his spare time, John developed an off-campus program for George Washington University, teaching introductory geology to nontraditional students. He was frequently sought as a lecturer at institutions across the country and worldwide, including in Sweden, New Zealand, Australia, China, and Mexico.

Much of what we know about the early history of mollusks comes from John's work, including many papers with long-time collaborator Bruce Runnegar. The importance of John's publications is apparent from such titles as "Rostroconchia: a new class of bivalved mollusks," "Fordilla troyensis Barrande: The oldest known pelecypod," "Origin and diversification of the Mollusca," and "The origin and early taxonomic diversification of pelecypods." John published nearly 150 papers, not only on Paleozoic mollusks but also on paleontological techniques and collecting, including issues with collecting on public lands. His scientific contributions have been recognized by Fellowship in the American Association for the Advancement of Science, the Geological Society of America, and the Paleontological Society. He received medals from the Geological Society of China and the Chinese Ministry of Geology and Mineral Resources, and Honorary Membership in the Association of Australasian Paleontologists for contributions to Australian paleontology. Eleven genera and species of mollusks, as well as Pojeta Peak in the Ellsworth Mountains of West Antarctica, have been named for him-a fraction of the number of taxa he has named for others!

John's expertise and attention to detail made him an oft-sought member of high-visibility committees. For example, he served on several committees for the National Academy of Sciences/National Research Council, including the Committee on Guidelines for Paleontological Collecting, and on the North American Commission on Stratigraphic Nomenclature, the Advisory Committee for the Treatise on Invertebrate Paleontology, and the USGS Geologic Names Committee, which he chaired.

John gave willingly of his time and energy to professional service and was actively involved in nearly two dozen professional organizations, serving as an officer for half a dozen of them. He was most significantly involved with the Paleontological Research Institution, for which he served as Vice-President and President of the Board of Trustees, and the Paleontological Society. John's extensive service to the PS included positions as Book Review Editor, Business Manager for Special Studies, and the PS Fellows Committee. John served as Paleontological Society Secretary from 1982 to 1988, followed by terms as President-Elect, President, and Past-President. For many paleontologists, John Pojeta, with Mary Lou by his side, was the face of paleontology; for 25 years the two of them organized and staffed the PS exhibit booth at national and regional GSA meetings, the North American Paleontological Convention, and other professional meetings. John worked tirelessly to promote his vision of "The Paleontological Society as the vehicle for the profession to use for improving its lot in American science" (articulated in his presidential address; Journal of Paleontology 65:347-354). In recognition of John and Mary Lou's unstinting service, the PS instituted the Pojeta Award (paleosoc.org/grants-and-awards/pojeta-award), for "exceptional professional or public service by individuals or groups in the field of paleontology above and beyond that of existing formal roles or responsibilities." Fittingly, John and Mary Lou were the first recipients.

John's official roles represent only a part of his contributions to paleontology. Although John could seem stern — especially when debating such topics as whether the appropriate terminology should be "pelecypod" or "bivalve" — his generosity towards and support of other paleontologists were unsurpassed. His friends and colleagues recall with gratitude his wisdom and sense of humor as a mentor and peer; his encouragement of new researchers; his helpfulness in introducing graduate students to the Smithsonian collections; his generosity in providing fossils to augment the teaching collections of young faculty members; his outreach to amateurs and professional collectors; and the amazing hospitality he and Mary Lou showed to paleontologists visiting D.C. Their annual Christmas letter was a veritable who's who of paleontology, as the Pojetas listed, month by month, the numerous colleagues that they had hosted at their home. John Pojeta touched the lives of many of us by living the vision he had for the advancement of our science, and we are the better for it.

John is survived by his wife Mary Lou, his daughter Kim (T.J. Oakes), son John (Christine Linn), six grand-children, two great-grand-children, and his brother Martin.

Dr. Patricia H. Kelley, Professor Emerita, University of North Carolina Wilmington



Daniel Reeves Shawe, 92, of Lakewood, Colorado, passed away peacefully, at home in his Lakewood Meridian apartment, on August 24, 2017.

Dan was born in Gardnerville, Nevada, on May 24, 1925, and he grew up in this same small town, located in the Carson Valley just east of the Sierra Nevada Mountains. He was a proud American throughout his life, and he served his country in the Second World War, from June 1943 to September 1945, as a flyboy in U.S. Naval Aviation.

Dan received his higher education at Stanford University, obtaining a B.S. in geology in 1949, an M.S. in geology in 1950, and a Ph.D. in geology in 1953. In June of 1951, he embarked on a rewarding career as a field geologist for the USGS, eventually mapping and studying mineral resources in many areas of the western United States, as well as in several foreign countries; in October of that same year, he married. Initially, Dan was stationed in Grand Junction, Colorado; however, in 1958, at the conclusion of the Colorado Plateau Uranium Program, he transferred to the Denver USGS office. He retired in January of 1995, continuing on into his 80s as a Scientist Emeritus, completing reports related to his earlier field work.

Specific projects in which Dan was involved over the course of his career included thorium reconnaissance and geologic mapping at Mountain Pass, California (1951–52); uranium exploration in the Slick Rock district of the Colorado Plateau (1953–58); geologic mapping in the Egan Range, Nevada (1958-60); mapping beryllium in volcanic rocks in the western United States (1961-65); serving as Chief of the Heavy Metals Branch (1966-69) and the Branch of Central Mineral Resources (1970–72); completing geologic studies of the Great Basin (1973–74); holding a temporary-duty assignment in Thailand, as well as preparing a report on the "Geology and Mineral Resources of Thailand;" and geologic mapping in the southern Toquima Range, Nevada (1974-95). In June of 1967, Dan and his colleague Barney Poole discovered large, high-grade deposits of bedded barite

in East Northumberland Canyon in the northern Toquima Range.

Dan received special recognition for his work both from the university he attended and from his geologist peers throughout his career; his awards included a B.S. with Great Distinction from Stanford in 1949 and the Federal Meritorious Service Award from the USGS in 1972. His interests outside school and, later, work included drawing, ornithology, Nevada artifacts, preparation of his autobiography, study of the natural world, woodworking, stone cutting, photography, and politics and an involvement in several conservative political organizations.

Dan was preceded in death by his loving and devoted bride of 50 years, Helen Mae Cruikshank. His father, Hamilton Bruce Shawe, his mother, Henrietta Frieda Rhodes, two brothers, Hamilton Bruce Shawe, Jr., and Fred Shawe, and one sister, Cora Lee Shawe, also predeceased him. He is survived by his children, Jill J Sethaler, Jennifer Sue Shawe, and Scott Reeves Shawe, and his grandchildren, Deborah Anne Ferchau, Brian Keith Sethaler, Matthew Reeves Shawe, and Elizabeth Anne Hendry. Four great-grandchildren, Melita Ferchau, Shelby Sethaler, Audrey Sethaler, and Cole Cooper Hendry, also survive him.

Jennifer Shawe

Katharine Lutz Varnes, 94, passed away peacefully at home on October 21, 2017. A retired USGS geologist, Katharine was born in Philadelphia, PA, and received her master's degree in geology from Bryn Mawr College. She joined the USGS in 1948 in Washington, D.C., and moved to Lakewood, Colorado, in the early 1950s to work in the Branch of Petroleum Geology at the Denver Federal Center. She retired in 1995.

Katharine survived two husbands who were also USGS geologists: Laurence P. Buck and David J. Varnes. She is survived by her sister Lavinia Orpen; five children: Elizabeth Brende, Charles Buck, Carol Laurie, Laura TenBroeck and Richard Varnes; and two grandchildren, Harrison and Samuel Varnes.

Katharine came from a line of thoughtful women for whom living meaningful lives was important. She volunteered for a variety of organizations and causes, including senior housing. A woman of generosity and grace, Katharine instilled in her children a love of reading, music, art, and lifelong learning. She was a world traveler who remained active and engaged until the end.

From Horan & McConaty funeral home website

Other Deaths

Elmer Baltz, 6/6/17 Sheila Drew, 2/22/18 Dave Durham, 10/6/16 Jon Glasby, 1/16/18 Andrew Griscom, 6/21/15 Joyce Lanphere, 7/28/17 Johanna Mendes, 4/25/15 Helen McKeown, 8/30/17 Ellen Moore, 7/9/17 Joseph Morgenstern, 12/28/17 Dorothy Mudge, 8/2017 Bill Perry, 2/19/18 William Phelps, Jr., 10/25/15 Phyllis Renzetti, 9/12/17 Ed Rhodehamel, 8/24/17 Chuck Rice, 8/18/17 Newell Trask, 9/25/17 Dave Usher, 9/5/17 Jean Williams, 10/24/17 Zelda Witkind, Fall 2017

RETIREE PUBLICATIONS 2015 – 2018

Note:

The references below are compiled from information available as of 20 February 2018. These references are "new" since the Spring 2017 Newsletter (Number 74). An effort is made to compile **ALL** known publications (whatever year) by Geologic Division Retirees (GDR) for inclusion in the Master List of GDR Publications (now being maintained and updated by Bob Tilling). Please complete references for any send new publications (but not those still "in press") to Bob (e-mail: rtilling@usgs.gov or volkno.rit@gmail.com), with cc to Odette James (e-mail: <u>o.b.james@verizon.net</u>) as back-up, for listing in the next Newsletter and for updating the Master List.

JAMES E. FASSETT publication:

<u>Fassett, J.E.</u>, Heizler, M.T., 2017, An improved new age for the C33n-C32r paleomagnetic reversal, San Juan Basin, NW New Mexico and SW Colorado, in: Karlstrom, Karl E., Gonzales, David A., Zimmerer, Matthew J., Heizler, Matthew, Ulmer-Scholle, Dana S., eds., The Geology of the Ouray-Silverton Area: New Mexico Geological Society 68th Field Conference Guidebook, p. 115-121.

ERIC R. FORCE publications:

- Force, E. R., 2017, *Seismic environments of prehistoric settlements in northern Mesopotamia*: Bulletin of the American Schools of Oriental Research, v.378, p.55-69.
- Howell, W. K., and Force, E. R., 2018, *The Late Holocene* geomorphic history of Montezuma Canyon, Southeastern Utah, and the Puebloan agricultural landscape: Arizona State Museum Archaeological Series 213, 64 pp.

PETER W. LIPMAN publications:

Best, M.G., Christiansen, E.H., de Silva, S., and <u>Lipman, P.W.</u>, 2016, *Slab-rollback ignimbrite flareups in the southern Great Basin and other Cenozoic American*

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Editor's note:

Ruth Tatlock has unearthed and kindly sent us the following letter. Norman Bowen has been described as the greatest petrologist of the 20th century. His principal contribution was the application of physical chemistry to the problem of classifying igneous and metamorphic rocks. His system is primarily still the

one used today. Most of his later career was spent at the Geophysical Lab of the Carnegie Institute of Washington. James Gilluly was another of the towering figures of 20th century geology. He joined the Survey in 1921, left to teach at UCLA in 1938, and then returned to the Survey in 1950, from which he retired in 1966.

