



Chronicles

Newsletter of the UCSD Emeriti Association

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SIO, the Colorado River, and the Future of San Diego's Water

—by Lea Rudee

The Colorado River is the source of much of the water used in Southern California as well as in six other states. The history of the management of the Colorado has been one mistake after another, and the question now is whether we will finally take a proper course with the help of scientific study.

Next year will mark the centennial of the first of many mistakes made in the management of the river. The first mistakes occurred at the outset of the 20th century when land in the Imperial Valley was sold to farmers with the promise that they would receive irrigation water. It turned out, however, that the first few years were years of below average flow, so the California Development Company was unable to divert water to the farms. In 1904 the company planned another attempt, but the Federal Government refused permission.

The next diversion was built just over the border in Mexico, in return for a share of the water with our southern neighbors. But the winter of 1904-1905 was very wet and the spring run-off overwhelmed the diversion gate. It failed, sending the entire flow of the Colorado into what had been the Salton Sink. It was not until 1907 that the Colorado was restored to its normal course leading to the Gulf of California, but by then the Salton Sink had been transformed into the Salton Sea.

The 1908 irrigation project that eventually succeeded was the first major use of Colorado River water, and,

under the water law in the West, gave what is now the Imperial Irrigation District the strongest claim to Colorado River water. The eight-year negotiations that finally allowed San Diego to buy some of the Imperial Irrigation District's water is a legacy of these historic rights.

The next major mistake was in 1922. The seven states in the river basin negotiated the Colorado Compact that divided the water to the states in absolute amounts, not as a percentage of the flow. The negotiators based their decisions on the roughly 25 years of flow data on hand. They thought they were conservative in the allocations, but we now know that their data represented an unusually wet period. As a result, they over-allocated the River's flow.

Scientists at SIO have been leaders for decades in both the theoretical and experimental studies of climate prediction, and the impact of mankind's activities on the energy balance of the earth, nowadays called Climate Change. Recently SIO scientist **Tim Barnett** coordinated a computer modeling study for the Department of Energy that involved several federal laboratories and other universities. This group used the best available climate models, ones that assumed the current rate of the emission of greenhouse gases

was not reduced, and coupled this to the river flow models used to manage the rivers of the West. The prediction for the Colorado River is that it will lose about a third of its flow by mid-century, creating a much larger deficit in an already overly optimistic allocation formula.

I became interested in these matters as a member of

Torpedo the Dam
—and—
Save the Water

[Continued on p.5]

IN MEMORIAM NORMAN KROLL PROFESSOR EMERITUS OF PHYSICS 1922-2004



Norman M. Kroll, an emeritus professor of physics at the University of California, San Diego and one of the pioneers of the field of quantum electrodynamics, died in La Jolla on Sunday, August 8, after a brief illness. He was 82.

Dr. Kroll was one of UCSD's founding faculty members, arriving in 1962 as a professor of physics after 20 years at Columbia University. He spent 40 years at UCSD, conducting research on electrodynamics, atomic physics, particle physics, free electron lasers, and the design of subatomic particle accelerators. In addition, he made numerous contributions to the development of UCSD as one of the nation's leading research universities and served twice as chair of UCSD's Department of Physics, from 1963 to 1965 and from 1983 to 1988.

A member of the prestigious National Academy of Sciences and American Academy of Arts and Sciences and a fellow of the American Physical Society, he was regarded by his colleagues as one of the physics department's most distinguished faculty members. Professor Kroll was a brilliant theoretical physicist with deep physical insight and broad scientific interests. As colleagues, we will all miss Norman's keen intellect and wise counsel.

In addition to his scientific contributions, Dr. Kroll is remembered by friends and family for his lifelong interest in opera and chamber music, serving on a committee that advises UCSD's chamber music series. He had a passion for gourmet food and fine wine and enjoyed ocean swimming, boogie-boarding, hiking, and observing and identifying wildflowers.

Born in Tulsa, Oklahoma on April 6, 1922, Kroll attended Rice University in Houston from 1938 to 1940, then received his bachelor degree from Columbia University in 1942. He followed with graduate studies at Columbia, where he worked with Professor **Willis Lamb**, a Nobel laureate, and received his Ph.D. in 1948. He continued at Columbia as an assistant professor, associate professor, and full professor of physics, quickly becoming one

of the world's leaders in the rapidly developing field of quantum electrodynamics, which described the properties of electromagnetic radiation and its interaction with electrically charged matter in the framework of quantum theory. Professor Kroll collaborated with Lamb on a landmark scientific paper titled "On the Self-Energy of a Bound Electron," which was published in 1949. The study was reprinted by Dover Publications in 1959 as part of the most important and influential papers on Quantum Electrodynamics.

After retiring from teaching in 1991, he continued an active role as a research physicist at UCSD until his death. His retirement also included a continuing consulting and working relationship with the Stanford Linear Accelerator Center, to which he commuted weekly until the fall of 2000 when he suffered a serious injury. At SLAC, he played a leading role in the development of the mathematical foundation for the design of a next generation linear collider, a project that is the highest priority for the nation's particle physicists seeking to understand the fundamental particles and forces of nature.

His career included visiting appointments to many other prestigious institutions, including the Institute for Advanced Study in Princeton, N.J.; Cornell University; CERN, the European Organization for Particle Physics in Geneva; the Niels Bohr Institute, and the University of Rome.

He is survived by his wife, **Sally Ruth Kroll** of La Jolla, and four children: **Linda Kroll** of Berkeley, a professor of education at Mills College; **Cynthia Kroll** of Piedmont, CA, a senior regional economist at UC Berkeley; **Heather Kroll** of Seattle, a physiatrist at Seattle's Virginia Mason Medical Center; and **Ira Joseph Kroll** of Philadelphia, an associate professor of physics and astronomy at the University of Pennsylvania. He is also survived by seven grandchildren: **Condy** and **Dana Creek**; **Russell**, **Carolyn**, and **Owen Hall**; and **Fiona** and **Erin Ruddell**.

A memorial for friends and the campus community will be held later in the fall.

—by Julius Kuti, Joe Kroll, and Kim McDonald

IN MEMORIAM

MURRAY GOODMAN

PROFESSOR OF CHEMISTRY

1928 – 2004



University professors are supposed to teach, carry out research, and perform professional and community service. For over 50 years, first at Brooklyn Polytech and then at UCSD, Professor Murray Goodman did not simply fulfill each requirement; he excelled at each and every one of them! Not only was Murray an outstanding classroom lecturer, but he also trained over 80 Ph.D.'s, over 100 postdoctoral students and hosted in his laboratories over 50 visiting scientists from around the world. Just this past spring, his distinguished teaching was applauded with the UCSD Chancellor's Associates Outstanding Teaching Award.

Murray Goodman's research accomplishments and contributions to the fields of organic, polymer, and the biochemistry of peptides and peptidomimetics are formidable and have resulted in over 500 scientific publications. As a leader in his chosen field, Murray also authored textbooks and monographs, led the international peptide society, and served for decades as editor-in-chief of the leading journal in his field, *Biopolymers*. He was a sought after consultant to the chemical and pharmaceutical industries and played key roles in many biotech startups using his peptide chemistry to create new drugs. For his outstanding research and professional service, Murray received numerous awards including the American Chemical Society's Hirschmann, Cope Scholar, and Hermann Mark Awards, just to name a few.

Despite all of his professional commitments, most significantly Murray Goodman led his community — in fact — all of his communities. For example, he was very involved with the Jewish community and Hillel and served as President of the Beth El Synagogue, which he was instrumental in establishing and building in La Jolla.

At UCSD, Murray Goodman mentored younger faculty like me, he led the Organic Chemistry Division, he chaired the Chemistry Department for two terms, and he served as

Provost of Revelle College when **Paul Saltman** became Vice Chancellor. Murray was elected to be Chair of the Faculty Academic Senate and served with distinction, and he helped lead the founding of the Faculty Club which was so critical to creating community at UCSD, and he served as its president.

Even with all of his enthusiasm, drive and energy, Murray had a light side. Some of us will never forget his performance as a stand-up comedian in the Lajollywood review at the Faculty Club when he took such great aim at the architectural design of the buildings on the UCSD campus. He had a realistic and wise view of the world, but he was consistently warm and friendly to all. He was a steadfast and supportive friend who performed significant deeds for those he loved: like helping a faculty colleague who suffered a stroke recuperate and seeing to it that he could remain professionally active. Murray was the very definition of a "mensch."

Last July 6, some of us had the joy of sharing the celebration of his 75th birthday with Murray, his wife of over 50 years **Zelda**, and his family. This was an occasion at which Professor **Edward Dennis**, UCSD community supporter **Milton Fredman**, and Dr. **Rao Makineni**, representing the international peptide community, and several major donors in the La Jolla community celebrated the completion of a campaign to establish the Murray Goodman Endowed Chair in Chemistry and Biochemistry at UCSD. This will be a fitting and lasting tribute to Murray. In addition, donations are now being accepted by the Department of Chemistry and Biochemistry to establish an annual Murray Goodman Lectureship in his memory.

Murray Goodman passed away on June 1, 2004 in Munich, Germany where he was lecturing. As we all know, Murray was the essence of the modern Renaissance man. At 75 he was still very much in his prime and we will all miss him dearly.

—by Edward A. Dennis
(Also published as a Memorial for the UCSD Senate)

Passions Outside of Academia

Petco Park—New Proof That Diamonds Are Forever

—By Sandy Lakoff

Like most American boys born before other games challenged the grip of the national pastime, I grew up with a passion for baseball. This fondness was encouraged by a father who had been a catcher for an amateur team fielded by his first employer, Swift and Company. I'm sure Pop was disappointed when I turned out to be a hopeless klutz on the sandlot, even after he bought me a beautiful leather fielder's glove and a bat to go with it as a birthday present, but that didn't stop me being a rabid fan.

Back then, devotion to baseball was a rite of passage, and I went through it as dutifully as the other kids I knew. We all collected the "baseball cards" with color photos of the players that came packaged with thin slabs of pink bubble gum and sold for a penny a piece. We used to flip the less-valued cards competitively at schoolyard recesses and trade for the rarer ones. Some of us had more baseball statistics in our heads than anything else. When in bed with a cold, I would recover by reading the sort of novels in which the underdog team comes from behind to win the deciding game in the bottom of the ninth thanks to a pinch-hit by a young unsung rookie. I savored the great baseball cartoons of **Willard Mullin** and for a while even devoured *The Sporting News*, the compendious weekly that recorded the doings of every team, in the minors as well as the major leagues. Because I also followed the northern New Jersey farm teams, I got to see **Jackie Robinson** play for the Montreal Royals before he broke the major-league color line with the Brooklyn Dodgers.

But the team that owned my paramount loyalty was the New York Yankees, the perennial world champion "Bronx Bombers." I followed their games on radio, listening to **Mel Allen** exult after every great play, "How 'bout that?" and describe the home runs, with a shameless plug for the sponsor, as "Ballantine blasts." Although I admired all the great players, including "**Joltin' Joe**" **DiMaggio**, the one I identified with most was second-baseman **Joe "Flash" Gordon** — a six-time All-Star. At an old-timers' day double header at Yankee Stadium, I not only saw Gordon play but also, between games, the legendary **Walter "The Train" Johnson** serve up pitches to the even more legendary "**Babe**"

Ruth. The Babe delighted the capacity crowd by doing his trademarked stunt of gesturing toward a place in the stands and then homering exactly where he pointed.

By my early teens I first broke into print as a sportswriter for the local papers, but only a few years later baseball had faded into the background, replaced by other diversions, including above all, the city's public library — my own personal field of dreams. But no one ever completely outgrows his childhood, so since settling in San Diego I have kept an eye on the Padres in a desultory fashion, frustrating as that has usually been. Until this year, that is. This Padre team is not just **Tony Gwynn** and eight minor league prospects to be named later. And of course it has its own new stadium, Petco Park. To coin a phrase, it's a whole new ball game.

And luckily, one of the head honchos at Petco is **Erik Judson**, a UCSD alumnus who happens to have fond memories of a class he took with me years ago. Thanks to Erik, who spotted me when **Evelyn** and I were checking out the park, and the kindness of his boss **John Moores**, the owner of the team, I have seen several games this past season from the best possible vantage point — the guest boxes overlooking or just to the right of home plate. The first time, Erik thoughtfully had our complimentary tickets autographed by three of the Padres' leading players: the slugging second baseman **Mark Loretta**, the ace closer **Trevor Hoffman**, and the acrobatic rookie shortstop **Khalil Greene**. We've had them framed and are displaying them prominently. (I feel sure that some day, after all three are voted into the Cooperstown Hall of Fame, these souvenirs will be worth a small fortune on Antiques Road Show.)

The second time, I attended as a Zelig-like interloper with the incoming class of our new Rady School of Management. Erik give us a fine capsule account of how the park had come into being, thanks to Moores' planning and persistence, and how it had not only breathed new life into the ball club but was transforming a downtown area east of the Gaslamp from a dull warehouse district into a vibrant place of residence and commerce. Then we watched the



game. And what a game it was! The Padres pounded the Braves' pitching for eight runs in two innings, and our pitcher, **Jake Peavy**, was masterful. I thought of the immortal words of **Jerry Coleman**, the radio voice of the Padres: "You can hang a star on that baby!"

The Padres are in a tough division, but they have an impressive lineup and some good pitching, so they are great fun to watch. Taking in a game is a fine way to relive youthful dreams and escape the too-often depressing realities

of politics. And you have to admire Moores for turning everything around. If he does as well co-chairing the Campaign for UCSD with **Irwin Jacobs** as he has with the Padres and Petco Park, there is no telling how far we'll go. We're in a tough division too, but with that kind of vision and resolve, we could go all the way! **Dan Yankelovich**, now a La Jolla, came up with the classic ad line "Diamonds are forever" for De Beers, but as the Padres and Petco are proving, it could just as well serve for baseball

[Lea Rudee from p. 1]

the Board of the Glen Canyon Institute, which is dedicated to the restoration of the natural flow of the Colorado River through Glen Canyon and the Grand Canyon by decommissioning Glen Canyon Dam and eventually eliminating the reservoir behind it, Lake Powell. When full, Lake Powell loses more water through evaporation and seepage each year than is used annually by the city of San Diego. Lake Powell flooded one of the world's most scenic canyons. It is seriously harming the ecology of the Colorado River through Grand Canyon. At the price that San Diego will pay for the transfer from the Imperial Irrigation District, the water lost by Lake Powell is worth more than the electricity generated by Glen Canyon Dam.

Due to the current drought conditions, Lake Powell is less than half full, and continues to fall. Many flooded features are reappearing as the water recedes. If these conditions continue, the generators will need to be stopped. Although there will surely be wide fluctuations, the current drought is likely the first stage of the loss in flow predicted by the SIO coordinated study.

Glen Canyon Dam was, in the opinion of many, a mistake in the first place. It was made necessary by the wording of the Colorado Compact of 1922. The Colorado Congressman who championed Glen Canyon Dam, **Wayne Aspinall**, is quoted as saying that if Glen Canyon Dam was not built, "... they will need to change their accounting system..."

Dam removal is happening in many locations around the country. Decommissioning Glen Canyon Dam would be the largest undertaken by far. The dam would not be removed but by-passed through the tunnels that carried the river during construction that was completed in 1963. It would be done over years so the releases did not cause damage of their own. It took 20 years to fill Lake Powell and it has taken 5 years of drought to drop it to its current level.

What are the chances of decommissioning? I think the opposition to Glen Canyon Dam has progressed from being considered the lunatic fringe to being taken very seriously. A Utah Congressman has been adding a rider to the Department of the Interior's budget for the last several years that



prevents spending any federal funds to even studying the possibility of decommissioning Glen Canyon Dam. Is he afraid of what the outcome of such a study might be? The state of Nevada got the least favorable treatment in the 1922 negotiations and is threatening to force

a reconsideration of the Colorado Compact.

The world of water politics moves very slowly. The leading players are called "water buffaloes" behind their backs. Several years ago I was the token environmentalist on a panel that included the top managers of the Colorado River of Arizona, California, and Nevada, as well as the Bureau of Reclamation's manager for these three states. They all gave basically the same speech and used the same Power Point slides. Now Nevada may be breaking ranks.

Glen Canyon Dam was the last hurrah of the era of great dams—Hoover, Grand Coulee, etc. It is hard for a large organization like the Bureau of Reclamation to recognize that one of its major projects was a mistake. Quite possibly the climate modeling done by the SIO team may force reconsideration.

Emeriti Website

Members are reminded that the Association maintains a website, <http://emeriti.ucsd.edu/>, where you can read information about the Association, learn about past and future events, read poetry and stories written by some of our Emeriti, and see what your Executive Committee has been up to. Under the rubric NEWS, PROGRAMS & MEETINGS past issues of *Chronicles* are available. The website is maintained by **Marjorie Caserio** and is periodically updated. Send your comments, suggestions or contributions to mcaserio@UCSD.edu.

What's New in the School of Medicine?

Why is Single Payer Universal Health Care in the USA the Third Rail of Politics?

—by Robert N. Hamburger, M.D. Professor of Pediatrics Emeritus



As a dues-paying member of Physicians For a National Health Program (PNHP), I was delighted to see the article in the *Journal of the American Medical Association (JAMA)* on 13 August 2004 titled: “The Physicians’ Proposal for Single-Payer National Health Insurance.” (1,2) This surprising article received excellent national media coverage.

The sponsoring physicians included the former Editor-in-Chief of the *New England Journal of Medicine*, **Marcia Angell** (lead spokesperson), former Surgeons General **Julius Richmond** and **David Satcher**, and our own **Rodney Hood**, an alumnus of the first class of our School of Medicine, a highly recognized practitioner in San Diego, former President of the National Medical Association, and a member of the SOM Advisory Board of Governors.

A few years ago any physician who publically endorsed a single-payer (government) health plan would have been thrown out of the AMA and declared un-American (or worse). The great American “unregulated” health care system grew like Topsy and finally became dysfunctional. It is now overpriced and underfunded, with everyone unhappy except the overpaid businessmen and bureaucrats who are milking it. Doctors who were unfairly being blamed for everything that was wrong with the system finally became fed-up and turned against it too.

It is one thing for academics and intellectual leaders to realize that a single-payer universal health care system is the best alternative, but a recent issue of everyman’s medical journal *Parade Magazine* (free with your Sunday newspaper) issued the clarion call, “We Must Fix Health Care,” by Dr. **Isadore Rosenfeld**, arguing that, “every American must have access to all the benefits modern medicine can provide.” “Ironically,” he points out, “health-care costs have sky-rocketed because of the great advances in medicine ...

new sophisticated tests and procedures, MRIs, CT and PET scans ... and breakthroughs in treating cancer, heart disease and infection.” And this is what he suggested:

First and foremost, we must guarantee access to medical care for every man, woman, and child. We are the only industrialized nation that does not do so.

Second, we must reduce the current large malpractice insurance costs ... however, (we) must compensate realistically those who have been hurt by “bad medicine.”

Finally, every patient must receive whatever medications he or she needs in order to enjoy good health.

I spent a sabbatical in London many years ago and saw first-hand how well their government-sponsored national health system (NHS) worked. When I returned to La Jolla all I heard was how unhappy both the doctors and their patients were in England. Those comments came mainly from the few British doctors who hated the change and emigrated here. A successful model to replace our system would be the Canadian single-payer system. Of course there will be dislocations and errors when we change the current enormously complex system. But that shouldn’t deter us any longer from replacing our broken system which is long overdue for remodeling. In fact, the State of California is once again (remember the defeat of Proposition 186) preparing to “go-it-alone with a single-payer initiative” if the nation delays much longer.

If the “people want universal health insurance by a 2:1 margin,” as revealed by the ABC News and Washington Post Poll (*Washington Post* 10/20/03), why is it not a plank in either party’s platform? The poll also found that 80% of people believe that it is important to cover the uninsured, “even if it means higher taxes!” (For more such useful information, see the PNHP website (3).

The answer to the question in my title should now become obvious: pharmaceutical companies, insurance companies, lawyers, and HMOs have multi-billion dollar stakes in maintaining the current miserable system. They are joined by those conservatives who hate change, no matter what it is, and those who want to return to the good-old-days

when doctors took care of each other and the poor for free. Generations of physicians were trained on hapless indigents. Now we train our students with paid actors who simulate diseases, and physicians have high priced health insurance so they can reimburse their peers for care.

One solution is to elect a president who secretly plans to put in place (during his second term) a single-payer universal health care system. If the present power structure gets a hint of that plan they will pay for his defeat at the polls, as **Dennis Kucinich** discovered before he could begin to get his cam-

paigned up and running. Because of the extraordinary role of huge campaign contributions, our democracy itself is in danger. Elections can now be bought, excellent candidates defeated before they can get their message to the electorate. Perhaps health care will have to deteriorate further before the rich and powerful begin to suffer. Maybe then we will enact a single-payer universal health care insurance system that will bring the benefits that modern medicine can provide to every man, woman, and child in America.

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1. <http://jama.ama-assn.org/cgi/content/abstract/290/6/798?maxtoshow=&eaf>
 2. <http://jama.ama-assn.org/cgi/content/full/290/6/798>
 3. <http://www.pnhp.org>

Please Note

This issue of *Chronicles* is being sent to all eligible emeriti with addresses in our data base. Subsequent issues will be sent only to members of the UCSD Emeriti Association. Dues are \$25/year or \$200 for life membership.



Chronicles

Newsletter of the UCSD Emeriti Association



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Please report all address changes to our administrative officer in the Academic Senate:
Sandi Pierz, (spierz@ucsd.edu, 858/534-0101)

Composer's Corner

In *Chronicles* III, no. 6, I announced my retirement as editor. I was tired. I'm still tired, but I have been persuaded to continue the mechanical parts of pasting together the newsletter, with the understanding that a new editorial board (see masthead) would assume the responsibility for providing its content. For this issue I have been gratified to see that **Sandy Lakoff** has taken on much of that responsibility himself, writing articles for us, getting others to provide material (some of it reprinted from other publications), reminding authors of deadlines, suggesting stylistic and substantive changes, and keeping track of where things stand and how things are going. I would like to confer upon him the title *Balabos*, but am not sure whether he will take that as honorifically as it is intended.

Is the result presented in this issue worth all our efforts? I hope to get responses from readers to determine whether to continue *Chronicles* this way in the coming year.

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