

# Staying Connected

PCC Retirees Association

April 2020

## My Honey and the Bees: An Adventure in Books, Beekeeping and a 'Honey' Partner

By Mary Ann Laun

Twenty-five years ago, I went to a Castle family reunion and met Jeff's grand uncle Ed, a bee- keeper from Bremerton, Washington. We were out by his truck, and he had some supers (bee boxes) in his truck. We started chatting and he told me how he was moving his hives to follow the flowers.

He graciously gave me a jar of his honey. I was intrigued. Later, at the L.A. County Fair, I found myself drawn to the bee exhibits from the LA County. Year after year, I would visit the exhibit and wonder at the box of bees... humming away doing what they do best.

Over one third of our food supply comes from bees that pollinate. I wished I liked honey...

Years later, I decided that I would tend bees even if I did not care for honey. They are fascinating creatures working in an intricate social network, communicating with each other, instinctively supporting the hive and their queen. I was thinking about retirement and building my "to do" list of all the things I wanted to explore if I just had the time. Martha Stewart's segments on keeping bees made me start to consider it again. I had her segments on beekeeping (and chickens) on my Tivo and over the years, I watch it again and again.

I started with one book from Amazon called *Beekeeping: A Practical Guide* by Richard E. Bonney. It was a good basic overview, but to tell you the truth, the idea of swarms and Africanized bees scared me away. My interest waned.

Then for Christmas, my daughter Lissa gave me a book titled *Natural Bee- keeping: Organic Approaches to Modern Apiculture* by Ross Conrad. Quite ex-tensive and dense. Then the next year, a friend recommended a book to me.

He was a beekeeper as a Boy Scout and he thought the best book on beekeeping was one that would be hard to find because it was out of print. Franklin H. Carrier's *Begin to Keep Bees* made me feel that I could actually do this some- day. It is a "step-by-step guide for the beginning beekeeper" as the subtitle says, and it is exactly that.

I read it cover to cover. Now if I only had more backyard space and was not concerned about all the children who come to swim each summer, all summer long. More books followed.

I was thinking about waiting until Jeff retired to start this adventure. Jeff's philosophy is always to "get going" so he encouraged me to jump in and get started. I asked him if he would help me and since he also had an interest... he agreed wholeheartedly. In our many years of marriage, we have done many things together but never a hobby where we were so fully engaged!

Jeff and I decided to explore some classes. First at Honey Love in L.A where you suit up and enter a bee yard on the first day. Although I was a little nervous, this trial taught me that I would be fine in a bee yard.

The hum of the bees and the rhythm of their chores pulled us in. We then decided to attend a meeting of the Los Angeles County Beekeepers Association (LACBA) where we were welcomed with open arms and were encouraged to find a mentor in our area. Manny and Cindy Caldera (Caldera Bees) were so helpful and invited us to tag along for a visit to their hives. Yes, we were hooked.

We ordered our bees from Bill's Bees in Sunland/Tujunga area and registered to take classes. One class a month for 10 months gave us all we needed to know to get started. The wonderful inexpensive LACBA classes were geared to what we would be doing the next month or two. We learned how to install our packages of bees and what to look for in the hives as we made inspections every two weeks or so.

We learned about wax moths, ants and varroa mites and how to deal with them., and how to harvest honey. Last year was our greatest success with 130 pounds of honey from one hive and 40 pounds from another hive.

The first three years we had hives that did not make it: wax moth, swarming, varroa mites, all challenges to the beekeeper.

Our mentors were just a phone call away, and we had lots of questions and sent photos to them to help them diagnose our issues. We were on our way.

Over the last five years we have learned so much.

We learned Beekeeping is more of an art than a science.

- Ask 10 beekeepers a question, you'll get 11 different answers.
- Climate change (especially drought) is horrible for humans as well as colonies of bees. We all rejoice when it rains!
- Italians (bees) are sweet and nice; feral bees can be aggressive

- The Queen rules! If you lose your queen, you lose your hive
- Jeff and I have different ways of beekeeping. I follow the rules (mostly) and Jeff follows his intuition
- Fellow beekeepers are great people—willing to help at any time! Gracious with their advice, mentoring and experience. We have mentors and ARE mentors!

Thank you to the Los Angeles County Beekeepers Association!

Give to your Club, and in return we all reap the rewards of the collective. People LOVE hearing about our adventures in beekeeping! There you go!

To follow our adventure, you can follow along on Mary Ann's Facebook or in her developing website called <http://my-honeyandthebees.com>.

## Ellen Ligons Honored for Being a Trailblazer

Sen. Anthony Portantino awarded Ellen Ligons one of his annual Trailblazer Awards for her professional work at Pasadena City College and community service in Pasadena last December.

He honored her for being the first African American hired as an investigator for Pacific Telephone Company in the 1960s, and the first African American to be hired as a full-time, tenured professor in the Business Division at Pasadena City College in the 1970s.

She is one of very few African Americans to receive the John J. Risser Award for outstanding teaching at PCC, and the only African American to receive the Ralph Story Award for exceptional service to the college and community.

Ellen is also the only faculty member at PCC to be elected to four consecutive terms as president of the college's Academic Senate and one of few PCC employees to move up the career ladder from secretary to a professor of business administration and ultimately the Dean of Career and Technical Education. In 2010, she retired after serving 41 years at the college.

The Pasadena City College Board of Trustees honored her during commencement in June of that year for her service and dedication to the college and greater community.

In the community, Ellen was the first African American woman to be appointed to the city's Planning Commission, and the first to serve as manager of the Office of Northwest Programs in Pasadena. In addition, she is a dedicated member of Delta Sigma Theta

Sorority, Inc., Pasadena Alumnae Chapter where she has served as chapter president and chaired several of the chapter's public service committees.

Ellen is a leader, mentor, and friend to our community who works to change lives and impact the community in positive way. For these reasons, Sen. Portantino awarded her with one of two Trailblazer Awards for 2019.

## Pleasure and Surprise

By Ron Koertge

I've been writing poems for more than fifty years. In 1962, I was in grad school when someone showed me a few out-of-the-ordinary magazines, all mimeographed and most stapled, that were nevertheless lively and fun to read. *The Wormwood Review* was one of those, and it was the first of the so-called "little magazines" that I submitted to and that published something of mine.

I fell in love with a lot of the counterculture poetry journals. The poems were snarky and chatty. Nobody was writing about nightingales or Grecian urns. Basically, the poems were fun to read and an antidote to grad school classes in poetic technique and craft. It turned out I had a knack for that sort of poem: relaxed, colloquial and (seemingly) off-the-cuff. It was only when, a few years later, my work started to drift toward the prosaic that I had to skate less on charm and sass and work to make the poems, for want of a five-star word, better. Like a baseball player moving from the minors in Rancho Cucamonga to Triple A in Colorado, I started submitting to magazines that'd been around for a while. That meant not changing my breezy style into something challenging-for-a-reader but, at first anyway, not wasting a single word. Editors would reply to my submissions with comments like this: "Fun to read and imaginative but lazy-on-the-page. Try again, please." Here's a poem of mine that turned out well, but it didn't start that way. This is the final, published version. Probably the sixth or seventh draft.

### *Cinderella's Diary*

*I miss my stepmother. What a thing to say but it's true. The prince is so boring: four hours to dress and then the cheering throngs.*

*Again. The page who holds the door is cute enough to eat. Where is he once Mr. Charming kisses my forehead goodnight?*

*Every morning I gaze out a casement window at the hunters, dark men with blood on their boots who joke and mount, their black trousers straining, rough beards, callused hands, selfish, abrupt ...*

*Oh, dear diary—I am lost in ever after: Those insufferable birds, someone in every room with a lute, the queen calling me to look at another painting of her son, this time holding the transparent slipper I wish I'd never seen.*

This poem turned out to be popular and it has appeared in a lot of anthologies. Once after a poetry reading and during Q&A, someone said that once I had the idea for the poem—and that is turning the happily-after trope on its head—didn't the poem pretty much write itself?

The answer in a way is Yes. Once I'd begun it and when Cinderella started speaking-through-me, I knew the poem would work. I knew I could finish. All I had to do was stay out of my own way.

But the early drafts were also gabby and over-explained. For example, these are the opening lines of an early draft:

*I miss my stepmother. What happened to that well-advertised ever after?  
The prince is not what I hoped.*

I wanted this poem to sound like a diary entry, the kind that is intimate and no-holds-barred. People tell their diaries things they wouldn't tell anybody else. That's one of the reasons diaries are dear. They understand.

Once I'd written the whole Cinderella-poem, I could go back and see that only the first line was useful. There was no reason to follow that with the anti-ever-after theme. It was more fun to let the reader intuit that as the details accumulated.

So, I threw out everything but those four words and started again, concentrating on Cinderella's confession and adding cool details like the cute page, the sexy hunters, and those "insufferable birds." I led my Readers toward pleasure and surprise and anything that blocked that or diluted it had to go. Thus, six or seven drafts.

By the way, those two words—*pleasure* and *surprise*—can stand for why I write. I want to bring pleasure to my readers, and I want to surprise them. Sometimes pleasure first and then surprise. Sometimes the other way around. But always both, like that couple in high school who were always together, who married after graduation and lived happily ever after.

*Ron Koertge taught in PCC's English Department for thirty-seven years. He is the current Poet Laureate of South Pasadena. His most recent book of poems is Yellow Moving Van from the University of Pittsburgh Press. Available at Vroman's or, of course, Amazon. But Vroman's is a better choice. If they are sold out of Yellow Moving Van, they'll order it.*

## Retirees Tour the Historic Caltech Campus

By Alan Lamson

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In mid-January a group of PCC retirees and guests gathered in front of the Caltech Athenaeum to begin a tour of the campus that included some of the original academic buildings and high-tech labs.

The tour was organized by Dona Mitoma who enlisted the services of Marilyn Diaz and Beryl Merion of the Caltech History and Architectural Tour Service, a volunteer group of the Caltech Women's Club.

While outside the historic Athenaeum, guide Marilyn Diaz talked about how Caltech came into being. Its beginnings are rooted in a small vocational school, named Throop University, which was founded in 1891 by wealthy former abolitionist and Chicago politician Amos Throop.

Later, the school changed its name to Throop Polytechnic Institute in 1893, then to Throop College of Technology in 1913, and finally to California Institute of Technology in 1920.

George Ellery Hale, astronomer from the University of Chicago, who founded the Mt. Wilson observatory was instrumental in turning Throop Polytechnic into a major scientific institution.

Inside the Athenaeum, we learned about the origins of the building. As early as 1921, Hale envisioned a social club at Caltech modeled after the Athenaeum in London. Finally, in 1929, with a gift of stock by Mr. and Mrs. Balch, construction on the Athenaeum was begun, and it opened the following year. Fortunately, the gift of stock by the Balch's was sold immediately by the Caltech Trustees for \$500,000, not long before the stock market crash in October of that year.

We left the Athenaeum to walk along the east west access way—called the Olive Walk-- that runs from the Athenaeum to the Throop Memorial garden on the west side of the campus. Before walking along the access route, Beryl pointed out the Millikan and Einstein suites atop the Athenaeum. Einstein lived in the suite during his stay at Caltech from 1931 to 33. In late February of 1931, he dedicated the observatory at PCC.

As we made our way along Olive Walk, we first visited the Guggenheim Aeronautical Laboratory. Beryl mentioned an early group at the Lab called the "suicide squad." The squad was a group of students and amateur scientists who wanted to experiment with rockets.

They persuaded Theodore von Karmen, head of the Lab, to let them use the Lab to experiment with rockets on campus. As it turned out, these experiments with fuels and starters caused several explosions at the Lab. Complaints about these experiments caused Von Karmen to move the group, now called the suicide squad, to the vacant Arroyo Seco, near the area that became JPL.

I took few notes about other buildings we visited but the most impressive was the Beckman Lab of Chemical Synthesis with its wonderful Alexander Calder arches, which were rescued from the Pasadena city junkyard. I should also include mention the turtle pond in the Throop Memorial Garden, one of the most popular sites on campus. After two hours of walking and listening, most of us were interested in heading to another well-known building on campus—the Chandler Café where most of the students and staff have lunch. Since it was a sunny day, all of the outside tables were taken, but someone found an empty table inside for all of us. The café provides numerous dining options-- everything from “Chinese to Latino, from upscale to grilled cheese.”

So, we ended our tour chatting with friends over lunch. Keith Miller, former physics teacher at the College, recalled the days when Caltech and PCC had closer ties.

Some of his best students transferred to Caltech and Richard Feynman, Nobel laureate, twice visited his physics class. Keith also consulted with Caltech on a multi-year project, “The Mechanical Universe,” a critically acclaimed series of 52 videos designed to cover the basic topics of a university level physics class. The series is available online.

Caltech also offers a tour of the new buildings on campus which may be one of our future excursions.

## PCC's Has a Historical Connection to Caltech, Its Neighbor to the South

By Keith Miller

PCC is fortunate to be in close proximity to Caltech. It is not only close geographically; we have also had a great historical connection with our students and Caltech. When I first started teaching at PCC in 1967, we had the Millikan Lecture Series, given annually in Sexson Auditorium for local high school students who took notes and were judged and rewarded on their notes. Robert Millikan was Caltech's first Nobel Prize winner.

While a visiting professor at Caltech, Albert Einstein, in 1931, dedicated PCC's Planetarium.

In the early 1980s I was fortunate to work on a project at Caltech called the Mechanical Universe, which was sponsored by the Annenberg Foundation. We collaborated on two textbooks in physics and 60 television shows.

When the Foundation called me for an interview to work on the project, I asked them what their projected audience was and the math level. They stated that the project was geared for the average high school graduate and they assumed that high school graduates had taken calculus. I tried to bring them back to reality by telling them that most high school graduates could barely pass a basic algebra class. Caltech people live in a dream world. The Mechanical Universe project ultimately worked out very well.

When I taught at PCC, we had many students transferring to Caltech. Foreign students from places like Hong Kong wanted to attend Caltech and were counselled by Caltech to go to PCC for a couple of years to improve their English proficiency and acquire additional courses in the humanities and to also enroll in our math, chemistry, and physics courses.

On the basis of their grades and our recommendations, these students easily transferred to Caltech, where most of our transfers ended up graduating with honors. I would like to say that I did something to help these students, but I know that they learned in spite of me.

In the 1980s, I was fortunate to have Caltech's Richard Feynman come to PCC and talk to my physics classes. Because of student interest, I reserved the large lecture room in E-Building, which was packed with standing room only. Dr. Feynman did not want me to introduce him as a Nobel Prize winner. He just wanted to answer students' questions.

When Feynman arrived, he was wearing his usual street clothes: tennis shoes, and open neck sport shirt. He was casual, as was his speech and demeanor. He began by saying: Science is like an onion. You peel off one layer and understand it and then there is another layer. I studied physics not to find the ultimate answer, but to discover something about nature. Once I get a puzzle, I can't let it go.

The exchanges between Feynman and the students were stimulating. I remember one student asking, "Why can I see through glass and not wood?" Feynman answered, "Why not?" "You can see through miles and miles of air with trillions and trillions of atoms. Why not glass? A thin sheet of aluminum foil is opaque and you can't see through it. It must have something to do with the material itself. Since light is an electromagnetic wave, maybe the material will simply absorb the light waves. You should study the electrical nature of the materials and then answer the question yourself."

Another student asked him, "What is gravity?" He stated, "That is something everyone wants to know. What does gravity smell like? Look like? Feel like? How fast does gravity travel? Everything experiences gravity. A lot of physicists have theories on what gravity is. Is it a wave, like a light wave? If the earth were to suddenly move, how soon would the moon know it?"

I really don't have a definitive answer to your question." He continued, "Gravitation is, so far, not understandable in terms of other phenomena. Maybe someday one of you students will have the answer. The answer is not as important as the question and the process and joy of trying to figure it out."

Feynman often answered a question with a question. There he was, Socrates, a couple of thousand years later. The students were in awe and didn't want to leave. Feynman seemed to enjoy himself and, in fact, returned a few more times to visit with my classes.

He was a wonderful teacher and PCC was most fortunate to take an interest in our students.

Richard Feynman received a Nobel Prize in physics in 1965 for fundamental work in Quantum Electrodynamics. He served as a physics professor at Caltech from 1950 until his death in 1988. For a few years he taught introductory physics courses at Caltech.

His lecture notes were published as The Feynman Lecture Series. Today PCC's equivalent courses would be Physics 1A,1B,1C, and 1D.

If you are a physicist and a glutton for punishment, pick up a copy of the lecture series and have a good read. Feynman also authored other books, such as Surely, You're Joking, Six Easy Pieces, and a few others. In 1981 Feynman was interviewed on PBS/Nova's "The Pleasure of Finding Things Out"; it is 50 minutes of pure Feynman and well worth viewing.

Richard Feynman leaves us with one of his most interesting and enigmatic sayings: "It doesn't matter how beautiful your theory is, if it doesn't agree with experiment, it's wrong".

## From the President's Desk

by Elvio Angeloni

As president of the PCC Retirees Association, I would like to take this opportunity to describe our organization and its mission so that you might more effectively participate. Everything we do is guided by a Board of Directors that reflects the diversity of the college itself: We are all retired faculty, classified staff and management, representing collectively over 500 years of experience working at PCC.

Understandably, our primary focus is to support the college in any way we can and to continue to foster an atmosphere of collegiality that we ourselves experienced as employees.

Since you are reading this newsletter, you are probably aware that we publish twice a year in order to inform members of upcoming events such as our twice-a-year mixers and our field trips to places of scientific, cultural and historical interest. We also share personal travel experiences that may be suggestive of *your* next adventure and, of course, we memorialize the passing of dear friends and colleagues.

Because we are committed to continued service to the college and the community, we annually provide a minimum of ten \$1,000 scholarships (last year, it was seventeen!) to needy and deserving PCC students.

We also encourage members to support such organizations as the PCC Lancer Pantry, dedicated to combatting student food insecurity, to volunteer with "Reading

Partners,” which provides tutors to local Pasadena grade schools and to join our local PCC PTSA.

As a side note, isn't it interesting that PCC is the only community college that has a PTSA *and* the only community college in the United States that has a Retirees Association? Is it any wonder that, for two years in a row, we have been named one of the ten best community colleges (out of more than 1,000!) in the country?

You should also know that membership in our Association is automatic upon retirement, does not involve dues, includes receipt of our newsletter twice a year provides an open invitation to participate in *all* of our activities.

So, if you would like more information about what we do (including notification of upcoming field trips that occur *before* publication of the next newsletter, please send your email address to Elvio Angeloni at [evangeloni@gmail.com](mailto:evangeloni@gmail.com) or Marcie Ambrose at [abuelitamarcie@gmail.com](mailto:abuelitamarcie@gmail.com). In fact, if you have any suggestions as to what we should be doing in terms of fieldtrips or projects, by all means, please let us know.

No one person can do everything, of course, but collectively we have strength—all 800 of us.

We look forward to having you join us when the Covid19 virus allows.

## Betty Kovacs Wins the Scientific and Medical Network 2019 Book Prize for *Merchants of Light*

By Betty Kovacs

In September of 2019 *Merchants of Light: The Consciousness That Is Changing the World* was published in the U.S. and launched in London at the *Beyond the Brain Conference*. This Conference is a branch of The Scientific and Medical Network which was formed at Cambridge in 1973 by a small group of scientists who, since the discovery of quantum physics, realized that it was necessary to include the study of consciousness within scientific research.

Since that time, the field of consciousness studies has exploded.

I presented a Pre-Conference Workshop, *Retrieving Soul from the Pathology of Western Culture*, as well as a talk during the main Conference on my earlier book, *The Miracle of Death: There Is Nothing But Life*.

There were many older people who attended, but I was especially happy to meet many young men and women all the way from Russia as well as most of the other countries in Europe.

There was great enthusiasm and interest among the young to participate in the new relationship between science and mysticism.

*Merchants of Light* tracks the emergence of a shaman-mystic-scientist consciousness that carries the blueprint for our evolution. This blueprint is revealed in the heart wisdom of the mystic and in the new science of quantum physics.

This sacred tradition, in spite of its persistent repression and suppression by the Roman Church and State, has survived underground and has been the source for every major creative awakening in Western history. Its reemergence in the twentieth century, along with the discovery of quantum physics, offers us a shift in perception that we urgently need in this moment of evolutionary crisis.

*Merchants of Light* and *The Miracle of Death* are available from online bookstores, ebook retailers, local bookstores, libraries, and the publisher, The Kamlak Center at [www.kamlak.com](http://www.kamlak.com). The book launches for *Merchants of Light* in Pasadena and Claremont have been postponed due to the coronavirus pandemic.

If you would like to receive news and updates on the rescheduled book launches, my live events, webinars and radio shows, subscribe to The Kamlak Center newsletter at [www.kamlak.com](http://www.kamlak.com). Once you subscribe, you will receive a sample chapter of *Merchants of Light*.

## Harry Kawahara's Talks About His Experiences in Japanese-American Internment Camps

By Harry Kawahara

In retrospect, it is hard to believe that I spent three and a half years of my life in an American government internment camp during World War II. My family and I were confined in this camp called Topaz in central Utah in a remote and desolate desert that was very hot in the summer and very cold in the winter with nasty dust storms.

The camp was surrounded with barbed wire and guard towers with armed soldiers. It was a prison. We lived in makeshift barracks that were basic and spartan. Our meals can be best described as "army" food.

The ten internment camps confined approximately 120,000 persons of Japanese ancestry, two thirds of whom were American citizens by birth. After the attack at Pearl Harbor on December 7, 1941, President Franklin D. Roosevelt issued Executive Order 9066 which authorized the military to order the incarceration of all Japanese living in the west coast states of Washington, Oregon, California and parts of Arizona.

I grew up in the San Francisco Bay area in a town called San Leandro. My father was a farmer growing mostly strawberries. After the issuance of EO 9066, we were ordered to

report to the Tanforan, a race track in San Bruno which was quickly converted to a detention camp.

Tanforan was euphemistically called an assembly center where we were lived for five months while the more permanent camps were being built away from the west coast. Our dwelling was literally a horse stable which still had the stench of hay and horses. In May 1942, we boarded trains for the three- day trip to Topaz which was located about 16 miles from the town of Delta in the middle of Utah. This was my first trip outside of California.

A couple of years ago, my wife and I participated in a reunion of former Topaz internees. It was good to see a few old friends from years ago. At the camp site is a small monument to mark this historic event that took place some 78 years ago. There are concrete slabs that show the areas where the barracks were placed. My family was in Block 12. We were also in Delta to celebrate the opening of a museum dedicated to what took place there years ago. I was pleased by how well the museum depicted life in the camp.

The U.S. government rationale for our forced incarceration was that it was critical because we were somehow a threat to the country. The government called it a military necessity. There were numerous studies conducted later that clearly reported there were no acts of sabotage by Japanese Americans during World War II.

The Japanese American community waged a 10-year battle to obtain redress as restitution for our unconstitutional confinement. Congress authorized a commission to hear from former surviving internees.

Hearings were conducted in 11 U.S. cities to listen to the accounts of over 750 individuals who spent time in the camps. Finally, we received a public apology from the government and \$20,000 to each surviving internee.

Our visit to Topaz painfully reminded me of the profound impact this episode had on my young life. I believe I was somewhat traumatized by those early years. I remember vividly when we were standing in line to be processed at Tanforan. There were U.S. soldiers with rifles telling us where to go and what to do. I recall thinking to myself, "Why are they treating us as if we were criminals? I did not do anything wrong. I did not break any laws. So why are they doing this to us?"

I was too young to know what was happening to us but old enough to know that something was not right. In my young understanding of what was taking place, I internalized that I was being treated this way because I was Japanese. So, it must be bad to be Japanese. I was guilty by reason of race. Otherwise, why would our own government be treating us this way?

There was no due process. There was no trial. We were confined behind barbed wire because we looked like the enemy. This experience heaped upon a young boy during

his formative years had to be devastating. I was just gaining a sense of my own identity as a person; my self-concept was evolving.

So, this incarceration experience had a crushing blow to my awareness of who I was. This event happened 78 years ago, but I still feel the sting of our unjust treatment.

Poet Lawrence Masuda of Seattle, who was confined in the Minidoka camp in Idaho, beautifully captured my lingering feelings:

*I carry my own fence,  
Barbed wire encircles me always.  
Determined not to follow my parents' path  
Into clinical depression or a bleeding ulcer—  
My shins are raked by steel teeth  
Of my unwilling confinement.  
Wearing this yellow skin, I am unable  
To walk freely in my own country.  
But I learn, border by border,  
Too leap safely in sudden movements  
Leaving no remnants snagged on the wire.*

*"A Cold Wind in Idaho" Black Lawrence Press 2010*

## Crime Scene Investigation Program Separates Fact from Fiction in Informative, Fun-Filled Event

By Jo Ann Lee

I returned from five days of the most interesting, informative, and fun-filled event—and I didn't have to travel more than about an hour from home. I attended a Road Scholar program in Riverside: Crime Scene Investigation (CSI). We spent nearly 12-hour days listening to crime scene investigators and other forensic experts, viewing photos and videos, and performing tests of our own.

All of our presenters were experts in crime scene investigations; forensic photography; fingerprint, bloodstain, and DNA analyses; and entomology. We also had a day trip out to the San Bernardino Coroner's Office and the Riverside Police Department's Forensic Lab and a tour of the historic Mission Inn.

Early on, we were divided into teams assigned to re-enact a crime scene based on the original police detectives' crime scene report, the CSI tech's report, crime scene photos and sketches, photographs, the evidence collected, and the preliminary coroner's report. As the days passed, we picked up information from the experts that could be applied to our investigations.

**What is real?** Most people can't tell what is real: All of the professionals dinged the CSI TV shows (*Miami*, *Las Vegas*, and *Bones*), which are fiction, drama, science fiction, sometimes reality, and sometimes entertainment; but they do not portray actual procedures or personnel at work. CSIs and criminalists DO NOT get into gun fights (few carry guns), are not sworn law enforcement (are civilians), interrogate suspects (detectives do this), rely on flashlights, get emotionally involved with victims, use "vic" (for victim) or "perp" (for perpetrator).

All of these are referred to as the "CSI effect" and influence American jurors; judges will often ask potential jurors if they in fact watch CSI!

The responsibility of CSIs is to document the scene so that someone not present at the scene can understand the scene later through notes, reports, detailed photos, sketches of the entire scene; measurements of distances and relationships, and videos. Evidence is collected, deductive reasoning is used to reconstruct the scene. Forensic science is to provide enough information to be presented in court to lead to someone being arrested.

**Gathering Evidence:** Blood typing is no longer used because DNA testing is available, is faster and more accurate. DNA is everywhere; touch DNA can be swabbed or samples can be taken from a surface or fabric. DNA cannot be automated and is done only by hand, with one test costing about \$1,295. A good DNA sample can determine one's ancestry and even color of eyes to construct the face of a suspect. Genealogy is the future of DNA testing. DNA can also be done on animals. Military labs test only remains.

There are two types of footwear impressions that can be taken and photographed: 3-dimensional—a footprint impressed in dirt or a vehicle tire in dirt, and 2-dimensional—dusted shoe print on a surface. Patterns on footwear can determine the manufacturer and style, wear pattern, defect, any artifact stuck in the tread. Dental casting compound is used to get a clean imprint for the mold and can even be used to cast in snow.

**Firearms, Ballistics, and Bullet Trajectories:** Gunshots yield gun powder residue on the shooter, the victim, and on nearby surfaces. Fingerprints found on the residue can be lifted from walls, floors, ceilings, furniture, objects, but doorknobs can yield no usable fingerprints because people squeeze or twist them. DNA tests can also be done. Firearms are sent to the Department of Justice for analysis and matching with databases.

Although revolvers and pistols are constructed differently, they can yield similar information. The cylinder of the revolver holds cartridges that revolve with each shot and are expelled when fired. Semi-automatic pistols are preloaded with cartridges contained in the magazine. After a shot, the next cartridge is loaded automatically. Knowing the type of firearm used enables reconstruction at crime scene based on the direction of an expelled cartridge and examination of the trajectory of the bullet.

**Fingerprint analysis.** Fingerprints contain moisture and oil (90 percent), amino acids (1 percent), and salts (negligible). We dusted our own fingerprints on a mirror and on a drinking glass. With a rabbit hair brush containing powder, the brush is twirled while moving across the surface. Using a special tape, the powder is lifted from the print while bubbles and air are squeezed out. The tape is then anchored on a fingerprint card and sent for analysis. Identical twins have identical DNA but different fingerprints.

On our visit to the San Bernardino Sheriff Department Coroner's Division, the Chief Medical Examiner presented (graphic) photos and videos of body parts during autopsy and what they look for.

The medical examiner/coroner determines the cause of death, determines any contributing factors; Identifies mode of death, whether natural, homicide, suicide, accident, or unexplained. We had the option of going into the lab where a body was awaiting autopsy.

I took the other option. Those who went in said it was the smell in the room that got to them more than seeing the body.

At the Riverside County Forensic Crime Lab, we learned about the qualifications to be a forensic scientist: MA in Forensic Science, the ability to work and be on call, willing to travel, be on assignment for lengthy periods away from home, and be physically able to perform the physical work (carrying equipment, supplies, climbing), among others.

### **Blood Pattern Stain Analysis.**

When analyzing blood stain, consider air resistance, gravity, velocity; angle of impact; length and width of the stain; degrees of impact. Blood stain analysis consists of discerning the pattern (identity, position, direction, number of blows, etc.); and determining weapon or firearm use (type, trajectory, shooting distance, location).

A stain on carpet will be absorbed and will show a smaller pattern but be deeper, while a stain on a floor or table will remain on the surface. Blood patterns are either splatters or spatters with bleeding from an artery or vein, and each has its own characteristics. Only the area where blood is in contact with a surface will show up. With part of our room papered, the analyst demonstrated how blood from a knife can be splattered over a crime scene and how the stains can be identified by the above-mentioned elements.

### **Forensic Entomological Science.**

Yes, BUGS AND INSECTS also yield evidence at and about the crime scene. Most of the work involving entomology is used on cold cases to determine time of death.

While a medical examiner can establish a limited time frame of death, an entomologist can get a more specific time based on what insects do and why they are at the scene. The presence of insects tells the location, season of year, weather pattern, and time of day of the death.

We examined samples of butterflies, flies, maggots, each having a distinctive characteristic for crime scene analyses. For example, moths are nocturnal; so, if they are found on a car radiator, the vehicle was driven somewhere at night. Female flies do not lay eggs; they deposit maggots, which are first to arrive at the crime scene and develop on a victim between 20 minutes and 24 hours after death. Maggots collected at the scene can yield DNA samples.

Entomological forensics have applications in such agencies as the Departments of Fish and Wildlife, Interior, public health; the USDA and FDA, and U.S. Customs (smuggling).

In civil applications, entomology helps identify food contamination. Medical applications include infections (caused by goods or animals brought into the country illegally), and neglect and abuse.

### **Our team crime scene investigation.**

Each team had 1.5 hours to reconstruct the original crime scene in a hotel room, the scene of the homicide. Our job was to determine whether all appropriate procedures were followed.

The crime scene photos were blurred and were not taken from different angles. The detectives failed to interview the witness who had called 9-1-1; look for surveillance tapes around the hotel; talk to hotel personnel about the victim and her suspect/husband. He had fled the scene and was not found until four hours later at home. They did not search the suspect's home or do lab tests on his clothing and shoes or his car. They did not report the crime scene accurately.

We disproved the suspect's version of the crime. The CSI team did not do a thorough investigation of the scene, failing to remain at the scene or to follow up to do complete testing. Whew! We had all sweated this assignment since we had little time to meet as a team to discuss theories.

**A Murder Mystery Dinner** was the final activity of our program! It was all exciting and fun because we knew one another by Day five of the program. We were attending a CSI Conference, with each person assigned a character, complete with name tag and a history. We were to interact with one another, sharing information about ourselves, offering opinions/comments about other forensic specialists in attendance. Everyone had reason to dislike one particular scientist. Lights out! A homicide has been committed. Whodunnit? I'll never tell!

## **We Get Letters**

*Scholarship Winners Check In*

*I recently asked our scholarship students from last year to let us know what they've been doing. Below is the response of several, including a photo of Angel Ra who is now in the BA nursing program at Cal State Fullerton. From her letter, you can see why she was awarded several scholarships last year. Our scholarship committee looks forward*

*to again selecting a group of returning students who have excelled at PCC. However, because of COVID19, this year's scholarship winners will be honored later in the Fall.*

*—Alan Lamson, Chair*

*Chair, Retirees Scholarship Committee*

## Stanley Hill Was Offered a Position at U.S. Bank

I hope that this email finds you well. My name is Stanley Hill, and I was a recipient of the PCC Retirees scholarship last school year. Since then I have adjusted well to California State University Northridge (CSUN).

I am approaching finals and I am confident that I will complete this semester amongst the top of my class. I have also recently been offered a position as a Client Relationship Consultant at U.S Bank which I am sure you would be proud of.

I appreciate your support on this journey as your encouragement and philanthropy has allowed me to continue my career pursuits. I will keep you updated as I progress in my career, and I wish you the best on your future personal endeavors and the philanthropic endeavors of the Retirees' Association.

## Angel Ra Working on BA in Nursing

My name is Angel Ra. Since the PCC Retirees Scholarship luncheon, I have been very busy during the last semester of the RN program. The last semester focuses on critical care, namely cardiac and respiratory emergencies, neurological conditions, burns and disaster planning. It has been very interesting to study and highlights the seriousness of the medical field.

I have my final exam tomorrow. I expect to show my instructors I have retained the knowledge they have passed on to me. I was able to dedicate my time to studying this semester due to the financial aid I received.

While I did take on student loans, I cannot express my gratitude for the scholarships I received. The generosity goes beyond the finances.

What resonates most to me is that the Retirees committee truly cares for the future generations of students and takes the time to express their support.

This holiday season I will be studying for the NCLEX licensure exam, which I anticipate I will be taking in late January. I will also be in classes at Cal State Fullerton for my Bachelor's in Nursing.

Thank you for keeping in touch!

## Rebecca Kovacs Loves Being Role Model to Her Kids

This is Rebecca Kovacs. So nice to hear about Stanley! He truly is an amazing gentleman, and I'm happy to know that he is continuing to be successful and incredible! I'm proud to let you know that I have been awarded 2 scholarships from the PCC Foundation for fall. I was awarded the Robert Westerbeck Scholarship and the Robert Westerbeck Scholarship Osher Visual Arts.

It truly was a blessing to receive two scholarships in one night during the ceremony, and I had the pleasure of having both my children along with my husband there to share that special moment. One thing that really made me so proud was how my oldest son Jeremy was telling me how excited he was that he too won an award at his elementary school for caring. He said, "mama, are you happy that I won an award just like you?" "Of course, I was!!!" I told him. These special moments show not only me but my children that hard work pays off!

I'm happy to see that I am a positive role model for them too. It's so wonderful that we have such amazing donors such as yourselves that help support us students.

You have not forgotten the struggles that come along with the college journey, and your generosity helps us achieve those goals that much more.

I just finished applying for transfer to 8 different schools! UCLA, UCSB, UCI, UCSD, CSULA, CSULB, CSUF, and CSUN. Once I get my acceptance letters, I will let you know which one I choose. FINGERS CROSSED!!!

It was very nice hearing from you again Alan! It makes me so happy to know that you truly care about us! I would like to meet with you one day maybe to grab some coffee and catch up Thank you again for all of your support!

## In Memoriam

### Bruce Carter, Geology Professor and Eclipse Chaser

Dr. Bruce Alan Carter was born on October 31, 1941, in Half Moon Bay, California, to Ralph and Kathrine Carter and passed away suddenly after a long illness on November 26, 2019, surrounded by family and friends.

Bruce was a former Dean of Natural Sciences at Pasadena City College and also a PCC geology professor (retired in 2005).

Bruce worked at PCC for more than 40 years and touched the lives of countless students who learned how to make it "just over the next ridge."

Bruce was recruited from his home in Northern California to attend Caltech by Professor Bob Sharp, completed all of his degrees at Caltech and earned his Ph.D. at Caltech under the guidance of Dr. Lee Silver. His dissertation remains one of the most important works to be done about the petrology of the San Gabriel Anorthosite.

Bruce was a longtime member of the Mineralogical Society of Southern California. He also had been active in developing educational exchanges with schools in China. He was also a member of the Monrovia School and CSBA.

Bruce was a founding father of the Monrovia Old House Preservation Group. His real love remained in the outdoors teaching students how to recognize and interpret complex geological information and leading extended field trips across Northern California, Santa Cruz Island and Baja California.

In retirement, Bruce and his wife Kathy Carter were avid eclipse chasers and members of the PCC Retirees Association. He was truly loved and will be greatly missed.

Many of Bruce's and Kathy's adventures around the world were documented in the Retirees Newsletters. He was a regular contributor.

He is survived by his wife, Kathy Carter, his children, Amanda (Clark Abbott) Carter, Cammy (Erik Schmudie) Carter and Douglas Carter, Kathy's family, Alan Fluhrer and family, Marc Fluhrer and family, his sister Betty (Wayne) Heaton and their children, Becky (Mike) Contreras and family and David (Melissa) Heaton.

If you would like to make a donation to The Bruce Carter Field Award, please contact the Pasadena City College Foundation.

## Paul Duchow Wrote Statistical Software for Two Sports

Paul G. Duchow, 78, of Palm Springs, a retired math professor, passed away peacefully at home on after a brief illness.

Paul was born December 22, 1938, in Albany, N.Y., the son of Martin and Julia Anderson Duchow. Born with Tetralogy of Fallot, Paul had the first of three heart surgeries at age 11, and is one of the longest survivors of this heart defect.

As a child, Paul's family moved to West Hartford, Conn., where he graduated from Hall High School. Paul received his bachelor's degree in chemistry from Central Connecticut State College, and his master's degree in mathematics from Syracuse University, before settling in Willimantic, Conn., where he was a math professor at Eastern Connecticut State University from 1963 to 1981.

While his health did not allow Paul to participate in sports, he was an avid fan. While at Eastern, Paul served as statistician and scorekeeper for the university's baseball, basketball and soccer teams.

He also developed one of the first statistical software packages for soccer and baseball, an innovation for which he was honored in 2004 as an Eastern Pioneer by the university's Sports Hall of Fame.

In 1978, Paul took a one-year sabbatical to teach at Cal Poly San Luis Obispo, an experience which made him want to live in California. In 1981, Paul moved cross country to be a professor of math, statistics and computer science at Pasadena City College, a position he held until retiring in 1996 and moving to Palm Springs full time.

While at Pasadena City College, Paul co-authored a computer lab textbook with Spike Meyers for use in any college level course. During his career, he also helped edit other math textbooks.

In Palm Springs, Paul was the business manager at Streetbar from 2000 to 2012.

Paul enjoyed baseball, word puzzles, traveling, math, classical music and tracking weather patterns, and he loved the desert.

Paul is survived by three brothers, Robert (Bonnie) Duchow of Westerlo, N.Y.; Gilbert (Linda) Duchow of Hilliard, Ohio; and Marvin (Darlene) Duchow of Chemainus, British Columbia; a sister, Carol (Joel) Gurin of Silver Spring, Md.; best friend Spike Meyers of Palm Springs; and 14 nieces and nephews.

As Paul wished, his body was donated to the UCLA School of Medicine.